

FIRMA **CHEMPUR®**

CATALOGUE



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ABOUT AS

Our first and most important principle is to sell our product with honest and reliable representation and build a business relationship based on this trust.

Deliveries are normally dispatched within 48 working hours by our own vehicle fleet (Refers to Poland and surrounding Countries). We have an excellent infrastructure with 4 Polish warehouses, an advanced production, a Quality Management System and a reputation for excellent customer service. Packaging meets all relevant legislation required and we supply a wide range of reagents, acids, solvents and indicators both to domestic and export markets.

Regardless of the economy situation, Chempur aims to give customers competitive pricing and the best service without demanding long-term contracts. Even though Chempur has to make a profit, we are a privately held company which does not have to meet stockholder's continuous demands for sales and profits.

QUALITY POLICY

We are the leading producer of chemical reagents in the domestic market. We always want to be with our products and services one step ahead of our competition. Chempur Company constantly tries to predict Clients' needs. Therefore, it introduces many innovative and useful solutions.

Continuous self-improvement and accomplishment of the organization processes, guarantee achieving the leader position among Market competition, in order to meet the needs of our customers as well as to contribute to the customer's satisfaction.

Our activities are focused on:

- active involvement of managers and staff, who will raise their qualifications and modernize the workplace,

- investing in new technologies, increasing our product range and expanding to other markets using marketing methods (market monitoring, analysis of customer satisfaction) as well as improvement our employee's expertise and

experience,

continuous improvement of customer service (concerning both customers and suppliers), services connected with terms of delivery, collaboration and direct contact with the client aiming at increasing the level of supply.

The top management will provide the resources and essential tools to maintain and continuously improve the effectiveness of existing quality management system.

In terms of quality control, we cooperate with the University of Silesia in Katowice. We possess written evidence of the recognition of the quality of our reagents approved by a number of research institutes across the country and abroad. By entering in the production of HPLC solvents, we successfully replaced an expensive Western Production, convincing many Customers to our manufacture.

In collaboration with researchers from Gdansk University of Technology, we have designed methods for micro traces analysis of 7 heavy metals applicable while using the UPE-3 camera. At the same time, we conducted extensive research on the implementation of hydrogen peroxide solutions production with a high degree of purification.

ACETALDEHYDE

Acetaldehyd



M = 44,05 g/mol

CAS: 75-07-0

WE: 200-836-8



H: 224, 319, 351, 335
P: 210, 233, 281, 305+351+338, 305+351+338,
308+313
RID/ADR: 3, I

UN: 1089



Physical and chemical properties:

Character:	liquid	top:	57% v/v
Colour:	colourless	Vapor pressure:	1007 mbar (20°C)
Odor:	sharp	Density:	0,785 g/cm ³ (20°C)
pH:	approx 5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	-123°C	in water:	soluble
Boiling point:	21°C	in organic solvent.:	ethanol
Auto-ignition temperature:	140°C	Refractive index (20°C):	1,332
Ignition temperature:	-20°C	Viscosity (20°C):	0,21 mPa·s
Explosion limits:			
bottom:	4% v/v		

acetaldehyde pure

CHEM*111002700

50 ml	100 ml	Assay (GC)	min. 99,0 %
250 ml	500 ml	Residue on evaporation	max. 0,01 %
1 l		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

acetaldehyde pure p. a.

CHEM*421002709

50 ml	100 ml	Assay (GC)	min. 99,5 %
250 ml	500 ml	Residue on evaporation	max. 0,005 %
1 l		Lead (Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

ACETANILIDE

Acetanilid

C₈H₉NO

M = 135,17 g/mol

CAS: 103-84-4

WE: 203-150-7



H: 302

P: not applicable

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapor pressure:	~0,002 hPa (20°C)
Odor:	characteristic	Density:	1,2 g/cm ³ (20°C)
pH:	no data	Bulk density:	approx 370 kg/m ³
Melting point:	115°C	Solubility:	
Boiling point:	304°C	in water:	5 g/l (20°C)
Auto-ignition temperature:	540°C	in organic solvent:	ethanol
Ignition temperature:	173°C		

acetanilide pure

CHEM*421009705

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 98,5 %
500 g	1 kg	Melting point	113 - 116°C
		Residue on ignition	max. 0,05%

acetanilide pure p. a.

CHEM*111009706

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	99,0 - 100,5 %
500 g	1 kg	Melting point	113 - 115°C
		Acidity (as CH ₃ COOH)	max. 0,05%
		Residue on ignition	max. 0,03%

ACETONE

Aceton



M = 58,08 g/mol

CAS: 67-64-1

WE: 200-662-2



H: 225, 319, 336, EUH066
 P: 210, 233, 305+351+338
 RID/ADR: 3, II UN: 1090



Physical and chemical properties:

Character:	liquid	Density:	0,791 g/cm ³ (20°C)
Colour:	colourless	Solubility:	
Odor:	characteristic	in water:	soluble
Melting point	-95°C	in organic solvent:	soluble in most organic solvents
Boiling point:	55-57°C		
Auto-ignition temperature:	540°C	log P _{ow} :	-0,24
Ignition temperature:	-19°C	Critical temperature:	235°C
Explosion limits:		Critical pressure:	4,7 MPa
bottom:	2,1% v/v	Refractive index (20°C):	1,3590
top:	13% v/v	Viscosity (20°C):	0,33 mPa·s
Vapor pressure:	233 mbar (20°C)		

acetone purified

CHEM*321024803

500 ml	1 l	Appearance	transparent
5 l	10 l	Density (20°C)	approx 0,791 g/cm ³
20 l	30 l	Acidity	max. 0,005 %
60 l	200 l	Water	max. 0,6 %
		Beginning of the distillation	56,0 °C
		End of distillation	56,4 °C
		Solubility in water	total
		Non-volatile residue	max. 0,001 %

acetone pure

CHEM*421024803

250 ml	500 ml	Assay C ₃ H ₆ O	min. 99,0 %
1 l	2,5 l	Alcohols CH ₃ OH and C ₂ H ₅ OH	max. 0,05 %
3 l	5 l	Non-volatile residue	max. 0,001 %
10 l	20 l	Acidity (as CH ₃ COOH)	max. 0,003 %
30 l	60 l	Alkalinity (as NH ₃)	max. 0,001 %
200 l		Substances reducing KMnO ₄	max. 0,0002%
		Aldehydes (as HCOH)	max. 0,006 %
		Water	max. 0,5 %
		Organic substances insoluble in water	passes test

acetone pure p. a.**CHEM*111024800**

250 ml	500 ml	Assay C ₃ H ₆ O	min. 99,5 %
1 l	2.5 l	Organic substances insoluble in water	passes test
3 l	5 l	Alcohols CH ₃ OH i C ₂ H ₅ OH	max. 0,05 %
10 l	20 l	Non-volatile residue	max. 0,0005 %
30 l	60 l	Water	max. 0,4 %
200 l		Acidity (as CH ₃ COOH)	max. 0,002 %
		Alkalinity	max. 0,001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0001 %
		Aldehydes (as HCOH)	max. 0,002 %
		Zinc (Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Manganese (Mn)	max. 0,00001 %
		Copper (Cu)	max. 0,00001 %
		Nickel (Ni)	max. 0,00001 %
		Lead (Pb)	max. 0,00001 %
		Iron (Fe)	max. 0,00001 %

acetone sp. pure for semiconductors**CHEM*102480613**

500 ml	1 l	Assay	min. 99,5 %
		Water	max. 0,2 %
		Acidity (as CH ₃ COOH)	max. 0,002 %
		Aldehydes	max. 0,001 %
		Alcohols	max. 0,025 %
		Non-volatile matter	max. 0,0005 %
		Boron (B)	max. 0,00001%
		Zinc (Zn)	max. 0,000001 %
		Phosphor (P)	max. 0,00001%
		Aluminium (Al)	max. 0,000005%
		Manganese (Mn)	max. 0,0000001 %
		Copper (Cu)	max. 0,0000001 %
		Lead (Pb)	max. 0,000001 %
		Gold (Au)	max. 0,0000001 %
		Iron (Fe)	max. 0,000001 %

acetone HPLC**CHEM*611024800**

500 ml	1 l	Assay	min. 99,8 %
		Non-volatile matter	max. 0,0005 %
2.5 l		Water (KF)	max. 0,2 %
		Acidity (as CH ₃ COOH)	max. 0,0005 meq/g
		UV – transmission (1cm, water)	
		335 nm	min. 50 %
		340 nm	min. 85 %
		350 nm	min. 98 %
		355 nm	min. 99 %

acetone GC standard**CHEM*611024801**

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

acetone GC for pesticide residue analysis**CHEM*611024802**

500 ml	1 l	Assay	min. 99,8 %
		Non-volatile matter	max. 0,0005 %
2.5 l		Water (KF)	max. 0,3 %
		Acidity	max. 0,0005 meq/g
		Interference peaks marked as:	
		- lindane (GC/ECD)	max.5 ng/l
		- parathion-ethyl (GC/NPD)	max.10 ng/l

acetone GC**CHEM*611024803**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,05 %
		Colour	max. 10 Hazen
		GC/ECD (retention range 1,2,4-trichlorobenzene to decachlorobiphenyle individual signals (lindane standard))	max. 3

ACETONITRILE

Acetonitril

CH₃CN

M = 41,05 g/mol

CAS: 75-05-8

WE: 200-835-2



H: 215, 302, 312, 319, 332
P: 210, 305+351+338, 403+235
RID/ADR: 3, II UN: 1648



Physical and chemical properties:

Character:	liquid	Vapor pressure:	97 mbar (20°C)
Colour:	colourless	Density:	0,78 g/cm ³ (20°C)
Odor:	aromatic	Solubility:	
pH:	no data	in water:	soluble
Melting point:	-46°C	in organic solvent:	alcohol and ethyl ether, acetone, benzene
Boiling point:	81°C		
Auto-ignition temperature:	524°C		
Ignition temperature:	2°C	log P _{OW} :	-0,34
Explosion limits:		Vapor density:	1,42
bottom:	3% v/v	Critical temperature:	274,7°C
top:	16% v/v	Critical pressure:	4,83 MPa
viscosity (20°C):	0,357 mPa·s	Refractive index (20°C):	1,344

acetonitrile pure p. a.

CHEM*111026402

500ml	1 l	Assay	min. 99,5 %
2.5 l	3 l	Residue on evaporation	max. 0,001 %
5 l	20 l	Water	max. 0,1 %
60 l		Acidity (as CH ₃ COOH)	max. 0,005 meq/g
		Heavy metals (as Pb)	max. 0,00001 %
		Iron (Fe)	max. 0,00001 %

acetonitrile HPLC

CHEM*611026403

500ml	1 l	Assay (GC)	min. 99,9 %
2.5 l		Non-volatile matter	max. 0,0005 %
		Water (KF)	max. 0,02 %
		Acidity (as CH ₃ COOH)	max. 0,0005 meq/g
		UV – transmission (1 cm, water):	
		240 nm	min. 98 %
		250 nm	min. 99 %
		Fluorescence (as quinine)	
		365 nm	max. 1 ppb

acetonitrile HPLC GR**CHEM*611026404**

500ml	1 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,02 %
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		190 nm	min. 30 %
		195 nm	min. 80 %
		200 nm	min. 93 %
		220 nm	min. 98 %
		230 nm	min. 99 %
		Gradient test (210 nm):	
		Highest peak	max. 3 mAU
		Baseline drift	max. 15 mAU
		Fluorescence (as quinine)	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

acetonitrile HPLC SUPER GRADIENT**CHEM*611026406**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		190 nm	min. 30 %
		195 nm	min. 80 %
		200 nm	min. 93 %
		220 nm	min. 98 %
		230 nm	min. 99 %
		Gradient test (210 nm):	
		Highest peak	max. 3 mAU
		Baseline drift	max. 15 mAU
		Fluorescence (as quinine)	
		365 nm	max. 1 ppb
		Filtration (0,2 um)	passes test

acetonitrile HPLC FUV**CHEM*611026407**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		190 nm	min. 30 %
		200 nm	min. 80 %
		210 nm	min. 90 %
		220 nm	min. 98 %
		230 nm	min. 99 %
		Fluorescence (as quinine)	
		365 nm	max. 1 ppb
		Filtration (0,2 um)	passes test

acetonitrile HPLC GRADIENT GRADE**CHEM*611026408**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,015 %
		Residue on evaporation	max. 0,0005 %
		Acidity	max. 0,0005 meq/g
		UV - transmission (1cm, water):	
		200 nm	min. 80 %
		210 nm	min. 88 %
		220 nm	min. 94 %
		230 nm	min. 98 %
		240 nm	min. 99 %
		Fluorescence (as quinine):	
		365 nm	max. 1 ppb

acetonitrile for UV-VIS spectroscopy**CHEM*611026409**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		200 nm	min. 90 %
		210 nm	min. 95 %
		220 nm	min. 97 %
		230 nm	min. 98 %

acetonitrile dehydrated (30ppm)**CHEM*611026410**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,003 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

acetonitrile GC for pesticide residue analysis**CHEM*611026405**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,2 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

ALUMINON

Aluminon



M = 473,44 g/mol

CAS: 569-58-4

WE: 209-319-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	brownish red	Vapor pressure:	no data
Odor:	characteristic	Density:	0,78 g/cm ³ (20°C)
pH:	approx 5,3 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 400 kg/m ³
Melting point:	220-225 °C (distribution)	Solubility:	
		in water:	approx 800 g/l (20°C)
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

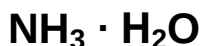
aluminon ind.

CHEM*111183000

1 g	5 g	Appearance	crystals or brownish red powder
7.5 g	10 g	Solubility in water	passes test
15 g	25 g	Residue on ignition (as SO ₄)	max. 0,4 %
		Sensitivity to aluminium ions	max. 0,000001 %

AMMONIUM HYDROXIDE SOLUTION 3%

Amoniak, roztwór 3%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	approx 0,9853 g/cm ³ (20°C)
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 3% pure

CHEM*421349644

1 l	5 l	Assay NH ₃	3,0 ± 0,1 %
		Non-volatile matter	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Total sulphur (S)	max. 0,001 %
		Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

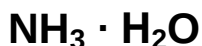
ammonium hydroxide 3% pure p. a.

CHEM*111349639

1 l	5 l	Assay NH ₃	3,0 ± 0,1 %
		Non-volatile matter	max. 0,003 %
		Chlorides (Cl)	max. 0,0001 %
		Total sulphur (S)	max. 0,0003 %
		Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE SOLUTION 5%

Amoniak, roztwór 5%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	0,978 g/cm ³ (20°C)
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 5% pure

CHEM*421349639

1 l	5 l	Assay NH ₃	5,0 ± 0,1 %
		Non-volatile matter	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Total sulphur (S)	max. 0,001 %
		Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

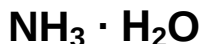
ammonium hydroxide 5% pure p. a.

CHEM*111349640

1 l	5 l	Assay NH ₃	5,0 ± 0,1 %
		Non-volatile matter	max. 0,003 %
		Chlorides (Cl)	max. 0,0001 %
		Total sulphur (S)	max. 0,0003 %
		Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE SOLUTION 10%

Amoniak, roztwór 10%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, III

UN: 2672



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	0,958 g/cm ³ (20°C)
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 10% pure

CHEM*421349604

1 l	5 l	Assay NH ₃	10,0 ± 0,5 %
		Non-volatile matter	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Total sulphur (S)	max. 0,001 %
		Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

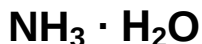
ammonium hydroxide 10% pure p. a.

CHEM*111349636

1 l	5 l	Assay NH ₃	10,0 ± 0,5 %
		Non-volatile matter	max. 0,003 %
		Chlorides (Cl)	max. 0,0001 %
		Total sulphur (S)	max. 0,0003 %
		Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE SOLUTION 20%

Amoniak, roztwór 20%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, III

UN: 2672



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	0,923 g/cm ³ (20°C)
pH:	strong alkaline	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 20% pure

CHEM*421349632

1 l	5 l	Assay NH ₃	20,0 ± 0,5 %
		Non-volatile matter	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Total sulphur (S)	max. 0,001 %
		Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

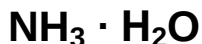
ammonium hydroxide 20% pure p. a.

CHEM*111349633

1 l	5 l	Assay NH ₃	20,0 ± 0,5 %
		Non-volatile matter	max. 0,003 %
		Chlorides (Cl)	max. 0,0001 %
		Total sulphur (S)	max. 0,0003 %
		Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE SOLUTION 25%

Amoniak, roztwór 25%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, III

UN: 2672



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	0,907 g/cm ³ (20°C)
pH:	strong irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 25% purified

CHEM*143618113

3 l	5 l	Assay NH ₃	24 – 28%
10 l	20 l	Density	approx 0,907 g/cm ³ (20°C)
30 l	60 l		

ammonium hydroxide 25% pure

CHEM*421349603

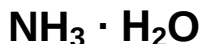
250 ml	500 ml	Assay NH ₃	24 – 28%
1 l	2.5 l	Non-volatile matter	max. 0,005 %
3 l	5 l	Chlorides (Cl)	max. 0,0002 %
10 l	20 l	Total sulphur (S)	max. 0,001 %
30 l	60 l	Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

ammonium hydroxide 25% pure p. a.**CHEM*111349637**

250 ml	500 ml	Assay NH ₃	24 – 28 %
1 l	2.5 l	Non-volatile matter	max. 0,003 %
3 l	5 l	Chlorides (Cl)	max. 0,0001 %
10 l	20 l	Total sulphur (S)	max. 0,0003 %
30 l	60 l	Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE SOLUTION 30-32%

Amoniak, roztwór 30-32%



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, III

UN: 2672



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	0,894-0,8856 g/cm ³ (20°C)
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide 30-32% pure

CHEM*421349643

1 l	2.5 l	Assay NH ₃	30,0 – 32,0 %
5 l		Non-volatile matter	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Total sulphur (S)	max. 0,001 %
		Carbonates (CO ₃)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium and magnesium (as Ca)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

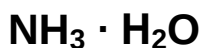
ammonium hydroxide 30-32% pure p. a.

CHEM*111349644

1 l	2.5 l	Assay NH ₃	30,0 – 32,0 %
5 l		Non-volatile matter	max. 0,003 %
		Chlorides (Cl)	max. 0,0001 %
		Total sulphur (S)	max. 0,0003 %
		Carbonates (CO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0001 %
		Calcium and magnesium (as Ca)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,000025 %
		Substances reducing KMnO ₄ (as O)	max. 0,0008 %

AMMONIUM HYDROXIDE STANDARD SOLUTIONS (C < 3 MOL/L)

Amoniak, roztwory mianowane



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	no data
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide standard solution 0,1 mol/l

CHEM*801349636

1 l	Titer	0,0996 – 0,1004 mol/l

ammonium hydroxide standard solution 0,5 mol/l

CHEM*801349635

1 l	Titer	0,498 – 0,502 mol/l

ammonium hydroxide standard solution 1 mol/l

CHEM*801349637

1 l	2.5 l	Titer	0,996 - 1,004 mol/l
3 l	5 l		

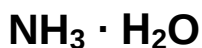
ammonium hydroxide standard solution 2 mol/l

CHEM*801349638

1 l	2.5 l	Titer	1,992 – 2,008 mol/l
5 l			

AMMONIUM HYDROXIDE STANDARD SOLUTIONS ($3 \leq C \leq 5 \text{ MOL/L}$)

Amoniak, roztwory mianowane ($3 \leq C \leq 5 \text{ MOL/L}$)



M = 35,05 g/mol

CAS: 1336-21-6

WE: 215-647-6



H: 314, 335, 400

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	no data
pH:	strong, irritating	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium hydroxide standard solution 3 mol/l

CHEM*801349639

500 ml	1 l	Titer	2,988 – 3,012 mol/l
2.5 l	3 l		
5 l			

ammonium hydroxide standard solution 5 mol/l

CHEM*801349642

500 ml	1 l	Titer	4,98 – 5,02 mol/l
2.5 l	3 l		
5 l			

AMMONIUM NITRATE

Amonu azotan



M = 80,05 g/mol

CAS: 6484-52-2

WE: 229-347-8



H: 272

P: 210

RID/ADR: 5.1, III

UN: 1942



Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	colourless to white	Density:	1,72 g/cm ³ (w 20°C)
Odor:	odorless	Bulk density:	approx 600-700 kg/m ³
pH:	5,5 - 7,0	Solubility:	
Melting point:	169°C	in water:	658 g/l (w 20°C)
Boiling point:	> 210°C	in organic solvent:	ethanol, pirydine,
Auto-ignition temperature:	not applicable		ammonium hydroxide; ethanol,
Ignition temperature:	not applicable		acetone
Explosion limits:	not applicable		

ammonium nitrate pure

CHEM*421369900

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Arsenic (As)	max. 0,0001 %
750 g	1 kg	Calcium (Ca)	max. 0,005 %
2 kg	5 kg	Nitrite (NO ₂)	max. 0,0008 %
10 kg	15 kg	Iron (Fe)	max. 0,001 %
20 kg		Sulphates (SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,004 %
		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0006 %
		pH (5%, 20°C)	max. 4,5 - 6,0
		Residue on ignition	max. 0,05 %
		Substances insoluble in water	max. 0,01 %
		Moisture	max. 2,5 %

ammonium nitrate pure p. a.**CHEM*111369900**

50 g	100 g	Assay	min. 99,5 %
250 g	500 g	Arsenic (As)	max. 0,00005 %
750 g	1 kg	Magnesium (Mg)	max. 0,001 %
2 kg	5 kg	Calcium (Ca)	max. 0,003 %
10 kg	15 kg	Nitrite (NO ₂)	max. 0,0004 %
20 kg		Iron (Fe)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0003 %
		pH (5%, 20°C)	4,5 - 6,0
		Residue on ignition	max. 0,02 %
		Substances insoluble in water	max. 0,005 %
		Moisture	max. 2,0 %

AMMONIUM BENZOATE

Amonu benzoesan



M = 139,15 g/mol

CAS: 1863-63-4

WE: 217-468-9



H: 302, 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,26 g/cm ³ (20°C)
pH:	approx 6 - 8 (100 g/l H ₂ O, 20°C)	Bulk density:	no data
Melting point:	198°C	Solubility:	
Boiling point:	distribution >198°C	in water:	200 g/l (w 20°C)
Auto-ignition temperature:	no data	in organic solvent:	16,3 g/cm ³ (ethanol, 20°C)
Ignition temperature:	no data		

ammonium benzoate pure

CHEM*421370604

50g	100g	Assay	min. 97 %
250g	500g	Reaction	passes test
750g	1kg	Substances insoluble in water	max. 0,01 %
		Residue on ignition (as SO ₄)	max. 0,08 %
		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0004 %
		Iron (Fe)	max. 0,002 %

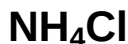
ammonium benzoate pure p. a.

CHEM*111371005

50g	100g	Assay	98-100,5 %
250g	500g	Reaction	passes test
750g	1kg	pH (5%, 20°C)	5 – 8
		Chlorine compounds (as Cl)	max. 0,01 %
		Sulfur compounds (as S)	max. 0,015 %
		Substances reducing KMnO ₄	passes test
		Substances insoluble in water	max. 0,005 %
		Residue on ignition (as SO ₄)	max. 0,05 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0002 %
		Iron (Fe)	max. 0,001 %

AMMONIUM CHLORIDE

Amonu chlorek



M = 53,49 g/mol

CAS: 12125-02-9

WE: 235-186-4



H: 302, 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	(30°C): 1,3 hPa;
Colour:	white		(250°C): 67 hPa
Odor:	odorless	Density:	1,53 g/cm ³ (20°C)
pH:	4,5–5,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	335°C	Solubility:	
Boiling point:	not applicable	in water:	370 g/l (20°C)
Auto-ignition temperature:	> 400°C	in organic solvent:	ethanol - 20 g/l (20°C)
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium chloride pure

CHEM*421372606

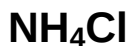
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,05 %
2 kg	3 kg	Sulphates (SO ₄)	max. 0,01 %
5 kg	10 kg	Phosphates (PO ₄)	max. 0,002 %
15 kg	20 kg	Iron (Fe III)	max. 0,001 %
25 kg		Calcium (Ca)	max. 0,004 %
		Magnesium (Mg)	max. 0,0025 %
		Heavy metals (as Pb)	max. 0,002 %
		Organic substances	passes test
		pH (5%, 20°C)	4,5 - 6

ammonium chloride pure p. a.**CHEM*111372607**

50 g	100 g	Assay	99,5 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,05 %
2 kg	3 kg	Nitrate (NO ₃)	max. 0,0006 %
5 kg	10 kg	Sulphates (SO ₄)	max. 0,002 %
15 kg	20 kg	Phosphates (PO ₄)	max. 0,001 %
25 kg		Chlorates (ClO ₃)	max. 0,0005 %
		Iodides and bromides (I + Br)	max. 0,001 %
		Thiocyanate (SCN)	max. 0,005 %
		Iron (Fe III)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Magnesium (Mg)	max. 0,001 %
		Arsenic (As)	max. 0,00005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Organic substances	passes test

AMMONIUM CHLORIDE STANDARD SOLUTIONS (C < 4 MOL/L)

Amonu chlorek, roztwory mianowane (C < 4 MOL/L)



M = 53,49 g/mol

CAS: 12125-02-9

WE: 235-186-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Solubility:	
Colour:	colourless	in water:	soluble
Odor:	odorless	in organic solvent:	no data
pH:	approx 2,5		

ammonium chloride standard solution 0,1mol/l

CHEM*811372603

500 ml	1 l	Titer	0,0996 – 0,1004 mol/l

ammonium chloride standard solution 0,2mol/l

CHEM*811372606

500 ml	1 l	Titer	0,1992 – 0,2008 mol/l

ammonium chloride standard solution 0,5 mol/l

CHEM*811372604

500 ml	1 l	Titer	0,498 – 0,502 mol/l

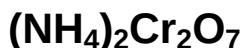
ammonium chloride standard solution 1 mol/l

CHEM*811372605

500 ml	1 l	Titer	0,996 - 1,004 mol/l

AMMONIUM DICHROMATE

Amonu dichromian



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350,
360FD, 372, 410, 312, 330

P: 210, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 5.1, II UN: 1439



Physical and chemical properties:

Character: solid
 Colour: orange red
 Odor: odorless
 pH: 3-4 (100 g/l H₂O, 20°C)
 Melting point: no data
 Boiling point: >180°C thermal
 decomposition with the explosive
 Auto-ignition temperature: not applicable
 Ignition temperature: not applicable

Explosion limits: not applicable
 Density: 2,15 g/cm³ (20°C)
 Bulk density: 1300 kg/m³
 Solubility:
 in water: 267 g/l (20°C)
 in organic solvent: soluble in ethanol, insoluble
 in acetone

ammonium dichromate pure

CHEM*421379307

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Loss on drying	max. 3 %
750 g	1 kg	Chlorides (Cl)	max. 0,01 %
5 kg	20 kg	Sulphates (SO ₄)	max. 0,05 %
25 kg			

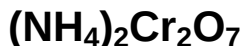
ammonium dichromate pure p. a.

CHEM*111379307

50 g	100 g	Assay	min. 99,5 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	pH (5%, 20°C)	3,0 - 4,0
5 kg	25 kg	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Magnesium (Mg)	max. 0,002 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,05 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

AMMONIUM DICHROMATE SOLUTION APPROX 15%

Amonu dichromian roztwór ok. 15%



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350, 360FD, 372, 410, 312, 330

P: 210, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 5.1, II

UN: 1439



Physical and chemical properties:

Character:	liquid	Solubility:	
Colour:	orange-red	in water:	soluble
Odor:	odorless	in organic solvent:	no data
Density:	1,087 g/cm ³ (20°C)		

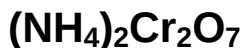
ammonium dichromate solution approx 15% sp.pure

CHEM*421379301

5 l	10 l	Assay	15,0 ± 0,5 %
		Chlorides (Cl)	max. 0,0005 %
20 l		Sulphates (SO ₄)	max. 0,001 %
		Copper (Cu)	max. 0,003 %
		Lead (Pb)	max. 0,003 %
		Potassium (K)	max. 0,05 %
		Sodium (Na)	max. 0,0005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

AMMONIUM DICHROMATE 0,01 MOL/L STANDARD SOLUTION

Amonu dichromian, roztwór mianowany 0,01mol/l



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350, 360FD, 372, 410

P: 210, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 6.1, II

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange - red	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		

ammonium dichromate standard solution 0,01 mol/l
CHEM*811379304

500 ml

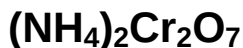
1 l

Titer

0,00996 – 0,01004 mol/l

AMMONIUM DICHROMATE $\leq 0,1$ MOL/L STANDARD SOLUTION

Amonu dichromian $\leq 0,1M$ roztwór mianowany



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350, 360FD, 372, 410

P: 210, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 6.1, II UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange - red	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		

ammonium dichromate standard solution 0,05 mol/l

CHEM*811379307

500 ml

1 l

Titer

0,0498 – 0,0502 mol/l

ammonium dichromate standard solution 0,1 mol/l

CHEM*811379305

500 ml

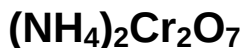
1 l

Titer

0,0996 – 0,1004 mol/l

AMMONIUM DICHROMATE 0,5 MOL/L STANDARD SOLUTION

Amonu dichromian, roztwór mianowany 0,5M



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350,
360FD, 372, 410

P: 210, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, II UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange – red	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		

ammonium dichromate standard solution 0,5 mol/l
CHEM*811379308

500 ml

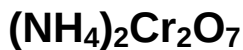
1 l

Titer

0,498 – 0,502 mol/l

AMMONIUM DICHROMATE 1 MOL/L STANDARD SOLUTION

Amonu dichromianroztwór mianowany 1 M



M = 252,07 g/mol

CAS: 7789-09-5

WE: 232-143-1



H: 272, 301, 314, 317, 334, 340, 350, 360FD, 372, 410

P: 210, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 6.1, II UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange – red	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		

ammonium dichromate standard solution 1 mol/l
CHEM*811379304

500 ml

1 l

Titer

0,996 – 1,004 mol/l

AMMONIUM FLUORIDE

Amonu fluorek



M = 37,04 g/mol

CAS: 12125-01-8

WE: 235-185-9



H: 301, 311, 331
P: 280, 302+352, 304+340
RID/ADR: 6.1, III UN: 2505



Physical and chemical properties:

Character:	solid	Vapor pressure:	not applicable
Colour:	white	Density:	1,01 g/cm ³
Odor:	ammoniacal	Bulk density:	approx 840 kg/m ³
pH:	2-3	Solubility:	
Melting point:	126°C, sublimation	in water:	600 g/l (20°C)
Boiling point:	not applicable	in organic solvent:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	-4,5
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium fluoride pure

CHEM*421381400

50 g	100 g	Assay	min. 96%
		Chlorides (Cl)	max. 0,01%
250 g	500 g	Sulphates (SO ₄)	max. 0,01%
		Heavy metals (as Pb)	max. 0,002%
750 g	1 kg	Iron (Fe)	max. 0,005%
		Ammonium hydrogen difluoride(NH ₄ F•HF)	max. 3,0%
		Hexafluorosilicate (SiF ₆)	max. 0,2%
		Water	max. 3,0 %
		Appearance	white, crystalline powder

ammonium fluoride pure p. a.

CHEM*111381400

25 g	50 g	Assay	min. 98%
		Chlorides (Cl)	max. 0,002%
100 g	250 g	Sulphates (SO ₄)	max. 0,005%
		Heavy metals (as Pb)	max. 0,001%
500 g	750 g	Iron (Fe)	max. 0,001%
		Ammonium hydrogen difluoride(NH ₄ F•HF)	max. 1,0%
1 kg		Hexafluorosilicate (SiF ₆)	max. 0,1%
		Water	max. 2,0 %
		Substances insoluble in water	max. 0,005 %
		Residue on ignition	max. 0,01%
		Appearance	white, crystalline powder

AMMONIUM FLUORIDE STANDARD SOLUTIONS (C < 1 MOL/L)

Amonu fluorek, roztwory mianowane



M = 37,04 g/mol

CAS: 12125-01-8

WE: 235-185-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	not applicable
Odor:	ammoniacal	Density:	no data
pH:	2-3	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	-4,5
Ignition temperature:	not applicable		

ammonium fluoride standard solution 0,1 mol/l

CHEM*811381400

500 ml

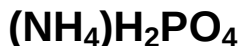
1 l

Titer

0,0996 – 0,1004 mol/l

AMMONIUM PHOSPHATE MONOBASIC

Amonu fosforan I zasadowy



M = 115,03 g/mol

CAS: 7722-76-1

WE: 231-764-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	not applicable
Odor:	odorless	Density:	1,80 g/cm ³ (20°C)
pH:	4 (1M)	Bulk density:	approx 800 - 1100 kg/m ³
Melting point:	190°C	Solubility:	
Boiling point:	distribution >190°C	in water:	370 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium phosphate monobasic pure

CHEM*421384107

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Chlorides(Cl)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,01 %
		Nitrate (NO ₃)	max. 0,002 %
		Iron (Fe)	max. 0,004 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Sodium (Na)	max. 0,02 %
		Potassium (K)	max. 0,04 %
		Appearance	colourless crystals or white powder

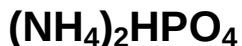
ammonium phosphate monobasic pure p. a.

CHEM*111384108

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	pH (5%, 20°C)	4,0÷4,5
1 kg		Chlorides(Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,005 %
		Nitrate (NO ₃)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Sodium (Na)	max. 0,01 %
		Potassium (K)	max. 0,01 %
		Appearance	colourless crystals or white powder

AMMONIUM PHOSPHATE DIBASIC

Amonu fosforan II zasadowy



M = 132,07 g/mol

CAS: 7783-28-0

WE: 231-987-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	not applicable
Colour:	white	Density:	1,62 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 800 - 1000 kg/m ³
pH:	7,8 - 8,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	155°C (distribution)	in water:	690 g/l (20°C)
Boiling point:	no data	in organic solvent:	no data
Explosion limits:	not applicable		

ammonium phosphate dibasic pure

CHEM*421384606

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	7,8-8,3
		Chlorides (Cl)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,01 %
		Nitrate (NO ₃)	max. 0,002 %
		Iron (Fe, III)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0001 %
		Sodium (Na)	max. 0,02 %
		Potassium (K)	max. 0,02 %

ammonium phosphate dibasic pure p. a.

CHEM*111384607

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	pH (5%, 20°C)	7,8-8,2
1 kg		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,005 %
		Nitrate (NO ₃)	max. 0,001 %
		Iron (Fe, III)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Sodium (Na)	max. 0,01 %
		Potassium (K)	max. 0,01 %

TRIAMMONIUM PHOSPHATE TRIHYDRATE

tri-amonu fosforan III zasadowy



M = 203,13 g/mol

CAS: 25447-33-0

WE: 233-793-9



H: 319

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	weak ammoniacal	Density:	no data
pH:	no data	Bulk density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

triammonium phosphate trihydrate pure

CHEM*421385006

25 g	50 g	Assay	min. 97,0%
100 g	250 g	Ammonium hydroxide (NH ₃)	23,5 - 25%
500 g	750 g	Substances insoluble in water	max. 0,01%
1 kg		Chlorides (Cl)	max. 0,001%
		Nitrate (NO ₃)	max. 0,002%
		Sulphates (SO ₄)	max. 0,02%
		Iron (Fe)	max. 0,002%
		Heavy metals (as Pb)	max. 0,001%
		Arsenic (As)	max. 0,0004%
		Appearance	white, crystalline powder

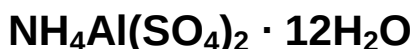
triammonium phosphate trihydrate pure p. a.

CHEM*111385007

25 g	50 g	Assay	min. 98,0%
100 g	250 g	Ammonium hydroxide (NH ₃)	23,5-25%
500 g	750 g	Substances insoluble in water	max. 0,005%
1 kg		Nitrate (NO ₃)	max. 0,001%
		Chlorides (Cl)	max. 0,0005%
		Sulphates (SO ₄)	max. 0,01%
		Heavy metals (as Pb)	max. 0,0005%
		Arsenic (As)	max. 0,0002%
		Iron (Fe)	max. 0,001%
		Appearance	white, crystalline powder

AMMONIUM ALUMINIUM SULFATE DODECAHYDRATE

Amonu glinu siarczan 12 hydrat



M = 453,32 g/mol

CAS: 7784-26-1

WE: 232-055-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	colourless	Density:	1,64 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 700 - 800 kg/m ³
pH:	approx 2,6 (100 g/l H ₂ O; 20°C)	Solubility:	
Melting point:	93°C	in water:	150 g/l (20°C)
Boiling point:	200°C	in other solvents:	glycerin, acids; insoluble in alcohol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium aluminium sulfate dodecahydrate pure

CHEM*421354601

50 g	100 g	Assay	min. 96,0 %
		Substances insoluble in water	max. 0,01 %
250 g	500 g	Chlorides (Cl)	max. 0,004 %
		Iron (Fe, III)	max. 0,001 %
750 g	1 kg	Heavy metals (as Pb)	max. 0,001 %
		Sodium (Na)	max. 0,2 %
		Arsenic (As)	max. 0,0001 %

ammonium aluminium sulfate dodecahydrate pure p. a.

CHEM*111356207

25 g	50 g	Assay	min. 98,0 %
		Substances insoluble in water	max. 0,005 %
100 g	250 g	Chlorides (Cl)	max. 0,001 %
		Iron (Fe, III)	max. 0,0005 %
500 g	750 g	Heavy metals (as Pb)	max. 0,0005 %
		Sodium (Na)	max. 0,1 %
1 kg		Arsenic (As)	max. 0,00005 %

AMMONIUM TETRACHLOROCUPRATE(II) DIHYDRATE

Amonu miedzi (II) chlorek 2hydrat hydrate



M = 277,47 g/mol

CAS: 10060-13-6

WE: 239-690-5



H: 225, 302, 312, 319, 332

P: 210, 280, 303+361+353

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue	Vapor pressure:	no data
Odor:	odorless	Density:	1,993 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	110°C	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in other solvents:	no data
Ignition temperature:	not applicable		

ammonium tetrachlorocuprate(II) dihydrate pure

CHEM*421362200

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Sulphates (SO ₄)	max. 0,01 %
500 g	1 kg	Iron (Fe)	max. 0,005 %

ammonium tetrachlorocuprate(II) dihydrate pure p. a.

CHEM*111362201

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Sulphates (SO ₄)	max. 0,005 %
250 g	500 g	Iron (Fe)	max. 0,002 %
1 kg			

AMMONIUM MOLYBDATE TETRAHYDRATE

Ammonium molybdate 4 hydrat



M = 1235,8 g/mol

CAS: 12054-85-2

WE: 234-722-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	ammoniacal	Density:	2,37 g/cm ³ (20°C)
pH:	approx 5,0 (50 g/l H ₂ O; 20°C)	Bulk density:	approx 800 kg/m ³
Melting point:	distribution >150°C	Solubility:	
Boiling point:	not applicable	in water:	400 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium molybdate tetrahydrate pure

CHEM*421390000

100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,03 %
1 kg	2 kg	Chlorides (Cl)	max. 0,002 %
5 kg	10 kg	Sulphates (SO ₄)	max. 0,03 %
		Phosphates, silicates, arsenate (as PO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

ammonium molybdate tetrahydrate pure p. a.

CHEM*111390000

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Chlorides (Cl)	max. 0,001 %
5 kg	10 kg	Sulphates (SO ₄)	max. 0,005 %
		Phosphates, silicates, arsenate (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,002 %
		Copper (Cu)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

AMMONIUM MOLYBDATE SOLUTION 1,5 %*Amonu molibdenian roztwór 1,5%*

M = 1163,74 g/mol

CAS: 12027-67-7

WE: 234-722-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	ammoniacal	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	not applicable	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium molybdate solution 1,5%**CHEM*521390000**

100 ml

500 ml

Assay

approx 1,5 %

1 l

AMMONIUM MOLYBDATE STANDARD SOLUTIONS ($0,1 \leq C < 0,2$ MOL/L)

Amonu molibdenian roztwory mianowane



M = 1163,74 g/mol

CAS: 12027-67-7

WE: 234-722-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	ammoniacal	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble (20°C)
Boiling point:	not applicable	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium molybdate standard solution 0,1 mol/l

CHEM*811390000

100 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1 l

AMMONIUM MOLYBDATE STANDARD SOLUTIONS (C > 0,2 MOL/L)

Amonu molibdenian rozwoy mianowane



M = 1163,74 g/mol

CAS: 12027-67-7

WE: 234-722-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	ammoniacal	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble (20°C)
Boiling point:	not applicable	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium molybdate standard solution 0,5 mol/l

CHEM*811390002

100 ml	500 ml

Titer

0,498 – 0,502 mol/l

1 l

ammonium molybdate standard solution 1 mol/l

CHEM*811390001

100 ml	500 ml

Titer

0,996 – 1,004 mol/l

1 l

AMMONIUM FORMATE

Amonu mrówczan



M = 63,03 g/mol

CAS: 540-69-2

WE: 208-753-9



H: 315, 319, 335
P: 302+352, 305+351+338
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,27 g/cm ³ (20°C)
pH:	5,5-7,5 (50 g/l H ₂ O; 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	116°C	Solubility:	
Boiling point:	distribution 180°C	in water:	1020 g/l (0°C), 5310 g/l (80°C)
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	no data		

ammonium formate pure

CHEM*421390407

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	6,4-7,2
5 kg	10 kg	Residue on ignition (as SO ₄)	max. 0,03 %
15 kg	20 kg	Chlorides (Cl)	max. 0,005 %
25 kg		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

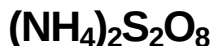
ammonium formate pure p. a.

CHEM*111390408

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	pH (5%, 20°C)	6,4-7,0
2 kg	3 kg	Residue on ignition (as SO ₄)	max. 0,01 %
5 kg	10 kg	Chlorides (Cl)	max. 0,001 %
15 kg	20 kg	Sulphates (SO ₄)	max. 0,005 %
25 kg		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

AMMONIUM PERSULFATE

Amonu nadsiarczan



M = 228,2 g/mol

CAS: 7727-54-0

WE: 231-786-5



H: 272, 302, 315, 317, 319, 334, 335
P: 280, 305+351+338, 338, 304+341, 342+311
RID/ADR: 5.1, III UN: 1444



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,98 g/cm ³ (20°C)
pH:	3,2 (100 g/l H ₂ O; 20°C)	Bulk density:	approx 900 kg/m ³
Melting point:	distribution > 120°C	Solubility:	
Boiling point:	not applicable	in water:	620 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium persulfate pure

CHEM*421391907

100 g	250 g	Assay	min. 97,0 %
500 g	750 g	Substances insoluble in water	max. 0,02 %
1 kg	2 kg	Residue on ignition	max. 0,1 %
5 kg	10 kg	Chlorides i chlorates (Cl)	max. 0,005 %
15 kg	20 kg	Heavy metals (as Pb)	max. 0,002 %
25 kg		Manganese (Mn)	max. 0,0003 %
		Iron (Fe)	max. 0,003 %
		Appearance	colourless crystals or yellow powder

ammonium persulfate pure p. a.

CHEM*111391908

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Acidity (as H ₂ SO ₄)	max. 0,2 %
		Residue on ignition	max. 0,05 %
		Chlorides i chlorates (Cl)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Manganese (Mn)	max. 0,0001 %
		Iron (Fe)	max. 0,001 %
		Appearance	colourless crystals or yellow powder

AMMONIUM ACETATE

Amonu octan



M = 77,08 g/mol

CAS: 631-61-8

WE: 211-162-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	weak acetic	Density:	1,07 g/cm ³ (20°C)
pH:	approx. 6,7 - 7,3 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 410 kg/m ³
Melting point:	114°C	Solubility:	
Boiling point:	no data	in water:	1480 g/l (4°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium acetate pure

CHEM*421392704

50 g	100 g	Assay	97,0 – 102,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,02 %
5 kg	10 kg	Chlorides (Cl)	max. 0,001 %
20 kg		Sulphates (SO ₄)	max. 0,005 %
		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

ammonium acetate pure p. a.

CHEM*111392705

25 g	50 g	Assay	97,0 – 100,0 %
100 g	250 g	pH (5%, 20°C)	6,7 - 7,3
500 g	750 g	Substances insoluble in water	max. 0,0025 %
1 kg		Residue on ignition (as SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,001 %
		Nitrate (NO ₃)	max. 0,0015 %
		Phosphates (PO ₄)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Magnesium (Mg)	max. 0,0002 %
		Aluminium (Al)	max. 0,0005 %
		Substances reducing KMnO ₄ (as O)	max. 0,007 %

AMMONIUM THIOCYANATE

Amonu rodanek

NH₄SCN

M = 76,12 g/mol

CAS: 1762-95-4

WE: 217-175-6



H: 302, 312, 332, 412, EUH032
P: 273, 280, 302+352
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,31 g/cm ³ (20°C)
pH:	4,5-6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	150°C	Solubility:	
Boiling point:	170°C	in water:	1280 g/l (0°C), 1650 g/l (19°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium thiocyanate pure

CHEM*421395809

10g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	pH (5%, 20°C)	4,5 - 6,0
1 kg	2 kg	Residue on ignition (as SO ₄)	max. 0,05 %
5 kg	10 kg	Iodine consuming substances	max. 0,005 %
20 kg		Chlorides (Cl)	max. 0,02 %
		Sulphates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

ammonium thiocyanate pure p. a.

CHEM*111395800

10g	25 g	Assay	min. 99,0 %
50 g	100 g	Substances insoluble in water	max. 0,005 %
250 g	500 g	pH (5%, 20°C)	4,5 - 6,0
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,02 %
2 kg	5 kg	Iodine consuming substances	max. 0,005 meq/g
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Sulfides (S)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0001 %

AMMONIUM THIOCYANATE ANALYTICAL WEIGHED AMOUNT

Amonu rodanek odważka analityczna

NH₄SCN

M = 76,12 g/mol

CAS: 1762-95-4

WE: 217-175-6



H: 302, 312, 332, 412, EUH032

P: 273, 280, 302+352

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,31 g/cm ³ (20°C)
pH:	4,5-6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	150°C	Solubility:	
Boiling point:	170°C -distribution	in water:	1280 g/l (0°C), 1650 g/l (19°C)
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable	in organic solvent:	no data

ammonium thiocyanate 0,05 mol/l analytical weighed amount

CHEM*161395938

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

ammonium thiocyanate 0,1 mol/l analytical weighed amount

CHEM*161395937

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

AMMONIUM THIOCYANATE STANDARD SOLUTIONS (C < 3 MOL/L)

Amonu rodanek roztwory mianowane

NH₄SCN

M = 76,12 g/mol

CAS: 1762-95-4

WE: 217-175-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	(18°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium thiocyanate standard solution 0,05 mol/l

CHEM*811395803

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1 l		

ammonium thiocyanate standard solution 0,1 mol/l

CHEM*811395800

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1 l		

ammonium thiocyanate standard solution 0,5 mol/l

CHEM*811395801

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1 l		

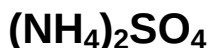
ammonium thiocyanate standard solution 1 mol/l

CHEM*811395802

100 ml	250 ml	Titer	0,996 – 1,004 mol/l
500 ml	1 l		

AMMONIUM SULFATE

Amonu siarczan



M = 132,14 g/mol

CAS: 7783-20-2

WE: 231-984-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,77 g/cm ³ (20°C)
pH:	5 - 6 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 960 kg/m ³
Melting point:	280°C distribution	Solubility:	
Boiling point:	not applicable	in water:	760 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium sulfate pure

CHEM*421397200

50 g	100 g	Assay	min. 97,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Residue on ignition	max. 0,06 %
5 kg	10 kg	Acidity (H ₂ SO ₄)	max. 0,05 %
15 kg	20 kg	Chlorides (Cl)	max. 0,002 %
25 kg		Nitrate (NO ₃)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %
		Arsenic (As)	max. 0,001 %
		pH (5%, 20°C)	4,0 – 6,0

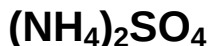
ammonium sulfate pure p. a.

CHEM*111397200

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Residue on ignition	max. 0,02 %
1 kg	5 kg	Chlorides (Cl)	max. 0,001 %
10 kg	15 kg	Nitrate (NO ₃)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Zinc (Zn)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		pH (5%, 20°C)	5,0 – 6,0

AMMONIUM SULFATE STANDARD SOLUTIONS

Amonu siarczan roztwory mianowane



M = 132,14 g/mol

CAS: 7783-20-2

WE: 231-984-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	not applicable	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

ammonium sulfate standard solution 0,1 mol/l

CHEM*801397201

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1 l		

ammonium sulfate standard solution 0,5 mol/l

CHEM*801397203

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1 l		

ammonium sulfate standard solution 1 mol/l

CHEM*801397202

100 ml	250 ml	Titer	0,996 – 1,004 mol/l
500 ml	1 l		

AMMONIUM OXALATE MONOHYDRATE

Amonu szczawian 1 hydrat



M = 142,1 g/mol

CAS: 6009-70-7

WE: 238-135-4



H: 301, 312

P: 302+352

RID/ADR: not applicable UN: not applicable



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	not applicable
Odor:	odorless	Density:	1,48 g/cm ³ (20°C)
pH:	approx 6,3 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 480 kg/m ³
Melting point:	distribution > 70°C	Solubility:	
Boiling point:	not applicable	in water:	45 g/l (20°C), 118 g/l (500)
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	no data		

ammonium oxalate monohydrate pure

CHEM*421400003

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,03 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,0015 %
		Iron (Fe)	max. 0,001 %

ammonium oxalate monohydrate pure p. a.

CHEM*111400004

50 g	100 g	Assay	min. 99,8 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,015 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

AMMONIUM CARBONATE

Amonu węglan

Mixture of ammonium carbonate and ammonium hydroxycarbonate, and ammonium carbamate

M = not applicable

CAS: 10361-29-2

WE: 233-786-0



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	69 hPa (20°C)
Odor:	ammoniacal	Density:	no data
pH:	9 (100 g/l H ₂ O, 20°C)	Bulk density:	780 – 830 kg/m ³
Melting point:	58°C (distribution)	Solubility:	
Boiling point:	not applicable	in water:	1000 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	no data		

ammonium carbonate pure

CHEM*421403607

50 g	100 g	Ammonium hydroxide (NH ₃)	min. 30,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,2 %
2 kg	3 kg	Chlorides (Cl)	max. 0,002 %
5 kg	10 kg	Sulphates (SO ₄)	max. 0,01 %
15 kg	20 kg	Arsenic (As)	max. 0,001 %
25 kg		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,002 %

ammonium carbonate pure p. a.

CHEM*111403608

50 g	100 g	Ammonium hydroxide (NH ₃)	min. 31,0 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	Residue on ignition (as SO ₄)	max. 0,01 %
2 kg	3 kg	Chlorides (Cl)	max. 0,001 %
5 kg	10 kg	Sulphates (SO ₄)	max. 0,005 %
15 kg	20 kg	Arsenic (As)	max. 0,0005 %
25 kg		Iron (Fe)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,001 %

AMMONIUM L-TARTRATE

Amonu winian L(+)



M = 184,15 g/mol

CAS: 3164-29-2

WE: 221-618-9



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	1,601 g/cm ³ (20°C)
pH:	5-7 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 850 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	63 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvent:	in methanol
Ignition temperature:	no data		

Ammonium L-tartrate pure

CHEM*421404506

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Residue on ignition	max. 0,1 %
		Chlorides (Cl)	max. 0,01 %
750 g	1 kg	Sulphates (SO ₄)	max. 0,01 %
		Lead (Pb)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,01 %

Ammonium L-tartrate pure p. a.

CHEM*111404507

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Residue on ignition	max. 0,05 %
		pH (5%, 20°C)	5,0 – 7,0
750 g	1 kg	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Cadmium (Cd)	max. 0,005 %
		Cobalt (Co)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

AMMONIUM HYDROGEN DIFLUORIDE

Amonu wodorodifluorek



M = 57,04 g/mol

CAS: 1341-49-7

WE: 215-676-4



H: 301, 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1727



Physical and chemical properties:

Character:	solid	Vapor pressure:	1 hPa (20°C)
Colour:	colourless/white	Density:	1,5 g/cm ³ (20°C)
Odor:	sharp	Bulk density:	approx 700 kg/m ³
pH:	approx. 3,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	126°C	in water:	630 g/l (20°C)
Boiling point:	distribution > 230°C	in organic solvent:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	-4,5
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium hydrogen difluoride purified

CHEM*321381400

3 kg	5 kg	Assay	min. 90,0 %
10 kg	25 kg	Chlorides (Cl)	max. 0,02 %
		Sulphates (SO ₄)	max. 0,2 %
		Iron (Fe)	max. 0,1 %

ammonium hydrogen difluoride pure

CHEM*421381603

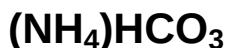
50 g	100 g	Assay	min. 93,0 %
250 g	500 g	Residue on ignition (as SO ₄)	max. 0,05 %
750 g	1 kg	Chlorides (Cl)	max. 0,005 %
2 kg	3 kg	Sulphates (SO ₄)	max. 0,05 %
5 kg	10 kg	Zinc (Zn)	max. 0,001 %
15 kg	20 kg	Copper (Cu)	max. 0,001 %
25 kg		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,005 %
		Appearance	colourless crystals

ammonium hydrogen difluoride pure p. a.**CHEM*111381604**

50 g	100 g	Assay	min. 95,0 %
250 g	500 g	Residue on ignition (as SO ₄)	max. 0,02 %
750 g	1 kg	Chlorides (Cl)	max. 0,001 %
2 kg	3 kg	Sulphates (SO ₄)	max. 0,01 %
5 kg	10 kg	Zinc (Zn)	max. 0,0001 %
15 kg	20 kg	Copper (Cu)	max. 0,0001 %
25 kg		Lead (Pb)	max. 0,0005
		Iron (Fe)	max. 0,001 %
		Appearance	colourless crystals

AMMONIUM BICARBONATE

Amonu wodorowęglan



M = 79,06 g/mol

CAS: 1066-33-7

WE: 213-911-5



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	67 hPa (20°C)
Colour:	white	Density:	1,586 g/cm ³ (20°C)
Odor:	sharp (ammoniacal)	Bulk density:	700-850 kg/m ³
pH:	approx 8 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	105°C distribution	in water:	220 g/l (20°C)
Boiling point:	not applicable	in organic solvent:	no data
Auto-ignition temperature:	not applicable	Log P _{ow} :	-2,4
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium bicarbonate pure

CHEM*421403709

50 g	100 g	Assay	98,0 – 101,0 %
250 g	500 g	Tar substances	passes test
750 g	1 kg	Iron (Fe)	max. 0,0005 %
2 kg	3 kg	Calcium (Ca)	max. 0,005 %
5 kg	10 kg	Heavy metals (as Pb)	max. 0,001 %
15 kg	20 kg	Arsenic (As)	max. 0,0001 %
25 kg		Sulphates (SO ₄)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,003 %
		Residue on ignition (as SO ₄)	max. 0,01 %
		Substances insoluble in water	max. 0,01 %

ammonium bicarbonate pure p. a.**CHEM*111403700**

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Cobalt (Co)	max. 0,0005 %
1 kg	5 kg	Substances insoluble in water	max. 0,005 %
10 kg		Residue on ignition (as SO ₄)	max. 0,05 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulfides (S)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0005 %
		Iron (Fe)	max. 0,0001 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,001 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,001 %
		Zinc (Zn)	max. 0,0005 %

AMMONIUM IRON(II) SULFATE HEXAHYDRATE

Amonu żelaza (II) siarczan 6 hydrat



M = 392,14 g/mol

CAS: 7783-85-9

WE: 233-151-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue - green	Vapor pressure:	no data
Odor:	odorless	Density:	1,86 g/cm ³ (20°C)
pH:	approx. 3 - 5 (50 g/l H ₂ O 20°C)	Bulk density:	approx 900 kg/m ³
Melting point:	distribution: 100 - 110°C	Solubility:	
Boiling point:	no data	in water:	269 g/l (20°C), 730 g/l (80°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

ammonium iron(II) sulfate hexahydrate pure

CHEM*421366004

50 g	100 g	Assay	98,0 – 101,0 %
250 g	500 g	Substances insoluble in H ₂ SO ₄	max. 0,01 %
750 g	1 kg	Chlorides (Cl)	max. 0,005 %
5 kg	10 kg	Phosphates (PO ₄)	max. 0,005 %

ammonium iron(II) sulfate hexahydrate pure p. a.

CHEM*111366001

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Iron (Fe, III)	max. 0,01 %
1 kg	5 kg	Chlorides (Cl)	max. 0,002 %
10 kg	15 kg	Phosphates (PO ₄)	max. 0,003 %
25 kg		Manganese (Mn)	max. 0,015 %
		Zinc (Zn)	max. 0,01 %
		Copper (Cu)	max. 0,005 %
		Alkaline metals (as sulphates)	max. 0,1 %

AMMONIUM IRON(II) SULFATE HEXAHYDRATE ANALYTICAL WEIGHED AMOUNT

Amonu żelaza (II) siarczan odważka analityczna



M = 392,14 g/mol

CAS: 7783-85-9

WE: 233-151-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue - green	Vapor pressure:	no data
Odor:	odorless	Density:	1,86 g/cm ³ (20°C)
pH:	approx. 3 - 5 (50 g/l H ₂ O, 0°C)	Bulk density:	approx 900 kg/m ³
Melting point:	distribution: 100 - 110°C	Solubility:	
Boiling point:	no data	in water:	269 g/l (20°C), 730 g/l (80°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

Ammonium iron(II) sulfate hexahydrate 0,1 mol/l analytical weighed amount
CHEM*161366001

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

AMMONIUM IRON (II) SULFATE STANDARD SOLUTIONS

Amonu żelaza (II) siarczan roztwory mianowane



M = 284,04 g/mol

CAS: 10045-89-3

WE: 233-151-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Vapor pressure:	no data
Colour:	blue - green	Density:	approx 1,05 g/cm ³ (20°C)
Odor:	odorless	Solubility:	
pH:	approx 3 - 5	in water:	soluble
Melting point:	not applicable	in organic solvent:	no data
Boiling point:	no data		
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium iron (II) sulfate 0,01 mol/l

CHEM*811366005

100 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1 l			

ammonium iron (II) sulfate 0,05 mol/l

CHEM*811366002

100 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1 l			

ammonium iron (II) sulfate 0,1 mol/l

CHEM*811366000

100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l			

ammonium iron (II) sulfate 0,125 mol/l

CHEM*811366003

100 ml	500 ml	Titer	0,1245 – 0,1255 mol/l
1 l			

ammonium iron (II) sulfate 0,25 mol/l

CHEM*811366001

100 ml	500 ml	Titer	0,249 – 0,251 mol/l
1 l			

ammonium iron (II) sulfate 0,5 mol/l**CHEM*811366004**

100 ml

500 ml

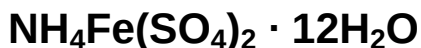
Titer

0,498 – 0,502 mol/l

1 l

AMMONIUM IRON (III) SULFATE DODECAHYDRATE

Amonu żelaza (III) siarczan 12 hydrat



M = 482,18 g/mol

CAS: 7783-83-7

WE: 233-382-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	purple	Vapor pressure:	no data
Odor:	odorless	Density:	1,71 g/cm ³
pH:	approx. 1,8 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 750 kg/m ³
Melting point:	39 - 41°C	Solubility:	
Boiling point:	no data	in water:	1240 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

Ammonium iron (III) sulfate dodecahydrate pure

CHEM*421367404

50g	100g	Assay	97,0 – 102,0 %
250g	500g	Substances insoluble in water	max. 0,015 %
750g	1kg	Chlorides (Cl)	max. 0,005 %
		Nitrate (NO ₃)	max. 0,05 %
		Phosphates (PO ₄)	max. 0,006 %
		Iron (Fe)	max. 0,005 %
		Copper (Cu)	max. 0,01 %
		Zinc (Zn)	max. 0,01 %
		Alkaline metals (as sulphates)	max. 0,2 %

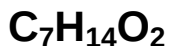
Ammonium iron (III) sulfate dodecahydrate pure p. a.

CHEM*111367401

25g	50g	Assay	98-101 %
100 g	250g	Substances insoluble in water	max. 0,01 %
500g	750g	pH (5%, 20°C)	min. 1,3
1kg		Chlorides (Cl)	max. 0,001 %
		Nitrate (NO ₃)	max. 0,03 %
		Phosphates (PO ₄)	max. 0,006 %
		Iron (Fe)	max. 0,002 %
		Manganese (Mn)	max. 0,01 %
		Copper (Cu)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Alkaline metals (as sulphates)	max. 0,05 %

AMYL ACEATE

n-Amylu octan



M = 130,19 g/mol

CAS: 628-63-7

WE: 211-047-3



H: 226, EUH066

P: 210

RID/ADR: 3, III

UN: 1104



Physical and chemical properties:

Character:	liquid	top:	7,5% v/v
Colour:	colourless	Viscosity. 20°C:	0,80 mPa·s
Odor:	banana - pear	Vapor pressure:	5 hPa (20°C)
Melting point:	-78,5°C	Density:	0,876 g/cm ³ (20°C)
Boiling point:	148°C	Solubility:	
Auto-ignition temperature:	378,9°C	in water:	2,12 g/l H ₂ O (20°C)
Ignition temperature:	23°C	in organic solvent:	soluble
Explosion limits:			
bottom:	1,1% v/v		

amyl acetate pure

CHEM*421435400

100 ml	250 ml	Assay	min. 98,0 %
		Density (20°C)	0,873 - 0,876 g/cm ³
500 ml	1 l	Water	max. 0,25 %
		Acidity (as CH ₃ COOH)	max. 0,02 %
5 l		Residue on evaporation	max. 0,01 %
		Organic substances	passes test

amyl acetate pure p. a.

CHEM*111435400

100 ml	250 ml	Assay	min. 98,5 %
		Density (20°C)	0,874 - 0,876 g/cm ³
500 ml	1 l	Water	max. 0,2 %
		Acidity (as CH ₃ COOH)	max. 0,01 %
		n-amyl alcohol	max. 0,2 %
		Isoamyl alcohol	max. 0,1 %
		Isoamyl acetate	max. 1,5 %
		Residue on evaporation	max. 0,0025 %
		Organic substances	passes test

ANILINE

Anilina



M = 93,13 g/mol

CAS: 62-53-3

WE: 200-539-3



H: 301, 311, 317, 318, 331, 341, 351, 372, 400

P: 273, 280, 302+352, 305+351+338,
308+313, 309, 310

RID/ADR: 6.1, II

UN: 1547



Physical and chemical properties:

Character:	liquid	top:	11% v/v
Colour:	colourless	viscosity. 20°C:	4,4 mPa*s
Odor:	characteristic	Vapor pressure:	0,4 mbar (20°C)
pH:	approx 8,8 (36 g/l H ₂ O, 20°C)	Density:	1,02 g/cm ³ (20°C)
Melting point:	-6°C	Solubility:	
Boiling point:	184°C	in water:	34 g/l (20°C)
Auto-ignition temperature:	approx 530°C	in organic solvent:	soluble
Ignition temperature:	approx 76°C	log P _{OW} :	0,94
Explosion limits:			
bottom:	1,3% v/v		

aniline pure

CHEM*421458307

50 ml	100 ml	Assay (GC)	min. 99,5 %
250 ml	500 ml	Density (20°C)	1,022-1,025 g/cm ³
		Water	max. 0,3 %
1 l		Residue on ignition (as SO ₄)	max. 0,01 %

aniline pure p. a.

CHEM*111458308

50 ml	100 ml	Assay (GC)	min. 99,7 %
250 ml	500 ml	Density (20°C)	1,022-1,023 g/cm ³
		Water	max. 0,2 %
1 l		Residue on ignition (as SO ₄)	max. 0,005 %
		Organic substances	max. 0,1 %

STONE REMOVAL SOLUTION

płyn do usuwania kamienia

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335
P: 302+352, 305+351+338
RID/ADR: 8, III UN: 3264



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	yellow	Vapor pressure:	12 mbar (20°C)
Odor:	sharp	Density:	1,10-1,11 g/cm ³
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	approx 110°C	in organic solvent:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

stone removal solution

CHEM*765966200

500 ml	1 l	Form	liquid
2.5 l	3 l	Colour	yellow
5 l	10 l	Odor	acetic
20 l	30 l	Density (20°C)	approx. 1,1 g/cm ³
60 l		Appearance	clear liquid
		Assay HCl	approx 15,0 %

ANTIMONY (III) CHLORIDE

Antymonu (III) chlorek



M = 228,11 g/mol

CAS: 10025-91-9

WE: 233-047-2



H: 314, 411
P: 273, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1733



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	0,16 hPa (20°C)
Odor:	characteristic	Density:	3,14 g/cm ³ (20°C)
pH:	sour	Bulk density:	approx 1600 kg/m ³
Melting point:	73°C	Solubility:	
Boiling point:	223°C (1013 hPa)	in water:	931 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	ethanol (20°C)
Ignition temperature:	not applicable		

antimony (III) chloride pure

CHEM*421482500

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Arsenic (As)	max. 0,02 %
250 g	500 g	Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,002 %
750 g			

antimony (III) chloride pure p. a.

CHEM*111482500

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Sulphates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,01%
250 g	500 g	Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,003 %
750 g		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

ANTIMONY (III) OXIDE

Antymonu (III) tlenek



M = 291,5 g/mol

CAS: 1309-64-4

WE: 215-175-0



H: 351

P: 281, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	13,3 hPa (660°C)
Colour:	white	Density:	5,4 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx. 800 - 1300 kg/m ³
pH:	no data	Solubility:	
Melting point:	656°C	in water:	2,7 mg/l (20°C)
Boiling point:	1550°C	in other solvents:	HCl
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

antimony (III) oxide pure

CHEM*421483806

10 g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Chlorides (Cl)	max. 0,1%
750 g		Sulphates (SO ₄)	max. 0,02%
		Lead (Pb)	max. 0,01%
		Arsenic (As)	max. 0,05%
		Iron (Fe)	max. 0,01%

antimony (III) oxide pure p. a.

CHEM*111483806

10 g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Chlorides (Cl)	max. 0,05%
750 g		Sulphates (SO ₄)	max. 0,01%
		Copper (Cu)	max. 0,002%
		Lead (Pb)	max. 0,005%
		Calcium (Ca)	max. 0,002%
		Arsenic	max. 0,001%
		Iron (Fe)	max. 0,005%

CANADA BALSAM FOR MICROSCOPY

Balsam kanadyjski do mikroskopii

M = not applicable

CAS: 8007-47-4

WE: 232-362-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	very dense liquid	Ignition temperature:	no data
Colour:	yellowish green	Explosion limits:	no data
Odor:	aromatic	Vapor pressure:	no data
pH:	no data	Density:	0,98 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvent:	toluene, xylene

canada balsam for microscopy

CHEM*591571602

50 ml	100 ml	Refractive index (20°C)	1,522-1,530
200 ml	250 ml		
500 ml	1 l		
2,5 l			

BARIUM NITRATE

Baru azotan



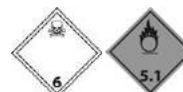
M = 261,32 g/mol

CAS: 10022-31-8

WE: 233-020-5



H: 272, 302, 332
P: 210, 302 + 352
RID/ADR: 5.1 (6.1), II UN: 1446



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	not applicable
Odor:	odorless	Density:	3,24 g/cm ³ (20°C)
pH:	5-8 (50 g/l H ₂ O, 25°C)	Bulk density:	1900 kg/m ³
Melting point:	592 - 595°C	Solubility:	
Boiling point:	thermal decomposition >550°C	in water:	90 g/l (25°C)
Auto-ignition temperature:	not flammable	in organic solvent:	no data
Ignition temperature:	no inflammation		

barium nitrate pure

CHEM*421575206

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Chlorides (Cl)	max. 0,005 %
5 kg		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,002 %
		Calcium and strontium (Ca + Sr)	max. 0,2 %
		Sodium and potassium (Na + K)	max. 0,1 %

barium nitrate pure p.a.

CHEM*111575207

25 g	50 g	Assay	min. 99,0%
100 g	250 g	Substances insoluble in water	max. 0,01%
500 g	750 g	Chlorides (Cl)	max. 0,002%
1 kg		Heavy metals (as Pb)	max. 0,001%
		Sodium and potassium (Na+K)	max. 0,05%
		Calcium and strontium (Ca+Sr)	max. 0,1%
		Iron (Fe)	max. 0,0005%

BARIUM CHLORIDE

Baru chlorek



M = 208,23 g/mol

CAS: 10361-37-2

WE: 233-788-1



H: 301+332

P: 301+310

RID/ADR: 6.1, III

UN: 1564



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapor pressure:	no data
Odor:	odorless	Density:	3,856 g/cm ³ (25°C, lit.)
pH:	no data	Bulk density:	no data
Melting point:	963°C (lit.)	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

barium chloride pure

CHEM*421579109

25 g	50 g	Assay	99,0 ÷ 102,0 %
100 g	250 g	Iron (Fe)	max. 0,001 %
		Calcium (Ca)	max. 0,2 %
500 g	1 kg	Strontium (Sr)	max. 0,2 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
		Substances insoluble in water	max. 0,02 %
		Appearance	white crystals

barium chloride pure p.a.

CHEM*111579110

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Iron (Fe)	max. 0,0002 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
1 kg		pH (5%, 20°C)	5,0 ÷ 8,0
		Total nitrogen (N)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Lead (Pb)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Strontium (Sr)	max. 0,01 %

BARIUM CHLORIDE DIHYDRATE

Baru chlorek 2 hydrat



M = 244,28 g/mol

CAS: 10326-27-9

WE: 233-788-1



H: 301+332

P: 301+310

RID/ADR: 6.1, III

UN: 1564



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapor pressure:	no data
Odor:	odorless	Density:	3,9 g/cm ³ (20°C)
pH:	approx 5,0 – 8,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1200-1400 kg/m ³
Melting point:	926°C	Solubility:	
Boiling point:	1830°C	in water:	263 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	insoluble
Ignition temperature:	not applicable		

barium chloride dihydrate pure

CHEM*421579108

50 g	100 g	Assay	99,0 ÷ 102,0 %
250 g	500 g	Iron (Fe)	max. 0,001 %
750 g	1 kg	Calcium (Ca)	max. 0,2 %
		Strontium (Sr)	max. 0,2 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
		pH (5%, 20°C)	5,0 ÷ 8,0
		Substances insoluble in water	max. 0,02 %
		Appearance	white crystals

barium chloride dihydrate pure p.a.

CHEM*111579109

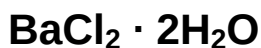
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Iron (Fe)	max. 0,0002 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	5,0 ÷ 8,0
		Total nitrogen (N)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Lead (Pb)	max. 0,0005 %
		Loss on drying (150°C)	max. 14,0-16,0 %
		Cadmium (Cd)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %

Copper (Cu)
Strontium (Sr)
Appearance

max. 0,0005 %
max. 0,01 %
white crystals

BARIUM CHLORIDE ANALYTICAL WEIGHED AMOUNT

Baru chlorek odważka analityczna



M = 244,28 g/mol

CAS: 10326-27-9

WE: 233-788-1



H: 301+332

P: 301+310

RID/ADR: 6.1, III

UN: 1564



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapor pressure:	no data
Odor:	odorless	Density:	3,9 g/cm ³ (20°C)
pH:	approx 5-8 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1200-1400 kg/m ³
Melting point:	926°C	Solubility:	
Boiling point:	1830°C	in water:	263 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	insoluble
Ignition temperature:	not applicable		

barium chloride 0,05 mol/l analytical weighed amount
CHEM*161579707

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

BARIUM CHLORIDE SOLUTIONS (3% < C < 25%)

Baru chlorek roztwory



M = 208,25 g/mol

CAS: 10361-37-2

WE: 233-788-1



H: 301, 332

P: 301+310

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	no data
pH:	5,0 – 8,0	Density:	
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium chloride 5%

CHEM*811579108

100 ml	250 ml	Assay	5,0 ± 0,1 %
500 ml	1 l	Density	approx 1,0434 g/cm ³
2.5 l	3 l		
5 l			

barium chloride 10%

CHEM*811579107

100 ml	250 ml	Assay	10,0 ± 0,5 %
500 ml	1 l	Density	approx 1,0921 g/cm ³
2.5 l	3 l		
5 l			

barium chloride 20%

CHEM*811579106

100 ml	250 ml	Assay	20,0 ± 0,5 %
500 ml	1 l	Density	approx 1,2031 g/cm ³
2.5 l	3 l		
5 l			

BARIUM CHLORIDE STANDARD SOLUTIONS (C < 0,15 MOL/L)

Baru chlorek, roztwory mianowane



M = 208,25 g/mol

CAS: 10361-37-2

WE: 233-788-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	no data
pH:	5,0 – 8,0	Density:	no data
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium chloride standard solution 0,05 mol/l

CHEM*811575209

500 ml

1 l

Titer

0,0498 – 0,0502 mol/l

barium chloride standard solution 0,1 mol/l

CHEM*811575207

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

BARIUM CHLORIDE STANDARD SOLUTIONS ($0,15 < C < 1,5 \text{ MOL/L}$)

Baru chlorek, roztwory mianowane

BaCl₂

M = 208,25 g/mol

CAS: 10361-37-2

WE: 233-788-1



H: 301+332

P: 301+310

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	no data
pH:	5,0 – 8,0	Density:	no data
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium chloride standard solution 0,5 mol/l

CHEM*811575208

500 ml

1l

Titer

0,498 – 0,502 mol/l

barium chloride standard solution 1 mol/l

CHEM*811579109

500 ml

1l

Titer

0,996 - 1,004 mol/l

BARIUM CHROMATE

Baru chromian



M = 253,33 g/mol

CAS: 10294-40-3

WE: 233-660-5



H: 302, 317, 332, 350, 410
P: 280, 301+310, 302+352, 304+340, 308+313
RID/ADR: 5.1, II UN: 3087



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapor pressure:	no data
Odor:	odorless	Density:	4,498 g/cm ³ (15°C)
pH:	no data	Bulk density:	no data
Melting point:	210°C	Solubility:	
Boiling point:	no data	in water:	0,337 *10 ⁻² g/l
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

barium chromate pure

CHEM*421580108

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in HCl	max. 0,2 %
		Chlorides (Cl)	max. 0,1 %
750 g	1 kg	Carbonate (CO ₃)	max. 0,08 %
		Iron (Fe)	max. 0,006 %
		Soluble chromate (as CrO ₃)	max. 0,1 %
		Appearance	yellow, crystalline powder

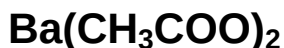
barium chromate pure p.a.

CHEM*111580109

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,1 %
		Chlorides (Cl)	max. 0,05 %
500 g	750 g	Carbonate (CO ₃)	max. 0,05 %
		Iron (Fe)	max. 0,003 %
1 kg		Soluble chromate (as CrO ₃)	max. 0,05 %
		Appearance	yellow, crystalline powder

BARIUM ACETATE

Baru octan



M = 255,43 g/mol

CAS: 543-80-6

WE: 208-849-0



H: 301, 332

P: 301+310

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	not applicable
Odor:	odorless	Density:	approx 2,47 g/cm ³
pH:	approx 6,5 - 8,5 (50 g/l H ₂ O)	Bulk density:	approx 1200 kg/m ³
Melting point:	approx 450°C	Solubility:	
Boiling point:	no data	in water:	720 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	weak in ethanol
Ignition temperature:	not applicable		

barium acetate pure

CHEM*421593302

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,04 %
750 g	1 kg	Acidity (CH ₃ COOH)	max. 0,15 %
		Chlorides (Cl)	max. 0,01 %
		Heavy metals (asPb)	max. 0,002 %
		Calcium and strontium (Ca+Sr)	max. 0,15 %
		Iron (Fe)	max. 0,001 %
		Alkaline metals	max. 0,1 %

barium acetate pure p.a.

CHEM*111593303

25 g	50 g	Assay	min. 99,0%
100 g	250 g	Substances insoluble in water	max. 0,02%
500 g	750 g	Acidity (CH ₃ COOH)	max. 0,1%
1 kg		Chlorides (Cl)	max. 0,005%
		Heavy metals (as Pb)	max. 0,001%
		Calcium and strontium (Ca+Sr)	max. 0,1%
		Iron (Fe)	max. 0,0005%
		Alkaline metals	max. 0,05%

BARIUM SULFATE

Baru siarczan



M = 233,4 g/mol

CAS: 7727-43-7

WE: 231-784-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	white	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	no data
pH:	3,5-10 (100 g/l, H ₂ O)	Density:	4.5 g/cm ³ (20°C)
Melting point:	1380°C	Bulk density:	approx 500 kg/m ³
Boiling point:	thermal	Solubility:	
	decomposition: 1580°C	in water:	< 0,01 g/l
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium sulfate pure

CHEM*421595304

100 g	250 g	Iron (Fe)	max. 0,01%
		Heavy metals (as Pb)	max. 0,005%
500 g	750 g	Arsenic (As)	max. 0,0003%
1 kg	3 kg	Barium salts soluble in water	passes test
		Phosphates (PO ₄)	max. 0,01%
5 kg	10 kg	Chlorides (Cl)	max. 0,01%
		Nitrate (NO ₃)	max. 0,01%
		Acidity (as H ₂ SO ₄)	max. 0,02%
		Alkalinity	passes test
		Substances soluble in HCl	max. 0,3%
		Appearance	white proszek

barium sulfate pure p.a.

CHEM*111595303

50 g	100 g	Substances soluble in HCl	max. 0,15 %
		Alkalinity	passes test
250 g	500 g	Acidity (H ₂ SO ₄)	max. 0,01 %
750 g	1 kg	Chlorides (Cl)	max. 0,001 %
		Nitrate (NO ₃)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulfates soluble in water (SO ₄)	max. 0,02 %
		Barium salts soluble in water	passes test
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe, III)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %

BARIUM THIOSULFATE

Baru tiosiarczan



M = 249,46 g/mol

CAS: 35112-53-9

WE: 252-375-7



H: 302, 332

P: 301+310

RID/ADR: not applicable

UN: not applicable



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	not applicable
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	no data
Melting point:	220°C	Solubility:	
Boiling point:	no data	in water:	
Auto-ignition temperature:	not applicable	in organic solvent:	insoluble
Ignition temperature:	not applicable		in ethanol

barium thiosulfate pure

CHEM*421596000

50 g	100 g	Assay	min. 98,0 %
250 g	500 g		
750 g	1 kg		

barium thiosulfate pure p.a.

CHEM*111596001

50 g	100 g	Assay	min. 99,0 %
250 g	500 g		
750 g	1 kg		

BARIUM CARBONATE

Baru węglan



M = 197,35 g/mol

CAS: 513-77-9

WE: 208-167-3



H: 302

P: 301+312

RID/ADR: 6.1, III

UN: 1564



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	4,43 g/cm ³ (20°C)
pH:	7-8 (0,016 g/l H ₂ O, 16°C)	Bulk density:	approx 350 kg/m ³
Melting point:	1740°C	Solubility:	
Boiling point:	not applicable	in water:	0,02 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	weak in ethanol
Ignition temperature:	not applicable		

barium carbonate pure

CHEM*421598602

100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in HCl	max. 0,1 %
1 kg	2 kg	Hydroxides and carbonate soluble in water	max. 0,05 %
10 kg	25 kg	Total nitrogen (N)	max. 0,005 %
		Sulfide (S)	max. 0,001 %
		Chlorides (Cl)	max. 0,01 %
		Iron (Fe)	max. 0,005 %
		Calcium and strontium (Ca + Sr)	max. 1,0 %
		Sodium and potassium (Na + K)	max. 0,25 %
		Heavy metals (as Pb)	max. 0,002 %

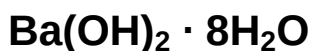
barium carbonate pure p.a.

CHEM*111598603

100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in HCl	max. 0,02 %
1 kg	2 kg	Hydroxides and carbonate soluble in water	max. 0,02 %
10 kg	25 kg	Total nitrogen (N)	max. 0,002 %
		Sulfide (S)	max. 0,0005 %
		Chlorides (Cl)	max. 0,002 %
		Iron (Fe)	max. 0,001 %
		Calcium and strontium (Ca + Sr)	max. 0,25 %
		Sodium and potassium (Na + K)	max. 0,1 %
		Heavy metals (as Pb)	max. 0,001 %

BARIUM HYDROXIDE OCTAHYDRATE

Baru wodorotlenek 8 hydrat



M = 315,48 g/mol

CAS: 12230-71-6

WE: 241-234-5



H: 302, 314, 332
P: 280+301+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 3262



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	not applicable
Odor:	odorless	Density:	2,18 g/cm ³ (20°C)
pH:	approx 12,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 900 - 1100 kg/m ³
Melting point:	78°C	Solubility:	
Boiling point:	decomposition >95°C	in water:	72 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	no data
Ignition temperature:	not applicable		

Barium hydroxide octahydrate pure

CHEM*421599400

50 g	100 g	Assay	min. 95,0 %
250 g	500 g	Carbonate (as BaCO ₃)	max. 3 %
750 g	1 kg	Substances insoluble in HCl	max. 0,05 %
		Chlorides (Cl)	max. 0,005 %
		Sulfide (S)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Heavy metals (as Cu)	max. 0,001 %
		Alkaline metals (as SO ₄)	max. 0,1 %

Barium hydroxide octahydrate pure p.a.

CHEM*111599400

50 g	100 g	Assay	min. 97,0 %
250 g	500 g	Carbonate (as BaCO ₃)	max. 2 %
750 g	1 kg	Substances insoluble in HCl	max. 0,005 %
		Chlorides (Cl)	max. 0,002 %
		Sulfide (S)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %
		Heavy metals (as Cu)	max. 0,0005 %
		Alkaline metals (as SO ₄)	max. 0,05 %

BARIUM HYDROXIDE STANDARD SOLUTIONS (C < 0,3 MOL/L)

Baru wodorotlenek roztwory mianowane



M = 171,34 g/mol

CAS: 17194-00-2

WE: 241-234-5



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	not applicable
pH:	approx 12,5	Density:	no data
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium hydroxide standard solution 0,05 mol/l

CHEM*811599400

100 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1l

barium hydroxide standard solution 0,1 mol/l

CHEM*811599401

100 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

BARIUM HYDROXIDE STANDARD SOLUTIONS ($0,3 < C \leq 0,6$ MOL/L)

Baru wodorotlenek roztwory mianowane



M = 171,34 g/mol

CAS: 17194-00-2

WE: 241-234-5



H: 315, 319
P: 302+352, 305+351+338
RID/ADR: 8, III UN: 3266



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	not applicable
pH:	approx 12,5	Density:	no data
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium hydroxide standard solution 0,5 mol/l

CHEM*811599403

100 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

BARIUM HYDROXIDE STANDARD SOLUTIONS (0,6 < C < 1,9 MOL/L)

Baru wodorotlenek roztwory mianowane



M = 171,34 g/mol

CAS: 17194-00-2

WE: 241-234-5



H: 302, 314, 332
P: 280+301+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 3262



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	not applicable
pH:	approx 12,5	Density:	not applicable
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvent:	no data

barium hydroxide standard solution 1 mol/l

CHEM*811599402

100 ml

500 ml

Titer

0,996 – 1,004 mol/l

1 l

GIEMSA STAIN

Barwnik Giemzy

M = not applicable

CAS: not applicable

WE: not applicable



H: 319

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green-black	Vapor pressure:	no data
Odor:	weak characteristic	Density:	no data
pH:	no data	Bulk density:	approx 520 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	weakly (20°C)
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	no data		

giemsa stain

CHEM*121601163

5 g	10 g
25 g	50 g
75 g	100 g

Maximum of absorption (methanol)

min. 648 nm

GIEMSA STAIN SOLUTION

Barwnik Giemzy roztwory

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 311, 33, 370
P: 210, 233, 280, 302+352, 309, 310
RID/ADR: 3 (6.1), II UN: 1992



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	green - black	Vapor pressure:	no data
Odor:	characteristic	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	11°C		

giemsa stain solution

CHEM*121601164

50 ml	100 ml	Assay of alcohol	passes test
250 ml	500 ml	Assay of stain	passes test
1 l			

BENZALDEHYDE

Benzaldehyd

C₇H₆O

M = 106,13 g/mol

CAS: 100-52-7

WE: 202-860-4



H: 302

P: 262

RID/ADR: 9, III

UN: 1990



Physical and chemical properties:

Character:	liquid	top:	no data
Colour:	colourless to yellow	Viscosity (20°C):	1,4 mPa·s
Odor:	almond	Vapor pressure:	1,3 hPa (20°C)
pH:	5,9 (1g/l, H ₂ O, 20°C)	Density:	1,04 g/cm ³ (20°C)
Melting point:	-26°C	Solubility:	
Boiling point:	179°C	in water:	0,3% (25°C)
Auto-ignition temperature:	190°C	in organic solvent:	ethanol, diethyl ether, benzene
Ignition temperature:	64°C	log P _(o/w) :	1,48
Explosion limits:			
bottom:	1,4 % v/v		

benzaldehyde pure

CHEM*421615306

50 ml	100 ml	Assay	min. 98,0 %
250 ml	500 ml	Density (20°C)	1,042 – 1,047 g/cm ³
		Refractive index (20°C)	1,544 - 1,547
1 l		Acid number	max. 5mg KOH/g

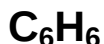
benzaldehyde pure p.a.

CHEM*111615307

50 ml	100 ml	Assay (GC)	min. 99,0 %
250 ml	500 ml	Nitrobenzene (C ₆ H ₅ NO ₂)	max. 0,001 %
		Acids (as benzoic acid)	max. 1,0 %
1 l		Lead (Pb)	max. 0,0001 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

BENZENE

Benzen



M = 78,11 g/mol

CAS: 71-43-2

WE: 200-753-7



H: 225, 304, 315, 319, 340, 350, 372
P: 201, 210, 301+310, 302+352,
305+351+338, 308+313
RID/ADR: 3, II UN: 1114



Physical and chemical properties:

Character:	liquid	top:	8% v/v
Colour:	colourless	Viscosity (20°C):	0,6487 mPa·s
Odor:	aromatic	Vapor pressure:	101 mbar (20°C)
pH:	no data	Density:	0,879 g/cm ³ (20°C)
Melting point:	approx 5,5°C	Bulk density:	not applicable
Boiling point:	approx 80°C	Solubility:	
Auto-ignition temperature:	555°C	in water:	1,8 g/l (20°C)
Ignition temperature:	-11°C	in organic solvent:	soluble
Explosion limits:		log P _(o/w) :	2,15
bottom:	1,2 % v/v		

benzene pure

CHEM*421625009

500 ml	1 l	Appearance	colourless, clear liquid
2.5 l	3 l	Assay	min. 99,5 %
5 l	10 l	Temperature of crystallization	min. 5 °C
20 l	30 l	Water	max. 0,1 %
60 l	200 l	pH of water extract	neutral
		Residue on evaporation	max. 0,005 %
		Darkening substances under the influence H ₂ SO ₄	passes test
		Tiofen (C ₄ H ₄ S)	max. 0,0005 %
		Total sulfur (S)	max. 0,001 %

benzene pure p.a.

CHEM*111625000

500 ml	1 l	Appearance	colourless, clear liquid
2.5 l	3 l	Assay	min. 99,7 %
5 l	10 l	Colour	max. 10 Hazen
20 l		Temperature of crystallization	min. 5,2 °C
		Water	max. 0,03 %
		pH of water extract	neutral
		Residue on evaporation	max. 0,001 %
		Darkening substances under the influence H ₂ SO ₄	passes test
		Tiofen (C ₄ H ₄ S)	max. 0,0001 %
		Total sulfur (S)	max. 0,0005 %

benzene HPLC		CHEM*611599401	
1 l	2.5 l	Assay (GC)	min. 99,8 %
		Non-volatile matter	max. 0,0002 %
		Acidity (as HCl)	max. 0,0005 %
		Alkalinity (as NH ₃)	max. 0,0002 %
		Water (KF)	max. 0,02 %
		UV Transmission (1cm, water):	
		280 nm	min. 20 %
		290 nm	min. 80 %
		340 nm	min. 98 %
benzene GC		CHEM*611599403	
1 l	2.5 l	Colour	max. 10 Hazen
		Residue on evaporation	max. 3 mg/l
		Water	max. 0,02 %
		Signal (GC) in the range of 1,2,4-trichlorobenzene to dekachlorobifenyl	max. 3 pg/ml
benzene GC standard		CHEM*611599402	
25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

BENZYL ALCOHOL

Benzylowy alkohol



M = 108,14 g/mol

CAS: 100-51-6

WE: 202-859-9



H: 302, 332

P: 271

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Viscosity 25°C:	5,04 mPa·s
Colour:	colourless	Vapor pressure:	0,13 mbar (20°C)
Odor:	aromatic	Density:	1,043-1,049 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	-15°C	in water:	39 g/l (20°C)
Boiling point:	205°C	in organic solvent:	ethanol, diethyl ether, acetone, chloroform, benzene
Auto-ignition temperature:	436°C		
Ignition temperature:	96°C		
Explosion limits:			
bottom:	1,3 % v/v	log P(w/o):	no data
top:	13 % v/v		

benzyl alcohol pure

CHEM*421716803

500 ml	1 l	Assay (GC)	min. 97,0 %
2.5 l	3 l	Colour	max. 20Hazen
5 l	10 l	Refractive index	1,537 – 1,543
20 l		Acidity (as benzoic acid)	max. 0,02 %
		Water	max. 0,2 %
		Non-volatile matter	max. 0,05 %
		Residue on evaporation	max. 0,05 %
		Benzaldehyde	max. 0,1 %
		Density (20°C)	approx 1,045 g/cm ³
		Peroxide number	max. 5

benzyl alcohol pure p.a.

CHEM*111716804

500 ml	1 l	Assay (GC)	min. 99,5 %
2.5 l	3 l	Colour	max. 10Hazen
5 l	10 l	Refractive index	1,538 – 1,541
20 l		Acidity (as benzoic acid)	max. 0,005 %
		Non-volatile matter	max. 0,001 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Benzaldehyde	max. 0,01 %
		Acetophenone	max. 0,02 %
		Water	max. 0,1 %
		Peroxide number	max. 5

HYDROCARBONS, C₆₋₁₁, HYDROTREATED, DEAROMATIZED

Benzyna ekstrakcyjna

M = not applicable

CAS: 93763-33-8

WE: 297-852-0



H: 225, 304, 315, 336, 410

P: 210, 240, 273, 301+310, 331, 403+235

RID/ADR: 3, II

UN: 1268



Physical and chemical properties:

Character:	liquid	bottom:	0,72% v/v
Colour:	colourless	top:	7,21% v/v
Odor:	characteristic	Vapor pressure:	approx 22 kPa at 37,8°C; 38,1 kPa at 50°C
pH:	no data	Density:	max. 0,775 g/cm ³ (20°C)
Melting point:	<-20°C	Solubility:	
Boiling point:	63-100°C	in water:	insoluble
Auto-ignition temperature:	310°C	in organic solvent:	soluble
Ignition temperature:	-7°C		
Explosion limits:			

Hydrocarbons, C₆₋₁₁ hydrotreated dearomatized

CHEM*757651425

250 ml	500 ml	Density (20°C)	max. 0,775 g/cm ³
1 l	2.5 l	Beginning of the distillation	min. 80°C
3 l	5 l	End of (98%) distillation	approx 120°C
10 l	20 l	pH of water extract	neutral
30 l	60 l	Sulfur (S)	max. 0,005 %
200 l		Benzene	max. 0,1 %
		Aromatic substances	max. 5,0 %
		Non-volatile matter	0

2, 2' - BIPYRIDYL

2,2'-bipirydył

C₁₀H₈N₂

M = 156,18 g/mol

CAS: 366-18-7

WE: 206-674-4



H: 301, 312
P: 280, 302+32
RID/ADR: 6.1, III

UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	no data
Odor:	weak	Density:	no data
pH:	approx 7,5 (5 g/l H ₂ O, 25°C)	Bulk density:	approx 500 kg/m ³
Melting point:	69-71 °C	Solubility:	
Boiling point:	~272°C (1013 hPa)	in water:	5 g/l (25°C)
Auto-ignition temperature:	no data	in organic solvent:	ethanol, approx 500 g/l (25°C)
Ignition temperature:	121°C		

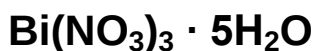
2,2'- bipyridyl pure p.a.

CHEM*113677209

1g	5g	Appearance	crystalline white powder
7,5g	10g	Assay	99,5 – 101,0%
15g	25g	Melting point	min. 69 °C
50g		Solubility in HCl	passes test
		Sensitivity to iron (II) ions	0,0000001 - 0,0000001 g/ml
		TLC test	passes test
		Residue on roasting (as SO ₄)	max. 0,2%

BISMUTH (III) NITRATE PENTAHYDRATE

Bizmutu (III) azotan 5 hydrat



M = 485,07 g/mol

CAS: 10361-44-1

WE: 233-791-8



H: 272
P: 20, 370+378
RID/ADR: 5.1, II

UN: 1477



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	not applicable
Odor:	weak	Density:	2,83 g/cm ³ (20°C)
pH:	approx 2 (100 g/l H ₂ O, 25°C)	Bulk density:	approx 900 kg/m ³
Melting point:	30°C(lit.)	Solubility:	
Boiling point:	75-80 °C	in water:	
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	not applicable		

Bismuth (III) nitrate pentahydrate pure

CHEM*421821203

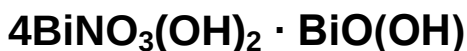
25g	50g	Appearance	colourless, crystalline powder or small crystals
100g	250g	Assay	min. 98,0 %
500g	1 kg	Substances insoluble in HNO ₃	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,05 %
		Ammonium salts (NH ₄)	max. 0,005 %
		Iron (Fe)	max. 0,002 %
		Copper (Cu)	max. 0,002 %
		Magnesium (Mg)	max. 0,01 %
		Lead (Pb)	max. 0,02 %
		Silver (Ag)	max. 0,01 %
		Sodium and potassium, calcium (Na+K+Ca)	max. 0,02 %
		Arsenic (As)	max. 0,0002 %

Bismuth (III) nitrate pentahydrate pure p.a.**CHEM*111821204**

10g	25g	Appearance	colourless, crystalline powder or small crystals
50g	100g	Assay	min. 99,0 %
250g	500g	Substances insoluble in HNO ₃	max. 0,003 %
1 kg		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,02 %
		Ammonium salts (NH ₄)	max. 0,0025 %
		Arsenic (As)	max. 0,0001 %
		Magnesium (Mg)	max. 0,005 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,01%
		Sodium (Na)	max. 0,01%
		Potassium (K)	max. 0,005%
		Calcium (Ca)	max. 0,005 %
		Silver (Ag)	max. 0,001 %
		Iron (Fe)	max. 0,001%

BISMUTH (III) SUBNITRATE

Bizmutu (III) azotan zasadowy



M = 1461,99 g/mol

CAS: 1304-85-4

WE: 215-136-8



H: 272
P: 280, 370+378
RID/ADR: 5.1, II

UN: 1477



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	not applicable
Odor:	weak	Density:	4,93 g/cm ³ (20°C)
pH	approx 3,2 (50 g/l H ₂ O, 20°C)	Bulk density:	600 kg/m ³
Melting point:	approx 260°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	not applicable		

Bismuth (III) subnitrate pure

CHEM*421821600

10g	25g	Appearance	white powder
50g	100g	Assay Bi	71,0 – 74,0 %
250g	500g	Loss on drying (105°C)	max. 3,0 %
1 kg		Chlorides (Cl)	max. 0,02 %
		Sulfates (SO ₄)	max. 0,03 %
		Ammonium salts (NH ₄)	max. 0,01 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,02 %
		Silver (Ag)	max. 0,0025 %

Bismuth (III) subnitrate pure p.a.

CHEM*111821601

10g	25g	Appearance	white powder
50g	100g	Assay (Bi ₂ O ₃)	79,0 – 82,0 %
250g	500g	Substances insoluble in HNO ₃	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Ammonium salts (NH ₄)	max. 0,003 %
		Arsenic (As)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,01 %
		Sodium and potassium, calcium (Na+K+Ca)	max. 0,15 %
		Silver (Ag)	max. 0,002 %
		Iron (Fe)	max. 0,003 %

BROMOPHENOL BLUE

Błękit bromofenolowy

C₁₉H₁₀Br₄O₅S

M = 669,96 g/mol

CAS: 115-39-9

WE: 204-086-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	pink	Density:	no data
Odor:	characteristic	Bulk density:	approx 730 kg/m ³
pH:	no data	Solubility:	
Melting point:	273°C(decomposition)	in water:	(20°C)
Boiling point:	no data	in organic solvent:	alcohol 9 g/l (20°C)
Auto-ignition temperature:	no data	log P _{OW} :	6,77
Ignition temperature:	no data		

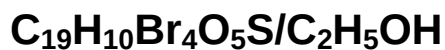
Bromophenol Blue ind.

CHEM*121840408

5 g	10 g	Solubility in ethanol	passes test
25 g	50 g	TLC test	passes test
		pH range	passes test
100 g		Loss on drying	max. 2,0 %
		Molar absorption coefficient:	
		E (pH 3,0; λ = 420 ÷ 460 nm)	min. 23000
		E (pH 4,6; λ = 580 ÷ 600 nm)	min. 61000
		Appearance	orange powder

BROMOPHENOL BLUE 0,1% IN ETHANOL

Błękit bromofenolowy 0,1% r-r w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Vapor pressure:	no data
Odor:	etanolu	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	soluble
Auto-ignition temperature:	425°C (etanol)		
Ignition temperature:	23°C (etanol)		

Bromophenol Blue r-r 0,1% in ethanol

CHEM*121840409

50 ml	100 ml
250 ml	500 ml

Assay

approx 1 g/l

BROMOTHYMOL BLUE

Błękit bromotymolowy



M = 624,4 g/mol

CAS: 76-59-5

WE: 200-971-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	pink	Vapor pressure:	no data
Odor:	weak	Density:	no data
pH:	no data	Bulk density:	approx 450 kg/m ³
Melting point:	200 - 202°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvent:	alcohol ~10 g/l (20°C)

Bromothymol Blue ind.

CHEM*211841409

5 g	10 g	Solubility in alcohol	total
25 g	50 g	Sensitivity to change of pH	passes test
		TLC test	passes test
100 g		Molar absorption coefficient:	
		E (pH 6,0; λ= 400-450nm)	min. 16000
		E (pH 7,5; λ= 600-640nm)	min. 30000
		Loss on drying	max. 1,4%

BROMOTHYMOL BLUE SOLUTION IN ETHANOL

Błękit bromotymolowy w alkoholu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	23°C (etanol)
Colour:	no data	Ignition temperature:	no data
Odor:	etanolu	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature: (etanol)	approx 425°C	in organic solvent:	soluble

Bromothymol Blue solution 0,1% in ethanol

CHEM*211841407

50 ml	100 ml	Assay	approx 1 g/l
250 ml	500 ml	Colour change:	
		pH 5,8	yellow
		pH 7,6	blue

Bromothymol Blue solution 0,5% in ethanol

CHEM*211841412

50 ml	100 ml	Assay	approx 5 g/l
250 ml	500 ml	Colour change:	
		pH 5,8	yellow
		pH 7,6	blue

Bromothymol Blue solution 1% in ethanol

CHEM*211841413

50 ml	100 ml	Assay	approx 10 g/l
250 ml	500 ml	Colour change:	
		pH 5,8	yellow
		pH 7,6	blue

Bromothymol Blue solution 1,5% in ethanol

CHEM*211841414

50 ml	100 ml	Assay	approx 15 g/l
250 ml	500 ml	Colour change:	
		pH 5,8	yellow
		pH 7,6	blue

METHYLENE BLUE

Błękit metylenowy



M = 319,86 g/mol

CAS: 61-73-4

WE: 200-515-2



H: 302

P: 264, 270, 301+312, 330

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	blue	Density:	no data
Odor:	odorless	Bulk density:	approx 400 - 600 kg/m ³
pH:	approx 3 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	approx 180°C with decomposition	in water:	approx 50 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvent:	alcohol 15 g/l, chloroform
Ignition temperature:	no data		

methylene blue ind.

CHEM*121854808

5 g	10 g	Assay	min. 82,0 %
25 g	50 g	Loss on drying (110°C)	8,0 – 16,0 %
100 g	250 g	Maximum of absorption (H ₂ O)	663 - 667 nm
500 g		Absorption (1%, 1cm, water)	min. 2200
		Coefficient max. of absorption P*15 nm	1,21 - 1,7
		TLC test	passes test
		Appearance	green crystals

METHYLENE BLUE SOLUTION IN ETHANOL

Błękit metylenowy w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	23°C (etanol)
Colour:	no data	Ignition temperature:	no data
Odor:	etanolu	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature: (etanol)	approx 425°C	in organic solvent:	soluble

methylene blue solution 0,1% in ethanol

CHEM*121854813

50 ml	100 ml	Assay	approx 1 g/l
250 ml	500ml		
1l			

METHYLENE BLUE IN SOLUTION

Błękit metylenowy w roztworze



M = 319,86 g/mol

CAS: 61-73-4

WE: 200-515-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	blue	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	no data

methylene blue solution 0,01%

CHEM*121854811

50 ml	100 ml	Assay	approx 0,1 g/l
250 ml	500ml		
1l			

methylene blue solution 0,1%

CHEM*121854810

50 ml	100 ml	Assay	approx 1 g/l
250 ml	500ml		
1l			

methylene blue solution 0,5%

CHEM*121854812

50 ml	100 ml	Assay	approx 5 g/l
250 ml	500ml		
1l			

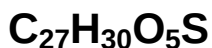
methylene blue solution 1%

CHEM*121854809

50 ml	100 ml	Assay	approx 10 g/l
250 ml	500ml		
1l			

THYMOL BLUE

Błękit tymolowy



M = 466,6 g/mol

CAS: 76-61-9

WE: 200-973-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Density:	no data
Colour:	green	Bulk density:	approx 350 kg/m ³
Odor:	characteristic	Solubility:	
pH:	no data	in water:	insoluble
Melting point:	221°C	in organic solvent:	alcohol 5 g/l, etanol
Auto-ignition temperature:	no data	log P _{OW} :	7,21
Ignition temperature:	no data	Thermal decomposition:	220°C
Vapor pressure:	no data		

thymol blue ind.

CHEM*211872506

5 g	10 g	Solubility in alcohol	passes test
25 g	50 g	TLC test	passes test
100 g	250 g	Sensitivity to change pH	passes test
500 g		Molar absorption coefficient:	
		E (pH 1,2; λ = 545 ÷ 555 nm)	min. 16000
		E (pH 9,6; λ = 595 ÷ 605 nm)	min. 16000
		Appearance	green powder or crystals
		Thymol	max. 0,8 %

THYMOL BLUE SOLUTION 0,1% IN ETHANOL

Błękit tymolowy roztwór 0,1% w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	23°C (ethanol)
Colour:	no data	Vapor pressure:	no data
Odor:	alcoholic	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solve:	soluble
Auto-ignition temperature: (ethanol)	approx 425°C		

thymol blue solution 0,1% in ethanol

CHEM*211872507

100 ml

250 ml

Assay

approx 1 g/l

500 ml

Colour change:

pH 1,2

purple

pH 2,8

brownish

pH 7,8

green-yellow

pH 9,5

blue

BROMINE

Brom

Br₂

M = 159,82 g/mol

CAS: 7726-95-6

WE: 231-778-1



H: 314, 330, 400
 P: 210, 273, 304+340, 305+351+338, 309, 310, 403+233
 RID/ADR: 8, I

UN: 1744



Physical and chemical properties:

Character:	liquid	Vapor pressure:	231 hPa (20°C)
Colour:	red- brown	Density:	3,12 g/cm ³ (20°C, liquid)
Odor:	severe irritant	Solubility:	
pH:	no data	in water:	40,3 g/l (10°C)
Melting point:	-7,2°C	in other solvents:	ethanol, diethyl ether, chloroform, CCl ₄ , CS ₂ , acetone, nitrobenzene, HCl, HBr
Boiling point:	58,8°C (1013 hPa)		
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

bromine pure

CHEM*421923600

50 ml	100 ml	Assay	min. 98,5 %
250 ml	500 ml	Non-volatile matter	max. 0,05 %
		Chlorine (Cl)	max. 0,2 %
1 l		Jodine (I)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,01 %

bromine pure p.a.

CHEM*111923600

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Non-volatile matter	max. 0,02 %
		Chlorine (Cl)	max. 0,02 %
1 l		Jodine (I)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %

BROMINE (POTASSIUM BROMIDE-BROMATE) ANALYTICAL WEIGHED AMOUNT

Brom (potasu bromek-bromian) odważka analityczna

Br₂ (mixture KBrO₃ and KBr)

M = not applicable

CAS: not applicable

WE: not applicable



H: 301, 350

P: 281, 301+310, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	odorless	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	no data		

potassium bromide-bromate 0,05 mol/l analytical weighed amount CHEM*161923801

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

BROMINE

STANDARD SOLUTIONS (0,02 < C < 0,2 MOL/L)

Brom roztwory mianowane

Br₂

M = 159,82 g/mol

CAS: 7726-95-6

WE: 231-778-1



H: 332
P: 304+340
RID/ADR: 8, I

UN: 1744



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	red - brown	Vapor pressure:	no data
Odor:	irritating	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	no data
Boiling point:	no data	in other solvents:	no data
Auto-ignition temperature:	not applicable		

bromine standard solution 0,05 mol/l

CHEM*811923600

100 ml	250 ml

Titer

0,0498 – 0,0502 mol/l

500 ml	1 l

bromine standard solution 0,1 mol/l

CHEM*811923601

100 ml	250 ml

Titer

0,0996 – 0,1004 mol/l

500 ml	1 l

BROMINE WATER

Woda bromowa

Br₂

M = 159,82 g/mol

CAS: 7726-95-6

WE: 231-778-1



H: 314, 330, 400

P: 210, 273, 304+340, 305+351+338, 309, 310, 403+233

RID/ADR: 8, I

UN: 1744



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	red - brown	Vapor pressure:	no data
Odor:	irritating	Density:	no data
pH:	no data	Solubility:	
Melting point:	no data	in water:	no data
Boiling point:	no data	in other solvents:	no data
Auto-ignition temperature:	not applicable		

bromine water

CHEM*524912000

50 ml

100 ml

Assay bromine

approx 4,0 %

250 ml

500 ml

1 l

1 - BUTANOL

1-Butanol



M = 74,1 g/mol

CAS: 71-36-3

WE: 200-751-6



H: 226, 302, 315, 318, 335, 336
P: 280, 305+351+338, 313
RID/ADR: 3, III UN: 1120



Physical and chemical properties:

Character:	liquid	Vapor pressure:	6,7 mbar (20°C)
Colour:	colourless	Density:	0,81 g/cm ³ (20°C)
Odor:	choking	Solubility:	
pH:	no data	in water:	69 g/l H ₂ O (25°C)
Melting point:	-89°C	in organic solvent:	soluble
Boiling point:	116-118°C	log P _{OW} :	0,88
Auto-ignition temperature:	340°C	Critical temperature:	289,78°C
Ignition temperature:	approx 36°C	Critical pressure:	4,41 MPa
Explosion limits:		Refractive index (20°C):	1,3993
bottom:	1,4% v/v	Viscosity 15°C:	3,379 mPa·s
top:	11,3% v/v		

butanol-1 purified

CHEM*322032302

2.5 l	3 l	Assay C ₄ H ₁₀ O	min. 98,0 %
5 l	10 l	Distillation	
20 l	60 l	- start	min. 116°C
200 l		- end	max. 123°C
		- 96% (V/V)	116 - 119°C
		Aldehydes and ketones (as C ₃ H ₇ CHO)	max. 0,08 %
		Bromine number (g Br ₂ /100g product)	max. 0,05 %
		Water	max. 0,2 %
		Appearance	clear liquid

butanol-1 pure

CHEM*422032302

250 ml	500 ml	Assay C ₄ H ₁₀ O	min. 99,0 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	0,809 - 0,811 g/cm ³
10 l	20 l	Acids (as CH ₃ COOH)	max. 0,004 %
30 l	60 l	Aldehydes and ketones (as C ₃ H ₇ CHO)	max. 0,07 %
200 l		Water	max. 0,2 %
		Residue on evaporation	max. 0,002 %
		Appearance	colourless, clear liquid

butanol-1 pure p.a. CHEM*112032303

250 ml	500 ml	Assay $C_4H_{10}O$	min. 99,5 %
1 l	2.5 l	Density (20°C)	0,810 - 0,811 g/cm ³
3 l	5 l	Acids (as CH_3COOH)	max. 0,0025 %
10 l	20 l	Aldehydes and ketones (as C_3H_7CHO)	max. 0,03 %
30 l	60 l	Water	max. 0,1 %
200 l		Residue on evaporation	max. 0,0015 %
		Colour	max. 10 Hazen
		Appearance	colourless, clear liquid

butanol-1 HPLC CHEM*612032303

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,03 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		230 nm	min. 65 %
		240 nm	min. 80 %
		250 nm	min. 90 %
		260 nm	min. 95 %
		310 nm	min. 99 %
		Fluorescence (as quinine)	
		254 nm	max. 2 ppb
		365 nm	max. 2 ppb

butanol-1 GC CHEM*612032305

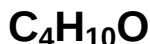
1 l	2.5 l	Assay	min. 99,9 %

butanol-1 GC standard CHEM*612032304

25ml	50ml	Purity	min. 99,9 %
75ml	100ml		

2- BUTANOL

2-Butanol



M = 74,1 g/mol

CAS: 78-92-2

WE: 201-158-5



H: 226, 319, 335, 336
P: 210, 304+340, 305+351+338
RID/ADR: 3, III UN: 1120



Physical and chemical properties:

Character:	liquid	Vapor pressure:	17 mbar (20°C)
Colour:	colourless	Density:	0,808 g/cm ³ (20°C)
Odor:	choking	Solubility:	
pH:	no data	in water:	125 g/l H ₂ O (20°C)
Melting point:	-114°C	in organic solvent:	ethanol, diethyl ether
Boiling point:	99°C	log P _{ow} :	0,61
Auto-ignition temperature:	390°C	Critical temperature:	265°C
Ignition temperature:	24°C	Critical pressure:	4,19 MPa
Explosion limits:		Refractive index (20°C):	1,39729
bottom:	1,7% v/v	Viscosity 15°C:	4,2 mPa·s
top:	9,8% v/v		

2 - butanol pure

CHEM*422032700

250ml	0,5l	Assay C ₄ H ₁₀ O	min. 99,0%
1l	2l	Density (20°C)	min. 0,809 g/cm ³
3l	5l	Acids and esters	max. 0,004 %
10 l	20 l	Aldehydes	max. 0,07 %
		Water	max. 0,2 %
		Substances insoluble in water	passes test
		Residue on evaporation	max. 0,002 %

2 - butanol pure p.a.

CHEM*112032701

100 ml	250 ml	Assay	min. 99 %
500 ml	1 l	Density (20°C)	approx 0,81 g/cm ³
2.5 l	3 l	Acidity	max. 0,0005 meq/g
5 l	10 l	Colour	max. 10 Hazen
20 l		Water	max. 0,1%
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Residue on evaporation	max. 0,002%
		Carbonyl compounds (as C ₃ H ₇ CHO)	max. 0,015%
		Cadmium (Cd)	max. 0,00001%
		Copper (Cu)	max. 0,00001%
		Lead (Pb)	max. 0,00001%
		Iron (Fe)	max. 0,00005%

2 - butanol HPLC**CHEM*612032701**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0007 meq/g
		Residue on evaporation	max. 0,0005%
		UV – transmission (1cm, water)	
		250nm	min. 65 %
		260nm	min. 80 %
		270nm	min. 90 %
		280nm	min. 95 %
		300nm	min. 98 %
		Appearance	colourless, clear liquid

2-BUTANONE

2-Butanon

C₄H₈O

M = 72,1 g/mol

CAS: 78-93-3

WE: 201-159-0



H: 225, 319, 336, EUH066
 P: 210, 305+351+338, 403+233
 RID/ADR: 3, II UN: 1193



Physical and chemical properties:

Character:	liquid	viscosity _{20°C} :	0,416 mPa·s
Colour:	colourless	Vapor pressure:	105 mbar (20°C)
Odor:	characteristic	Density:	0,805 g/cm ³ (25°C)
pH:	5,5 (300 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	-86°C	in water:	275 g/l H ₂ O (20°C)
Boiling point:	79-80°C	in organic solvent:	alcohol, diethyl ether
Auto-ignition temperature:	515°C	log P _{OW} :	0,29
Ignition temperature:	-6°C	Critical temperature:	260°C
Explosion limits:		Critical pressure:	4,33 MPa
bottom:	1,8% v/v	Refractive index(20°C):	1,3788
top:	11,5% v/v		

butanon-2 purified

CHEM*322033609

2.5 l	3 l	Assay	min. 98,5 %
5 l	10 l	Water	max. 0,5 %
20 l	60 l	Density (20°C)	0,804 - 0,807 g/cm ³
30 l	200 l	Acidity (as CH ₃ COOH)	max. 0,01
		Colour	max. 10 Hzaen
		Non-volatile matter	max. 0,01 %

butanon-2 pure

CHEM*422033609

250 ml	500 ml	Assay	min. 99,0 %
1 l	2.5 l	Water	max. 0,3 %
3 l	5 l	Density (20°C)	0,804 - 0,807 g/cm ³
10 l	20 l	Acidity (as CH ₃ COOH)	max. 0,005 %
60 l	200 l	Colour	max. 10 Hazen
		Non-volatile matter	max. 0,005 %

butanon-2 pure p.a.**CHEM*112033600**

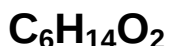
100 ml	250 ml	Assay	min. 99,5 %
		Water	max. 0,05 %
500 ml	1 l	Density (20°C)	0,805 - 0,807 g/cm ³
2,5 l	3 l	Acidity (as CH ₃ COOH)	max. 0,001 %
5 l	10 l	Colour	max. 10 Hazen
20 l	60 l	Non-volatile matter	max. 0,002 %
200 l			

butanon-2 HPLC**CHEM*612033600**

1 l	2,5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		335 nm	min. 50 %
		340 nm	min. 85 %
		350 nm	min. 98 %
		360 nm	min. 99 %

ETHYLENE GLYCOL BUTYL ETHER

2-butoksyetanol



M = 118 g/mol

CAS: 111-76-2

WE: 203-905-0



H: 302, 312, 332, 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	1,1% v/v
Colour:	colourless	top:	10,6% v/v
Odor:	characteristic	Viscosity _{20°C} :	3,26 cSt
pH:	no data	Vapor pressure:	1 hPa (20°C)
Melting point:	-60°C	Density:	0,899 – 0,904 g/cm ³ (20°C)
Boiling point:	168-172°C	Solubility:	
Auto-ignition temperature:	230°C	in water:	soluble
Ignition temperature:	67°C	in organic solvent:	soluble
Explosion limits:		Log P _{ow} :	0,83

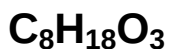
Ethylene glycol butyl ether pure

CHEM* 424465105

500 ml	1 l	Assay (GC)	min. 99,0 %
2.5 l	3 l	Water	max. 0,1 %
5 l	10 l	Colour	max. 10 Hazen
20 l	60 l	Acids (as CH ₃ COOH)	max. 0,005 %
		Density	0,899 – 0,904 g/cm ³
		Appearance	colourless, clear liquid

DIETHYLENE GLYCOL BUTYL ETHER

2-(2-butoksyetoksy)etanol



M = 162,23 g/mol

CAS: 112-34-5

WE: 203-961-6



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	0,7% v/v
Colour:	colourless or yellow	top:	9,9% v/v
Odor:	characteristic	Viscosity (20°C):	5,85 mPa s
pH:	no data	Vapor pressure:	0,1 hPa (20°C)
Melting point:	-68°C	Density:	0,952 – 0,957 g/cm ³ (20°C)
Boiling point:	228-233°C	Solubility:	
Auto-ignition temperature:	230°C	in water:	soluble
Ignition temperature:	105°C	in organic solvent:	no data
Explosion limits:		Log P _{ow} :	0,56

Diethylene glycol butyl ether pure

CHEM* 424465106

500 ml	1 l	Assay (GC)	min. 98,0 %
2.5 l	3 l	Water	max. 0,1 %
5 l	10 l	Colour	max. 15 Hazen
20 l	60 l	Acids (as CH ₃ COOH)	max. 0,01 %
		Density	0,952 – 0,957 g/cm ³
		Appearance	colourless, clear liquid

n-BUTYL ACETATE

n-butylu octan



M = 116,16 g/mol

CAS: 123-86-4

WE: 204-658-1



H: 226, 336, EUH066

P: 210

RID/ADR: 3, II

UN: 1123



Physical and chemical properties:

Character:	liquid	bottom:	1,2% v/v
Colour:	colourless	top:	7,5% v/v
Odor:	characteristic	Viscosity (20°C):	0,734 mPa·s
Melting point:	73,5°C	Vapor pressure:	13 mbar (20°C)
Boiling point:	126°C	Density:	0,88 g/cm ³ (20°C)
Auto-ignition temperature:	370°C	Solubility:	
Ignition temperature:	22°C	in water:	4,8 g/l (200C)
Explosion limits:		in organic solvent:	soluble

n-butyl acetate purified

CHEM*322115000

2.5 l	3 l	Esters (as butyl acetate)	min. 85,0 %
5 l	10 l	Density (20°C)	0,868 - 0,877 g/cm ³
20 l	60 l	Water	max. 0,15 %
200 l		Acidity (as CH ₃ COOH)	max. 0,01 %
		Residue on evaporation	max. 0,01 %
		Appearance	colourless, clear liquid
		Colour	max. 30 Hazen

n-butyl acetate pure

CHEM*422115000

250 ml	500 ml	Assay	min. 98,0 %
1 l	2.5 l	Density (20°C)	0,876 - 0,882 g/cm ³
3 l	5 l	Water	max. 0,1 %
10 l	20 l	Acidity (as CH ₃ COOH)	max. 0,01 %
60 l	200 l	Residue on evaporation	max. 0,01 %
		Appearance	colourless, klarowna liquid

n-butyl acetate pure p.a. CHEM*112115001

100 ml	250 ml	Assay	min. 99,0 %
500 ml	1 l	Density (20°C)	0,879 - 0,882 g/cm ³
2.5 l	3 l	Water	max. 0,1 %
5 l	10 l	Acidity (as CH ₃ COOH)	max. 0,01 %
20 l	60 l	1-Butanol	max. 0,3 %
200 l		Non-volatile matter	max. 0,005 %
		n-butyl formate	max. 0,1 %
		Isobutyl acetate	max. 0,5 %
		Appearance	colourless, clear liquid

n-Butyl acetate HPLC CHEM*612115001

1 l	2.5 l	Assay (GC)	min. 99,0 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		260 nm	min. 50 %
		280 nm	min. 80 %
		300 nm	min. 90 %
		320 nm	min. 95 %
		360 nm	min. 99 %

CHLORAMINE T TRIHYDRATE

Chloramina T 3hydrat



M = 281,69 g/mol

CAS: 7080-50-4

WE: 204-854-7



H: 302, 314, 334, EUH031

P: 280, 301+330+331, 304+341, 305+351+338

RID/ADR: 8, II

UN: 3263



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white to yellow	Vapor pressure:	no data
Odor:	weak of chlorine	Density:	no data
pH:	approx 8-10 (50 g/l H ₂ O, 20°C)	Bulk density:	500 - 600 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	decomposition >60°C	in water:	150 g/l (25°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	192°C	log P(w/o):	0,84

chloramine T trihydrate pure

CHEM*422256602

100 g	250 g	Assay (iodometry)	min. 98,0 %
500 g	1 kg	Substances insoluble in C ₂ H ₅ OH	max. 2,0 %
		pH (5%, 20°C)	8,0 – 10,0

chloramine T trihydrate pure p. a.

CHEM*112256603

50 g	100 g	Assay (iodometry)	min. 99,0 %
250 g	500 g	Substances insoluble in C ₂ H ₅ OH	max. 1,5 %
1 kg		pH (5%, 20°C)	8,0 – 10,0

chloramine T

CHEM*522256602

50 g	100 g	Assay (iodometry)	min. 97,0 %
250 g	500 g	Substances insoluble in C ₂ H ₅ OH	max. 2,5 %
750 g	1 kg		
2 kg	5 kg		
7 kg	10 kg		
15 kg	20 kg		

CHLORAMINE T SOLUTION 3%

Chloramina T 3%



M = 227,64 g/mol

CAS: 127-65-1

WE: 204-854-7



H: 334

P: 304+341

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

chloramine T 3%

CHEM*521345411

500 ml	1 l	Assay	3,0 ± 0,1 %
2.5 l	3 l	pH (20°C)	8,0 – 10,0
5 l	10 l		
20 l			

CHLORAMINE T SOLUTION 6%

Chloramina T 6%



M = 227,64 g/mol

CAS: 127-65-1

WE: 204-854-7



H: 315, 319, 334

P: 280, 305+351+338

RID/ADR: 8, III

UN: 3267



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

chloramine T 6%

CHEM*421345412

500 ml	1 l	Assay	6,0 ± 0,1 %
2.5 l	3 l	pH (20°C)	8,0 – 10,0
5 l	10 l		
20 l			

CHLOROBENZENE

Chlorobenzen



M = 112,56 g/mol

CAS: 108-90-7

WE: 203-628-5



H: 226, 332, 411

P: 273

RID/ADR: 3, III

UN: 1134



Physical and chemical properties:

Character:	liquidy	Vapor pressure:	11,7 mbar (20°C)
Colour:	colourless	Density:	1,11 g/cm ³ (20°C)
Odor:	aromatic	Bulk density:	not applicable
Melting point:	-45°C	Solubility:	
Boiling point:	132°C	in water:	0,5 g/l (20°C)
Auto-ignition temperature:	638°C	in other solvents:	ethanol, diethyl ether, benzene, chloroform, CCl ₄ , CS ₂
Ignition temperature:	28°C		
Explosion limits:			
bottom:	1,3% v/v	log P _(w/o) :	2,98
top:	7,1% v/v		
Viscosity at 20°C:	0,799 mPa·s		

chlorobenzene purified

CHEM*322276603

2.5 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	min. 98,0 %
20 l	60 l	Colour	max. 30 Hazen
		Density (20°C)	1,106 - 1,108 g/cm ³
		Water	max. 0,08 %
		Free acid (as HCl)	max. 0,06 %
		Residue on evaporation	max. 0,006 %

chlorobenzene pure

CHEM*412276603

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay	min. 99,0 %
3 l	5 l	Colour	max. 30 Hazen
10 l	20 l	Density (20°C)	1,106 - 1,108 g/cm ³
30 l	60 l	Water	max. 0,04 %
		Free acid (as HCl)	max. 0,03 %
		Residue on evaporation	max. 0,003 %

chlorobenzene pure p. a.**CHEM*112276603**

100 ml	250 ml	Appearance	colourless, clear liquid
		Assay	min. 99,5 %
500 ml	1 l	Colour	max. 10 Hazen
2.5 l	3 l	Density (20°C)	1,106 - 1,108 g/cm ³
		Water	max. 0,03 %
5 l	10 l	Free acid (as HCl)	max. 0,03 %
20 l	30 l	Residue on evaporation	max. 0,003 %
60 l			

CHLOROFORM

Chloroform

CHCl₃

M = 119,38 g/mol

CAS: 67-66-3

WE: 200-663-8



H: 315, 319, 334
P: 302+352, 314
RID/ADR: 6.1, III

UN: 1888



Physical and chemical properties:

Character:	liquid	Vapor pressure:	211 mbar (20°C)
Colour:	colourless	Density:	1,48 g/ml (20°C)
Odor:	etheric, sharp	Solubility:	
Melting point:	-63°C	in water:	8,2 g/cm ³ (20°C)
Boiling point:	61°C	in other solvents:	ethanol, diethyl ether, benzene, CS ₂ , DMSO
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable	log P(w/o):	1,97
Explosion limits:	not applicable		
Viscosity at 20°C:	0,568 mPa·s		

chloroform purified (stabilized with amylene)

CHEM*322344304

5 l	10 l	Assay	min. 98,0 %
20 l	60 l	Stabilizer	0,0045 ÷ 0,0055 %
200 l		Water	max. 0,05 %
		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0002 %
		Aldehydes and ketones	max. 0,005 %
		Free chlorine	max. 0,0002 %
		Free acids and fosgen (as HCl)	max. 0,0002 %

chloroform pure (stabilized with amylene)

CHEM*422344304

250 ml	500 ml	Assay	min. 98,0 %
1 l	2.5 l	Stabilizer	0,0045 ÷ 0,0055 %
3 l	5 l	Water	max. 0,02 %
10 l	20 l	Residue on evaporation	max. 0,002 %
60 l	200 l	Chlorides (Cl)	max. 0,0001 %
		Aldehydes and ketones	max. 0,005 %
		Free chlorine	max. 0,0001 %
		Density (20°C)	1,475 - 1,481 g/cm ³
		Fosgen	passes test
		Metalic impurities	passes test
		Organic substances carbonizable with H ₂ SO ₄	passes test
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Appearance	colourless, clear liquid

chloroform pure p. a. (stabilized with amylene)**CHEM*112344305**

100 ml	250 ml	Assay	min. 98,5 %
500 ml	1 l	Stabilizer	0,0045 ÷ 0,0055 %
		Water	max. 0,015 %
2.5 l	3 l	Residue on evaporation	max. 0,0006 %
5 l	10 l	Chlorides (Cl)	max. 0,00003 %
		Aldehydes and ketones	max. 0,005 %
20 l	60 l	Free chlorine	max. 0,00005 %
200 l		Density (20°C)	1,475 - 1,481 g/cm ³
		Fosgen	passes test
		Metalic impurities	passes test
		Organic substances carbonizable with H ₂ SO ₄	passes test
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Appearance	colourless, clear liquid

chloroform pure (stabilized with ethanol)**CHEM*422344305**

100 ml	250 ml	Assay	min. 98,0 %
500 ml	1 l	Stabilizer	0,6 - 1 %
		Water	max. 0,02 %
2.5 l	3 l	Residue on evaporation	max. 0,002 %
5 l	10 l	Chlorides (Cl)	max. 0,0001 %
		Aldehydes and ketones	max. 0,005 %
20 l	30 l	Free chlorine	max. 0,00005 %
60 l	200 l	Density (20°C)	1,475 - 1,481 g/cm ³
		Fosgen	passes test
		Metalic impurities	passes test
		Organic substances carbonizable with H ₂ SO ₄	passes test
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Appearance	colourless, clear liquid

chloroform pure p. a. (stabilized with ethanol)**CHEM*112344306**

50 ml	100 ml	Assay	min. 98,5 %
250 ml	500 ml	Stabilizer	0,6 - 1 %
		Water	max. 0,015 %
1 l	2.5 l	Residue on evaporation	max. 0,0006 %
3 l	5 l	Chlorides (Cl)	max. 0,00003 %
		Aldehydes and ketones	max. 0,005 %
10 l	20 l	Free chlorine	max. 0,00005 %
30 l	60 l	Density (20°C)	1,475 - 1,481 g/ml
200 l		Fosgen	passes test
		Metalic impurities	passes test
		Organic substances carbonizable with H ₂ SO ₄	passes test
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Appearance	colourless, clear liquid

chloroform pure p. a. (stabilized with ethanol, to work with ditizon) CHEM*112344307

50 ml	100 ml	Assay	min. 98,5 %
		Stabilizer	0,6 - 1 %
250 ml	500 ml	Water	max. 0,015 %
1 l	2.5 l	Residue on evaporation	max. 0,0006 %
		Chlorides (Cl)	max. 0,00003 %
		Aldehydes and ketones	max. 0,005 %
		Free chlorine	max. 0,00005 %
		Density (20°C)	1,475 - 1,481 g/cm ³
		Fosgen	passes test
		Metalic impurities	passes test
		Organic substances carbonizable with H ₂ SO ₄	passes test
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Appearance	colourless, clear liquid

chloroform sp .pure (stabilized with ethanol) CHEM*102480614

1 l	2.5 l	Appearance	colourless, clear liquid
		Assay	min. 97,8 %
		Density (20°C)	1,475 - 1,481 g/cm ³
		Stabilizer (ethanol)	0,6 - 1 %
		Water	max. 0,02 %
		Aldehydes and ketones (asCH ₃ CO)	max. 0,005 %
		Fosgen	passes test
		Useful to work with dithizne	passes test
		Substancje ciemniejące pod wpływem H ₂ SO ₄	passes test
		Free chlorine (Cl ₂)	max. 0,00005 %
		Residue on evaporation	max. 0,002 %
		Free acids and fosgen (as HCl)	max. 0,0001 %
		Metalic impurities	passes test
		Chlorides (Cl)	max. 0,0001 %

chloroform do chromatografii HPLC (stabilized with ethanol) CHEM*612344300

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV – transmission (1 cm, water):	
		250 nm	min. 50,0 %
		260 nm	min. 85,0 %
		270 nm	min. 98,0 %
		280 nm	min. 99,0 %
		Fluorescence (as quinine)	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb
		Ethanol	~1,0 %

chloroform GC for pesticide analysis (stabilized with ethanol) CHEM*612344302

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		Ethanol	~1,0 %
		Organic residue (as octanol GC/FID)	max. 10 ng/ml
		Halogen residue (as lindan GC/ECD)	max. 5 ng/l

chloroform GC (stabilized with ethanol) CHEM*612344303

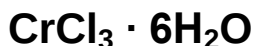
1 l	2.5 l	Residue on evaporation	max. 5 mg/l
		Water	max. 0,01 %
		Colour	max. 10 Hazen
		Signal (GC) range of 1,2,4-trichlorobenzene to decachlorobiphenyl	max. 3 pg/ml

chloroform GC standard CHEM*612344301

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

CHROMIUM (III) CHLORIDE HEXAHYDRATE

Chromu (III) chlorek 6hydrat



M = 266,45 g/mol

CAS: 10060-12-5

WE: 233-038-3



H: 302

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	no data	Vapor pressure:	no data
Odor:	no data	Density:	1,76 g/cm ³ (25°C)
pH:	no data	Bulk density:	no data
Melting point:	83°C	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	not applicable		

Chromium (III) chloride hexahydrate pure

CHEM*422502508

10 g	25 g	Assay	min. 95,0 %
50 g	75 g	Sulfates (SO ₄)	max. 0,1 %
100 g	250 g	pH (5%, 20°C)	2 – 3,5
500 g		Iron (Fe)	max. 0,05 %
		Lead (Pb)	max. 0,005%
		Substances insoluble in water	max. 0,05 %
		Non precipitation substances with ammonia	max. 0,05 %

Chromium (III) chloride hexahydrate pure p. a.

CHEM*11250250

10 g	25 g	Assay	min. 98,0 %
50 g	75 g	Sulfates (SO ₄)	max. 0,05 %
100 g	250 g	Zinc (Zn)	max. 0,005 %
500 g		Cadmium (Cd)	max. 0,005 %
		Cobalt (Co)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,03 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,01 %

CHROMIUM (VI) OXIDE

Chromu (VI) tlenek



M = 99,99 g/mol

CAS: 1333-82-0

WE: 215-607-8



H: 271, 360, 340, 361F, 330, 301,
311, 314, 334, 317, 410

P: 210, 273, 280, 301+330+331,
304+340, 305+351+338

RID/ADR: 5.1, I

UN: 1463



Physical and chemical properties:

Character:	solid,	Density:	2,7 g/cm ³ (20°C)
Colour:	red	Bulk density:	approx 900 kg/m ³
Odor:	odorless	Solubility:	
Melting point:	197°C	in water:	620 g/l (20°C)
Boiling point:	decomposition	in other solvents:	sulfuric acid, nitric acid
Vapor pressure:	no data		

chromium (VI) oxide tech.

CHEM*322501202

250 g	500 g	Assay	min. 98,0 %
1 kg	3 kg	Substances insoluble in water	max. 0,2 %
5 kg	10 kg	Chlorides (Cl)	max. 0,01 %
15 kg	20 kg	Sulfates (SO ₄)	max. 0,25 %
25 kg		Precipitated substances with NH ₄ OH	max. 0,1 %
		Sodium, potassium, calcium, magnesium (Na+K+Ca+Mg)	max. 0,2 %

CHROMIC LIQUID

Ciecz chromowa

M = not applicable

CAS: not applicable

WE: not applicable



H: 301,312, 314, 317, 330, 334, 340, 350,
360FD, 372, 410
P: 273, 280, 302+352, 305+351+338,
308+313, 309, 310
RID/ADR: 8, II UN: 2922



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	yellow - orange	Explosion limits:	not applicable
Odor:	characteristic	Vapor pressure:	no data
pH:	acidic	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

chromic liquid

CHEM*112517030

50 ml	100 ml	Sulfuric acid (H ₂ SO ₄)	passes test
250 ml	500 ml	Potassium dichromate (K ₂ Cr ₂ O ₇)	passes test
1 l	5 l		

CYCLOHEXANE

Cykloheksan

C₆H₁₂

M = 84,16 g/mol

CAS: 110-82-7

WE: 203-806-2



H: 225, 304, 315, 336, 410
P: 210, 240, 273, 301+310+331, 403+235
RID/ADR: 3, II UN: 1145



Physical and chemical properties:

Character:	liquid	Viscosity at 20°C:	0,98 mPa·s
Colour:	colourless	Vapor pressure:	104 mbar (20°C)
Odor:	characteristic	Density:	0,78 g/cm ³ (20°C)
Melting point:	6,5°C	Solubility:	
Boiling point:	80,7°C	in water:	0,01% m/m (20°C)
Auto-ignition temperature:	260°C	in organic solvents:	ethanol, diethyl ether, acetone, benzene, CCl ₄
Ignition temperature:	-18°C		
Explosion limits:		log P _(w/o) :	7
bottom:	1,2% v/v		
top:	8,3% v/v		

cyclohexane purified

CHEM*312564208

5 l	10 l	Assay	min. 98,5 %
20 l	60 l	Colour	max. 30 Hazen
200 l		Water	max. 0,1 %
		Residue on evaporation	max. 0,005 %
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Appearance	colourless, clear liquid

cyclohexane pure

CHEM*412564208

1 l	2.5 l	Assay	min. 99,0 %
250 ml	500 ml	Colour	max. 10 Hazen
3 l	5 l	Water	max. 0,05 %
10 l	20 l	Residue on evaporation	max. 0,003 %
30 l	60 l	Substances darkening under the influence of H ₂ SO ₄	passes test
200 l		Appearance	colourless, clear liquid

cyclohexane pure p. a.**CHEM*112564208**

100 ml	250 ml	Assay	min. 99,5 %
		Colour	max. 10 Hazen
500 ml	1 l	Water	max. 0,02 %
2.5 l	3 l	Residue on evaporation	max. 0,002 %
5 l	10 l	Substances darkening under the influence of H ₂ SO ₄	passes test
20 l	30 l	Density (15°C)	0,5 – 2 g/cm ³
60 l		Appearance	colourless, clear liquid

cyclohexane HPLC**CHEM*612564208**

1 l	2.5 l	Assay	min. 99,5 %
		Residue on evaporation	max. 0,0005 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		UV – transmission (1 cm, water):	
		210 nm	min. 60,0 %
		220 nm	min. 80,0 %
		230 nm	min. 95,0 %
		240 nm	min. 98,0 %
		250 nm	min. 99,0 %
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

cyclohexane GC for pesticide analysis**CHEM*612564210**

1 l	2.5 l	Assay (GC)	min. 99,5 %
		Residue on evaporation	max. 0,0005 %
		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g

cyclohexane GC**CHEM*612564211**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,01 %
		Colour	max. 10 Hazen
		Signal (GC) in the range 1,2,4-trichlorobenzene to dekachlorobiphenyl	max. 3 pg/ml

cyclohexane GC standard**CHEM*612564209**

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

CYCLOHEXANOL

Cykloheksanol



M = 100,16 g/mol

CAS: 108-93-0

WE: 203-630-6



H: 302, 315, 332, 335

P: 262, 302+352, 304+340

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	1,52% v/v
Colour:	colourless	top:	11,2% v/v
Odor:	characteristic	Viscosity at 30°C:	41,07 mPa·s
pH:	6,5 (40 g/l H ₂ O, 20°C)	Vapor pressure:	1,2 hPa (20°C)
Melting point:	25°C	Density:	0,96g/ml (20°C)
Boiling point:	161-162°C	Solubility:	
Auto-ignition temperature:	300°C	in water:	37,5 g/l (20°C)
Ignition temperature:	68°C	in organic solvents:	ethyl acetate, petroleum ether, aromatic hydrocarbons
Explosion limits:			

cyclohexanol pure

CHEM*422570106

250 ml	500 ml	Assay	min. 97,5 %
1 l	2.5 l	Refractive index (20°C)	1,463 - 1,467
3 l	5 l	Appearance	colourless, clear liquid
10 l	20 l		

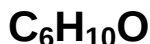
cyclohexanol pure p. a.

CHEM*112570107

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Temperature of crystallization	min. 22°C
1 l	2.5 l	Water	max. 0,2 %
3 l	5 l	Acidity (asCH ₃ COOH)	max. 0,01 %
10 l	20 l	Non-volatile residue	max. 0,05 %
		Cyclohexaneon	max. 0,5 %
		Copper (Cu)	max. 0,00002 %
		Nickel (Ni)	max. 0,00002 %
		Lead (Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00005 %
		Appearance	colourless liquid

CYCLOHEXANONE

Cykloheksanon



M = 98,15 g/mol

CAS: 108-94-1

WE: 203-631-1



H: 226, 332
P: not applicable
RID/ADR: 3, III

UN: 1915



Physical and chemical properties:

Character:	liquid	top:	9,4% v/v
Colour:	colourless	Viscosity at 15°C:	2,45 mPa·s
Odor:	characteristic	Vapor pressure:	4,7 hPa (20°C)
Melting point:	approx -32 to -26°C	Density:	0,95 g/cm ³ (20°C)
Boiling point:	approx 156°C	Solubility:	
Auto-ignition temperature:	420°C	in water:	90 g/l (20°C)
Ignition temperature:	43°C	in organic solvents:	soluble
Explosion limits:			
bottom:	1,3% v/v		

cyclohexaneon pure

CHEM*422571504

250 ml	500 ml	Assay	min. 99,0 %
1 l	2.5 l	Density (20°C)	0,946 - 0,948 g/cm ³
3 l	5 l	Colour	max. 20 Hazen
10 l	20 l	Non-volatile residue	max. 0,05 %
		Water	max. 0,5 %
		Appearance	clear liquid

cyclohexaneon pure p. a.

CHEM*112571505

50 ml	100 ml	Assay	min. 99,5 %
250 ml	500 ml	Density (20°C)	0,945 - 0,948 g/cm ³
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Non-volatile residue	max. 0,02 %
10 l	20 l	Water	max. 0,1 %
		Appearance	clear liquid

TIN 99,85%

Cyna

Sn

M = 118,69 g/mol

CAS: 7440-31-5

WE: 231-141-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Density:	7,31 g/cm ³ (20°C)
Colour:	white	Bulk density:	approx 4000 kg/m ³
Odor:	odorless	Solubility:	
Melting point:	232°C	in water:	insoluble
Boiling point:	2270°C	in other solvents:	HCl, H ₂ SO ₄ , HNO ₃ , aqua regia, NaOH
Explosion limits:	no data		
Vapor pressure:	1,33 hPa (1492°C)		

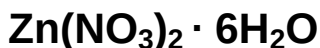
tin 99,85%

CHEM*112610555

25 g	50 g	Appearance	soft metal
100 g	250 g	Antimony (Sb)	max. 0,04 %
		Arsenic (As)	max. 0,04 %
500 g	750 g	Lead (Pb)	max. 0,05 %
1 kg		Copper (Cu)	max. 0,02 %
		Iron (Fe)	max. 0,01 %

ZINC NITRATE HEXAHYDRATE

Cynku azotan 6hydrat



M = 297,46 g/mol

CAS: 10196-18-6

WE: 231-943-8



H: 272, 302, 315, 319, 335,
P: 272, 302+352, 305+351+338
RID/ADR: 5.1, II UN: 1514



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	odorless	Density:	2,06 g/cm ³ (20°C)
pH:	5,1 (50 g/l H ₂ O, 20°C)	Bulk density:	no data
Melting point:	approx 36°C	Solubility:	
Boiling point:	no data	in water:	1800 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Zinc nitrate hexahydrate pure

CHEM*422640109

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Free acid (as HNO ₃)	max. 0,04 %
5 kg	10 kg	Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Lead (Pb)	max. 0,02 %
		Sodium (Na)	max. 0,02 %
		Potassium (K)	max. 0,02 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,005 %
		Appearance	white crystals

Zinc nitrate hexahydrate pure p. a.

CHEM*112640100

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Ammonia (NH ₃)	max. 0,01 %
1 kg		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Salts of alkaline metals and alkaline earths	max. 0,25 %
		Magnesium (Mg)	max. 0,002 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %
		Appearance	white crystals

ZINC NITRATE STANDARD SOLUTIONSN (C < 1,25 MOL/L)

Cynku azotan roztwory mianowane



M = 189,37 g/mol

CAS: 7779-88-6

WE: 231-943-8



H: 302, 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapor pressure:	no data
pH:	approx 5	Density:	no data
Melting point:	not applicable	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Zinc nitrate standard solution 0,1 mol/l

CHEM*802640100

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

Zinc nitrate standard solution 0,5 mol/l

CHEM*802640101

500 ml

1 l

Titer

0,498 – 0,502 mol/l

Zinc nitrate standard solution 1 mol/l

CHEM*802640102

500 ml

1 l

Titer

0,996 - 1,004 mol/l

ZINC CHLORIDE

Cynku chlorek bezwodny



M = 136,28 g/mol

CAS: 7646-85-7

WE: 231-592-0



H: 302, 314, 335, 410
P: 273, 280, 301+330+331, 305+351+338
RID/ADR: 8, III UN: 2331



Physical and chemical properties:

Character:	solid	Vapor pressure:	1 hPa (428°C)
Colour:	colourless or white	Density:	2,91 g/cm ³ (25°C)
Odor:	odorless	Bulk density:	approx 1400 - 1800 kg/m ³
pH:	approx 5 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	approx 300°C	in water:	4320 g/l (22°C)
Boiling point:	732°C	in organic solvents:	diethyl ether and ethanol
Explosion limits:	not applicable		

Zinc chloride pure

CHEM*422642009

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Oxychlorides (as ZnO)	max. 2,4 %
750 g	1 kg	Cadmium (Cd)	max. 0,001 %
5 kg	15 kg	Copper (Cu)	max. 0,002 %
25 kg		Lead (Pb)	max. 0,002 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 1 %
		Iron (Fe)	max. 0,002 %

Zinc chloride pure p. a.

CHEM*112642000

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in water with HCl	max. 0,005 %
500 g	750 g	Total nitrogen (N)	max. 0,002 %
1 kg		Sulfates (SO ₄)	max. 0,002 %
		Oxychlorides (as ZnO)	max. 1,2 %
		Cadmium (Cd)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,001 %
		Sodium (Na)	max. 0,001 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

ZINC CHLORIDE SOLUTION 5%

Cynku chlorek 5%



M = 136,28 g/mol

CAS: 7646-85-7

WE: 231-592-0



H: 315, 319, 335, 411

P: 280, 305+351+338

RID/ADR: 8, III

UN: 3264



Physical and chemical properties:

Character:	liquid	Vapor pressure:	no data
Colour:	colourless	Density:	approx 1,0441 g/cm ³ (20°C)
Odor:	odorless	Solubility:	
pH:	approx 5	in water:	soluble
Melting point:	no data	in organic solvents:	diethyl ether and ethanol
Boiling point:	no data		
Explosion limits:	not applicable		

Zinc chloride solution 5% pure p. a.

CHEM*112620410

250 ml

500 ml

Assay

5,0 ± 0,1 %

1 l

2.5 l

Density

approx 1,0441 g/ml

5 l

ZINC CHLORIDE SOLUTION 10%

Cynku chlorek 10%



M = 136,28 g/mol

CAS: 7646-85-7

WE: 231-592-0



H: 314, 411

P: 280, 301+330+331, 335, 305+351+338

RID/ADR: 8, II

UN: 3264



Physical and chemical properties:

Character:	liquid	Vapor pressure:	no data
Colour:	colourless	Density:	approx 1,0899 g/cm ³ (20°C)
Odor:	odorless	Solubility:	
pH:	approx 5	in water:	soluble
Melting point:	no data	in organic solvents:	diethyl ether and ethanol
Boiling point:	no data		
Explosion limits:	not applicable		

Zinc chloride solution 10% pure p. a.

CHEM*112620411

250 ml	500 ml	Assay	10,0 ± 0,5 %
1 l	2.5 l	Density	approx 1,0889 g/cm ³
5 l			

ZINC CHLORIDE STANDARD SOLUTION (C < 0,02 MOL/L)

Cynku chlorek, roztwory mianowane



M = 136,28 g/mol

CAS: 7646-85-7

WE: 231-592-0

H: 412

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	approx 1,0002 g/cm ³ (20°C)
pH:	approx 5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	diethyl ether and ethanol

Zinc chloride standard solution 0,01 mol/l**CHEM*812642007**

500 ml

1 l

Titer

0,00996 – 0,01004 mol/l

ZINC CHLORIDE STANDARD SOLUTION

(0,02 ≤ C < 0,2 MOL/L)

Cynku chlorek roztwory mianowane



M = 136,28 g/mol

CAS: 7646-85-7

WE: 231-592-0



H: 412

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	diethyl ether and ethanol

Zinc chloride standard solution 0,05 mol/l

CHEM*814579109

500 ml

1 l

Titer

0,0498 – 0,0502 mol/l

Zinc chloride standard solution 0,1 mol/l

CHEM*812642009

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

ZINC ACETATE DIHYDRATE

Cynku octan 2 hydrat



M = 219,49 g/mol

CAS: 5970-45-6

WE: 209-170-2



H: 302, 410
P: 262, 273, 280
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	no data
Odor:	weak	Density:	approx 1,77 g/cm ³ (20°C)
pH:	approx 6 - 7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 900 kg/m ³
Melting point:	>100°C	Solubility:	
Boiling point:	not applicable	in water:	430 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Zinc acetate dihydrate pure

CHEM*422654905

50 g	100 g	Assay	min. 97,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	6,0 – 8,0
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

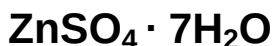
Zinc acetate dihydrate pure p. a.

CHEM*112654906

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	pH (5%, 20°C)	6,0 – 7,0
1 kg	2 kg	Total nitrogen (N)	max. 0,002 %
5 kg		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Sodium (Na)	max. 0,001 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

ZINC SULFATE HEPTAHYDRATE

Cynku siarczan 7 hydrat



M = 287,54 g/mol

CAS: 7446-20-0

WE: 231-793-3



H: 302, 31, 410

P: 273, 280, 301+330+331, 305+351+338,
309, 310

RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapor pressure:	no data
Odor:	odorless	Density:	1,97 g/cm ³ (20°C)
pH:	4 - 6 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 800 - 1000 kg/m ³
Melting point:	38-280°C	Solubility:	
Boiling point:	no data	in water:	960 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble
Ignition temperature:	not applicable		

Zinc sulfate heptahydrate pure

CHEM*422657500

50 g	100 g	Assay	99,0 - 100,5 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	pH (5%, 20°C)	4,4 - 5,6
3 kg	5 kg	Total nitrogen (N)	max. 0,002 %
10 kg	15 kg	Chlorides (Cl)	max. 0,002 %
25 kg		Arsenic (As)	max. 0,0005 %
		Lead (Pb)	max. 0,003 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

Zinc sulfate heptahydrate pure p. a.**CHEM*112657501**

25 g	50 g	Assay	99,5 - 100,5 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	pH (5%, 20°C)	4,4 - 5,6
1 kg	3 kg	Azotany (NO ₃)	max. 0,002 %
		Salt ammonia (NH ₄)	max. 0,001 %
		Chlorides (Cl)	max. 0,0003 %
		Arsenic (As)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0001 %
		Magnesium (Mg)	max. 0,0003 %
		Manganese (Mn)	max. 0,0003 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,001 %
		Sodium (Na)	max. 0,001 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0003 %

ZINC SULFATE STANDARD SOLUTIONS (C < 0,015 MOL/L)

Cynku siarczan roztwory mianowane



M = 161,47 g/mol

CAS: 7733-02-0

WE: 231-793-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data

Zinc sulfate standard solution 0,01 mol/l

CHEM*802657501

100 ml

500 ml

Titer

0,00996 – 0,01004 mol/l

1 l

ZINC SULFATE STANDARD SOLUTIONS (0,015 < C < 0,15 MOL/L)

Cynku siarczan roztwory mianowane



M = 161,47 g/mol

CAS: 7733-02-0

WE: 231-793-3

H: 412

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data

Zinc sulfate standard solution 0,02 mol/l

CHEM*802657504

100 ml

500 ml

Titer

0,01992 – 0,02008 mol/l

1 l

Zinc sulfate standard solution 0,05 mol/l

CHEM*802657503

100 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1 l

Zinc sulfate standard solution 0,1 mol/l

CHEM*802657502

100 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1 l

ZINC SULFATE STANDARD SOLUTIONS (0,15 < C < 0,7 MOL/L)

Cynku siarczan roztwory mianowane

ZnSO₄

M = 161,47 g/mol

CAS: 7733-02-0

WE: 231-793-3



H: 318, 411
P: 280, 305+351+338
RID/ADR: 9, III UN: 3082



Physical and chemical properties:

Character:	liquid	Vapor pressure:	no data
Colour:	colourless	Density:	approx 1,078 g/cm ³ (20°C)
Odor:	odorless	Solubility:	
pH:	approx 5 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	no data
Boiling point:	no data		
Explosion limits:	not applicable		

Zinc sulfate standard solution 0,5 mol/l

CHEM*802657505

100 ml

500 ml

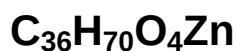
Titer

0,498 – 0,502 mol/l

1 l

ZINC STEARATE

Cynku stearynian



M = 632,33 g/mol

CAS: 557-05-1

WE: 209-151-9



H: 335

P: 304+340

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapor pressure:	no data
Odor:	weak	Density:	no data
pH:	no data	Bulk density:	approx 80 – 130 kg/m ³
Melting point:	118 – 122°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Zinc stearate pure

CHEM*422660207

10 g	25 g	Assay	min. 98,0%
50 g	75 g	Free acid	passes test
100 g	250 g	Lead (Pb)	max. 0,005%
500 g	750 g	Sodium, potassium, calcium (Na, K, Ca)	max. 0,1%
1 kg		Appearance	white powder

ZINC OXIDE

Cynku tlenek

ZnO

M = 81,37 g/mol

CAS: 1314-13-2

WE: 215-222-5



H:410
P: 273
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	white	Density:	5,61 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 300 - 500 kg/m ³
pH:	approx 7 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	> 1800°C	in water:	0,0016 g/l (20°C)
Boiling point:	1800°C	in other solvents:	acids, alkalies

Zinc oxide pure

CHEM*422664700

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Iron (Fe)	max. 0,001 %
750 g	1 kg	Calcium (Ca)	max. 0,05 %
2 kg	3 kg	Sodium (Na)	max. 0,05 %
5 kg	10 kg	Lead (Pb)	max. 0,04 %
15 kg	20 kg	Copper (Cu)	max. 0,0008 %
25 kg		Manganese (Mn)	max. 0,001 %
		Total nitrogen (N)	max. 0,001 %
		Arsenic (As)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,02 %
		Chlorides (Cl)	max. 0,004 %

Zinc oxide pure p. a.

CHEM*112664700

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Iron (Fe)	max. 0,0005 %
500 g	750 g	Calcium (Ca)	max. 0,001 %
1 kg	2 kg	Sodium (Na)	max. 0,001 %
10 kg		Lead (Pb)	max. 0,002 %
		Copper (Cu)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %
		Total nitrogen (N)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,002 %

TIN (II) CHLORIDE

Cyny (II) chlorek



M = 189,62g/mol

CAS: 7772-99-8

WE: 231-868-0



H: 302, 315, 317, 319, 335
P: 280, 302+352, 305+351+338
RID/ADR: 8, III UN: 3260



Physical and chemical properties:

Character:	solid	Vapor pressure:	not applicable
Colour:	white	Density:	3,65 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	no data
pH:	approx 2,0 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	245 - 247°C	in water:	2700 g/l (20°C)
Boiling point:	622 - 624°C	in organic solvents:	ethanol
Explosion limits:	not applicable		

Tin (II) chloride pure

CHEM*422619204

25 g	50 g	Assay	min. 97,0%
100 g	250 g	Substances insoluble in HCl	max. 0,05%
		Sulfates (SO ₄)	max. 0,01%
500 g	750 g	Arsenic (As)	max. 0,0002%
1 kg	2 kg	Heavy metals (Pb+Cu+Zn+Ni+Co+Mn)	max. 0,05%
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05%
5 kg	10 kg	Iron (Fe)	max. 0,01%
		Appearance	white powder

Tin (II) chloride pure p. a.

CHEM*112620001

10 g	25 g	Assay	min. 98,0 %
50 g	100 g	Substances insoluble in HCl	max. 0,02%
		Sulfates (SO ₄)	max. 0,005%
250 g	500 g	Arsenic (As)	max. 0,0001%
		Heavy metals (Pb+Cu+Zn+Ni+Co+Mn)	max. 0,02%
750 g	1 kg	Sodium, potassium, calcium (Na+K+Ca)	max. 0,02%
		Iron (Fe)	max. 0,005%
		Appearance	white powder

TIN (II) CHLORIDE DIHYDRATE

Cyny chlorek 2 hydrat



M = 225,63 g/mol

CAS: 10025-69-1

WE: 231-868-0



H: 302, 315, 317, 319, 335
 P: 280, 302+352, 305+351+338
 RID/ADR: 8, III UN: 3260



Physical and chemical properties:

Character:	solid	Vapor pressure:	not applicable
Colour:	colourless to white	Density:	2,71 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 1250 kg/m ³
pH:	approx 1 - 2 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	38°C	in water:	1187 g/l (20°C)
Boiling point:	652°C (1013hPa)	in organic solvents:	no data
Explosion limits:	not applicable		

Tin (II) chloride dihydrate pure

CHEM*422620409

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,01 %
		Sulfates (SO ₄)	max. 0,01 %
500 g	750 g	Arsenic (As)	max. 0,0001 %
1 kg	2 kg	Heavy metals (Pb+Cu+Zn+Co+Ni+Mn)	max. 0,05 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
5 kg	10 kg	Iron (Fe)	max. 0,01 %
25 kg			

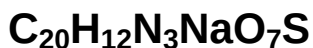
Tin (II) chloride dihydrate pure p. a.

CHEM*112620409

10 g	25 g	Assay	min. 99,0 %
		Substances insoluble in HCl	max. 0,005 %
50 g	100 g	Sulfates (SO ₄)	max. 0,0025 %
250 g	500 g	Arsenic (As)	max. 0,00005 %
		Heavy metals (Pb+Cu+Zn+Co+Ni+Mn)	max. 0,01 %
750 g	1 kg	Sodium, potassium, calcium (Na+K+Ca)	max. 0,002 %
		Iron (Fe)	max. 0,002 %

ERIOCHROME BLACK T

Czerń eriochromowa T



M = 461,38 g/mol

CAS: 1787-61-7

WE: 217-250-3



H: 319, 411
P: 273, 305+351+338
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	black	Vapor pressure:	no data
Odor:	weak	Density:	no data
pH:	approx 3,7 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 400-600 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	50 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol 2 g/l (20°C)
Ignition temperature:	no data		

Eriochrome Black T ind.

CHEM*232714101

5 g	10 g	Residue on roasting (as Na ₂ SO ₄)	max. 20,0 %
25 g	50 g	Absorption coefficient	
100 g	250 g	$\alpha^{1\%}_{1\text{cm}}$ (pH 10,0; λ_{max} = 580 - 640 nm)	min. 400
500 g		Mg - sensitivity	min. 0,00001 g/ml
		Loss on drying	max. 5,0 %
		TLC test	passes test

ALIZARIN RED S

Czerwień alizarynowa S



M = 342,26 g/mol

CAS: 130-22-3

WE: 204-981-8



H: 315, 319, 335

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	orange	Vapor pressure:	no data
Odor:	phenol	Density:	no data
pH:	6-7 (1 g/l, H ₂ O, 20°C)	Bulk density:	approx 340 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	1 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

alizarin red

CHEM*212717704

1 g	5 g	pH sensitivity	3,7 – 5,2
7,5 g	10 g		
15 g	25 g		

PHENOL RED

Czerwień fenolowa

C₁₉H₁₄O₅S

M = 376,36 g/mol

CAS: 143-74-8

WE: 205-609-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	brown	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	pK – 7,9	Bulk density:	no data
Melting point:	>300°C	Solubility:	
Boiling point:	no data	in water:	0,77 g/l (100°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Phenol Red sodium salt

CHEM*212722504

1 g	5 g	Appearance	brown crystalline powder
7,5 g	10 g	Absorption coefficient	
		E (1%, 1cm, pH 6,5)	min. 500
15 g	25 g	E (1%, 1cm, pH 8,0)	min. 1000
50 g		Solubility in ethanol	passes test
		pH sensitivity	passes test
		TLC test	passes test
		Loss on drying	max. 1,5%

CONGO RED

Czerwień Kongo



M = 696,66 g/mol

CAS: 573-58-0

WE: 209-358-4



H: 359, 361D

P: 201, 281, 308+313

RID/ADR: 6.1, III

UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	brown	Vapor pressure:	no data
Odor:	characteristic	Density:	no data
pH:	approx 6,7 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 600 - 700 kg/m ³
Melting point:	>360 °C(lit.)	Solubility:	
Boiling point:	no data	in water:	25 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol 1 g/l (20°C)
Ignition temperature:	no data	log P _{ow} :	2.63 (lit.)

czerwień Kongo ind.

CHEM*212724200

1 g	5 g	Absorption coefficient (1%; 1cm)	min. 520
7,5 g	10 g	Maximum absorption(H ₂ O)	497 – 500 nm
		Coefficient of maximum absorption P -/+ 15 nm	0,99 - 1,04
15 g	25 g	Loss on drying (110°C)	max. 5%
		TLC test	passes test

CRESOL RED

Czerwień krezolowa



M = 404,41 g/mol

CAS: 1733-12-6

WE: 263-654-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	600-620kg/m ³
Melting point:	290°C (decomposition)(lit.)	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Cresol red ind.

CHEM*212724506

1 g	5 g	Appearance	green powder
7,5 g	10 g	Molar coefficient of absorption	
		E (pH 5,0; 435 nm)	min. 18500
15 g	25 g	E (pH 9,2; 575 nm)	min. 45500
		Solubility in water	passes test
50 g		TLC test	passes test
		Residue on roasting (asSO ₄)	17 - 20%
		dissociation constant pK (pH 5,0÷9,2)	7,6 - 8,2
		pH sensitivity:	
		red-yellow	0,2 - 1,8
		yellow-purple	7,2 - 8,8

METHYL RED

Czerwień metylowa



M = 269,31 g/mol

CAS: 493-52-7

WE: 207-776-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	red or purple	Vapor pressure:	no data
Odor:	weak	Density:	no data
pH:	no data	Bulk density:	approx 300-500 kg/m ³
Melting point:	181-182°C	Solubility:	
Boiling point:	no data	in water:	0,1g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	alcohol 2,5 g/l (20°C), benzene
Ignition temperature:	no data		

Methyl Red ind.

CHEM*212725700

5 g	10 g	Solubility in ethanol	passes test
25 g	50 g	TLC test	passes test
		Moisture	max. 5,0 %
100 g		pH sensitivity	4,4 - 6,2
		Molar coefficient of absorption:	
		E (pH 6,2; λ = 430 nm)	min. 18000
		E (pH 4,4; λ = 520 nm)	min. 39000

METHYL RED 0,1% SOLUTION IN ETHANOL

Czerwień metylowa 0,1% roztwór w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,3% v/v (ethanol)
Colour:	no data	top:	19% v/v (ethanol)
Odor:	ethanol	Viscosity at 20°C:	1,078 mPa·s
pH:	no data		(ethanol)
Melting point:	-117°C (ethanol)	Vapor pressure:	60 hPa (20°C) (ethanol)
Boiling point:	78°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C	in water:	no data
	(ethanol)	in organic solvents:	no data

Explosion limits:

Methyl Red 0,1% in ethanol

CHEM*212725701

100 ml	250 ml	Assay	0,09 - 0,11 %
500 ml	1 l	pH sensitivity	4,4 - 6,2

METHYL RED SODIUM SALT

Czerwień metylowa sól sodowa



M = 291,28 g/mol

CAS: 845-10-3

WE: 212-682-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	orange	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 8,2 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 360 kg/m ³
Melting point:	285°C	Solubility:	
Boiling point:	no data	in water:	800 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

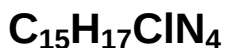
Methyl Red sodium salt ind.

CHEM*212725702

5 g	10 g	Appearance	brown powder
25 g	50 g	Molar coefficient of absorption:	
		E (pH 6,2; 420÷450 nm)	min. 14000
		E (pH 4,4; 510÷540 nm)	min. 28000
100 g		pH sensitivity	passes test
		Solubility in water	passes test
		TLC test	passes test
		Residue on roasting (as Na ₂ SO ₄)	max. 40, 0 %

NEUTRAL RED

Czerwień obojętna



M = 288,78 g/mol

CAS: 553-24-2

WE: 209-035-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green - black	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 3,1 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 300-500 kg/m ³
Melting point:	290°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	50 g/l (25°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol - 20 g/l (25°C)
Ignition temperature:	no data		

Neutral Red ind.

CHEM*212727000

5 g	10 g	Assay	min. 50,0 %
25 g	50 g	Maximum absorption (50% ethanol)	539 - 544 nm
100 g		Percentage coefficient of absorption: (1%; 1cm; 50% ethanol)	min. 770
		Loss on drying	max. 8,0 %
		Solubility in water	passes test
		TLC test	passes test
		pH sensitivity:	6,8 - 8,0

NEUTRAL RED 0,1% SOLUTION IN ETHANOL

Czerwień obojętna 0,1% roztwór w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,3% v/v (ethanol)
Colour:	no data	top:	19% v/v (ethanol)
Odor:	ethanol	Viscosity at 20°C:	1,078 mPa·s
pH:	no data		(ethanol)
Melting point:	-117°C (ethanol)	Vapor pressure:	60 hPa (20°C) (ethanol)
Boiling point:	78°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C	in water:	no data
	(ethanol)	in organic solvents:	no data

Explosion limits:

Neutral Red 0,1% in ethanol

CHEM*212727002

50 ml	100 ml	Assay	0,09 - 0,11 %
250 ml	500 ml	pH sensitivity:	6,8 - 8,0
1 l			

DENATURATED ALCOHOL

Denaturat

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 319, 336
P: 210, 305+351+338
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	bottom:	3,1% v/v
Colour:	violet	top:	20% v/v
Odor:	nasty	Dynamic viscosity:	no data
pH:	no data	Vapor pressure (20°C):	no data
Melting point:	-114,5°C	Density:	approx 0,8194 g/cm ³ (15°C)
Boiling point:	78°C	Solubility:	
Auto-ignition temperature:	425°C	in water:	soluble
Ignition temperature:	12°C	in organic solvents:	no data
Explosion limits:			

denaturated alcohol

CHEM*757650005

100 ml

250 ml

500 ml

1 l

Appearance	clear, purple liquid
Colour intensity	not less than the solution: 0,7mg crystal violet/1dm ³ H ₂ O
Precipitate	max. 0,2 ml/1dm ³
Odor	nasty
Strenght (20°C)	91,7 - 92,3 % v/v
Residue on evaporation	max. 0,25 g/l
Turbidity number	max. 200

DENATURATED ALCOHOL - RRK12 FLUID (colourless)

Denaturat – płyn RRK12

M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	colourless - yellow	bottom:	3,3% v/v
Odor:	characteristic	top:	19% v/v
pH:	no data	Vapor pressure:	no data
Melting point:	no data	Density:	approx 0,8 g/cm ³
Boiling point:	no data	Solubility:	
Auto-ignition temperature:	365°C	in water:	no data
Ignition temperature:	13°C	in organic solvents:	no data

denaturated alcohol - RRK12 fluid

CHEM*757650006

250 ml	500 ml	Ignition temperature	13°C
1 l	2.5 l	Auto-ignition temperature	365°C
3 l	5 l	Density (20°C)	0,802 g/cm ³
10 l	20 l	Strenght	91,7 ÷ 92,3%
30 l	60 l	Residue on evaporation	max. 0,25 g/l

DENATURATED ALCOHOL - RRK12 FLUID

Denaturat - plyn RRK12

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 319, 336
P: 210, 305+351+338
RID/ADR: 3, III

UN: 1170



Physical and Chemical Properties:

Character:	liquid	bottom:	3,0 % v/v
Colour:	colourless	top:	18,0 % v/v
Odor:	choking	Viscosity (20°C):	approx 1,19 mPa·s
pH:	6,0 - 7,0	Vapor pressure:	approx 59 hPa (20°C)
Melting point:	no data	Density:	0,815 – 0,830 g/cm ³ (20°C)
Boiling point:	approx 79°C	Solubility:	
Auto-ignition temperature:	approx 425°C	in water:	soluble
Ignition temperature:	approx 18°C	in organic solvent:	no data
Explosion limits:			

denaturated alcohol - RRK12 fluid

CHEM*757650004

500 ml	1 l	Appearance	clear liquid
2.5 l	3 l	Apparent power (20°C)	93,0 %
5 l	10 l	Density (20°C)	0,82 g/cm ³
20 l	30 l	Water	max. 10,0 %
60 l		Glycol	1,0 % ± 0,2 %
		Alcohol contaminated Bitrex	99,0 % ± 1,0 %

1,2 -DICHLOROETHANE

1,2-Dichloroetan



M = 98,97 g/mol

CAS: 107-06-2

WE: 203-458-1



H: 225, 302, 319, 335, 350,
P: 201, 210, 302+352, 304+340, 305+351+338,
308+33
RID/ADR: 3, II UN: 1184



Physical and chemical properties:

Character:	liquid	top:	16% v/v
Colour:	colourless	Viscosity dynamic:	0,838 mPa.s (20°C)
Odor:	characteristic	Vapor pressure (20°C):	87 hPa
pH:	neutral (20°C)	Density:	1,25 g/cm ³ (20°C)
Melting point:	-35,66°C	Solubility:	
Boiling point:	83,48°C	in water:	8 g/l (20°C)
Auto-ignition temperature:	440°C	in organic solvent:	ethanol, diethyl ether , acetone, chloroform, CCl ₄
Ignition temperature:	13°C		DMSO
Explosion limits:		log P _(w/o) :	1,48
bottom:	6,2% v/v		

1,2 -dichloroethane purified

CHEM*323192004

5 l	10 l	Appearance	colourless, klarowna liquid
20 l	30 l	Assay (GC)	min. 99,0 %
		Density (20°C)	1,246 - 1,255 g/cm ³
		Water	max. 0,05 %
		Free acid (as HCl)	max. 0,005 %
		Non-volatile matter	max. 0,01 %

1,2 -dichloroethane pure

CHEM*413192004

500 ml	1 l	Appearance	colourless, clear liquid
2.5 l	3 l	Assay (GC)	min. 99,5 %
		Density (20°C)	1,246 - 1,255 g/cm ³
5 l	10 l	Water	max. 0,03 %
20 l	30 l	Free acid (as HCl)	max. 0,001 %
		Non-volatile matter	max. 0,005 %

1,2 -dichloroethane pure p.a.**CHEM*113192005**

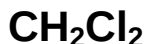
100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (GC)	min. 99,5 %
2.5 l	3 l	Density (20°C)	1,246 - 1,255 g/cm ³
5 l	10 l	Water	max. 0,03 %
20 l	30 l	Free acid (as HCl)	max. 0,001 %
		Substances reducing KMnO ₄	max. 0,001%
		Non-volatile matter	max. 0,002 %
		Chlorides	max. 0,0001%
		Chromium (Cr)	max. 0,000002%
		Zinc (Zn)	max. 0,00001%
		Cadmium (Cd)	max. 0,000005%
		Cobalt (Co)	max. 0,000002%
		Magnesium (Mg)	max. 0,00001%
		Manganese (Mn)	max. 0,0000002%
		Copper (Cu)	max. 0,0000002%
		Nickel (Ni)	max. 0,0000002%
		Lead (Pb)	max. 0,00001%
		Calcium (Ca)	max. 0,00005%
		Iron (Fe)	max. 0,00001%

1,2 -dichloroethane HPLC**CHEM*613192005**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Non-volatile matter	max. 0,0005 %
		UV - transmission (1cm, water):	
		250 nm	min. 50 %
		260 nm	min. 90 %
		280 nm	min. 98 %
		300 nm	min. 99 %

DICHLOROMETHANE

Dichlorometan



M = 84,93 g/mol

CAS: 75-09-2

WE: 200-838-9



H: 351
P: 281, 308+313
RID/ADR: 6.1, III

UN: 1593



Physical and Chemical Properties:

Character:	liquid	top:	22% v/v
Colour:	colourless	Dynamic viscosity:	0,437 mPa.s (20°C)
Odor:	characteristic	Vapor pressure (20°C):	475 hPa
pH:	neutral (20°C)	Density:	1,326 g/cm ³ (20°C)
Melting point:	-95°C	Solubility:	
Boiling point:	39,5 - 40,5°C	in water:	16 g/l (20°C)
Auto-ignition temperature:	605°C	in other solvents:	ethanol, methanol, diethyl ether, acetone, CCl ₄ , benzene
Ignition temperature:	not applicable		
Explosion limits:		log P _(w/o) :	1,25
bottom:	13% v/v		

dichloromethane purified

CHEM*326284101

2.5 l	3 l	Assay	min. 98,5 %
5 l	10 l	Colour	max. 30 Hazen
20 l	30 l	Water (KF)	max. 0,1 %
60 l	200 l	Free acid (asHCl)	max. 0,005 %
		Non-volatile matter	max. 0,005 %

dichloromethane pure

CHEM*426284101

100 ml	250 ml	Assay	min. 99,0 %
500 ml	1 l	Colour	max. 20 Hazen
2.5 l	3 l	Water (KF)	max. 0,05 %
5 l	10 l	Free acid (as HCl)	max. 0,001 %
20 l	30 l	Non-volatile matter	max. 0,002 %
60 l	200 l		

dichloromethane pure p.a. CHEM*116284101

100 ml	250 ml	Assay	min. 99,5 %
		Colour	max. 10 Hazen
500 ml	1 l	Water (KF)	max. 0,02 %
2.5 l	3 l	Free acid (as HCl)	max. 0,001 %
5 l	10 l	Free halogens	passes test
20 l	30 l	Non-volatile matter	max. 0,001 %
60 l			

dichloromethane HPLC CHEM*616284101

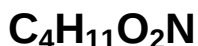
1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Non-volatile matter	max. 0,0005 %
		UV - transmission (1cm, water):	
		235 nm	min. 40 %
		240 nm	min. 75 %
		250 nm	min. 98 %
		260 nm	min. 99 %
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb
		Stabilizer (amylen)	20 ppm

dichloromethane GC for pesticide analysis CHEM*616284102

500 ml	1 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,05 %
2.5 l		Acidity	max. 0,0005 meq/g
		Non-volatile matter	max. 0,0005 %
		Stabilizer (amylen)	~50 ppm

DIETHANOLOAMINE

Dietanolamina



M = 105,14 g/mol

CAS: 111-42-2

WE: 203-868-0



H: 302, 315, 318, 373

P: 280, 302+352, 305+351+338, 314

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	9,8 % v/v
Colour:	colourless	Vapor pressure:	1,33 Pa (30°C)
Odor:	weak	Density:	1,097 g/cm ³ (20°C)
pH:	approx 11 (53 g/l H ₂ O)	Solubility:	
Melting point:	28°C	in water:	soluble
Boiling point:	269 - 271°C	in organic solvent:	benzene, diethyl ether, n-heptane, methanol
Auto-ignition temperature:	662,2 °C		
Ignition temperature:	134 °C	log P _(w/o) :	-1,43
Explosion limits:			
bottom:	1,6 % v/v		

diethanolamine pure

CHEM*423261704

100 ml	250 ml	Assay	min. 96,0 – 103,0 %
		Density (20°C)	1,085 - 1,1 g/cm ³
500 ml	1 l	Refractive index (20°C)	1,476 - 1,479
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,1 %
5 l	10 l	The product may be crystallized. Crystallization does not affect product quality.	
20 l			

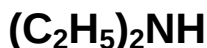
diethanolamine pure p.a.

CHEM*113261705

50 ml	100 ml	Assay	min. 99,0 – 101,0 %
		Density (20°C)	1,095 - 1,098 g/cm ³
250 ml	500 ml	Refractive index(20°C)	1,4765 - 1,4775
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,05 %
3 l	5 l	The product may be crystallized. Crystallization does not affect product quality.	
10 l	20 l		

DIETHYLAMINE

Dietyloamina



M = 73,14 g/mol

CAS: 109-89-7

WE: 203-716-3



H: 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 3, II UN: 1154



Physical and Chemical Properties:

Character:	liquid	bottom:	1,7 % v/v
Colour:	colourless	top:	10,1 % v/v
Odor:	ammonia	Dynamic viscosity:	0,34 mPa.s (25°C)
pH:	13 (100 g/lH ₂ O, 20°C)	Vapor pressure:	250 mbar (20°C)
Melting point:	-48°C	Density:	0,71 g/cm ³ (20°C)
Boiling point:	56°C	Solubility:	
Auto-ignition temperature:	310°C	in water:	soluble
Ignition temperature:	-25°C	in organic solvent:	alcohols
Explosion limits:		log P _(w/o) :	0,58

diethylamine pure

CHEM*423271305

100 ml	250 ml	Assay	99,0 -107,0 %
500 ml	1 l	Density (20°C)	0,704 –0,708 g/cm ³
2.5 l	3 l	Refractive index (20°C)	1,3840-1,3860
5 l	10 l	Boiling point (95%)	54-57°C
20 l		Residue on evaporation	max. 0,05 %
		Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %
		Appearance	colourless - yellow liquid

diethylamine pure p.a.

CHEM*113271306

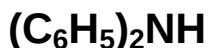
50 ml	100 ml	Assay	99,0 -105,0 %
250 ml	500 ml	Density (20°C)	0,704 –0,708 g/cm ³
1 l	2.5 l	Refractive index(20°C)	1,3840-1,3860
3 l	5 l	Boiling point (95%)	55-56°C
10 l		Residue on evaporation	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (asPb)	max. 0,0005 %
		Iron (Fe)	max. 0,0003 %
		Appearance	colourless – yellow liquid

diethylamine HPLC**CHEM*423271305**

1l	2.5 l	Assay (GC)	min. 99,5 %
		Water	max. 0,15 %
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		300 nm	min. 50 %
		320 nm	min. 70 %
		350 nm	min. 90 %
		400 nm	min. 99 %

DIPHENYLAMINE

Difenyloamina



M = 169,22 g/mol

CAS: 122-39-4

WE: 204-539-4



H: 301, 311, 331, 373, 410
P: 273, 280, 302+352, 304+340
RID/ADR: 9, III UN: 3077



Physical and Chemical Properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Vapor pressure:	0,0003 mbar (20°C), 1,3 hPa (115°C)
Odor:	weak	Density:	1,16 g/cm ³ (160°C)
pH:	no data	Solubility:	
Melting point:	52 - 55°C	in water:	0,05 g/l (25°C)
Boiling point:	302°C	in organic solvent:	ethanol - 450 g/l (20°C)
Auto-ignition temperature:	640°C		
Ignition temperature:	150°C		

diphenylamine pure

CHEM*423360507

10 g	25 g	Appearance	colourless – yellow crystals or scales
50 g	75 g	Assay	min. 97,5 %
		Solubility in ethanol	passes test
100 g	250 g	Residue on roasting	max. 0,01 %
		Nitrate and other oxidants	passes test

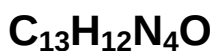
diphenylamine pure p.a.

CHEM*113360508

10 g	25 g	Appearance	colourless – yellow crystals or scales
50 g	75 g	Assay	min. 99,0 %
		Melting point	min. 52°C
100 g	250 g	Solubility in ethanol	passes test
		NO ₃ sensitivity	max. 0,000001 g/ml
		Residue on roasting	max. 0,005 %
		Nitrate and other oxidants	passes test

DIPHENYLCARBAZONE

Difenylokarbazon



M = 240,26 g/mol

CAS: 538-62-5

WE: 208-698-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and Chemical Properties:

Character:	solid	Explosion limits:	no data
Colour:	orange	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	approx 380 kg/m ³
Melting point:	153-158 °C(lit.)	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvent:	alcohol, acetone,
Ignition temperature:	no data		benzene, chloroform

1,5-diphenylcarbazone pure p.a.

CHEM*113371904

1 g	5 g	Appearance	orange, crystalline powder
10 g	25 g	Assay	40,0 – 50,0 %
50 g		Solubility in ethanol	passes test
		Hg(II) sensitivity	min. 0,000001 g/cm ³
		Melting point	153 – 158°C
		Residue on roasting (as SO ₄)	max. 0,1 %

DIPHENYLCARBAZONE SOLUTION 2% IN ETHANOL

Difenylokarbazon, roztwór 2% w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvent:	not applicable

1,5-diphenylcarbazone 2% in ethanol

CHEM*113371905

50 ml	100 ml	Appearance	orange solution
250 ml	500 ml	Assay	1,0 % ± 0,1 %

1,5-Diphenylcarbazine

1,5-difenylokarbazyd



M = 242,28 g/mol

CAS: 140-22-7

WE: 205-403-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white or pink	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	approx 420 kg/m ³
Melting point:	170 - 172°C	Solubility:	
Boiling point:	no data	in water:	weak
Auto-ignition temperature:	no data	in organic solvent:	no data
Ignition temperature:	no data		

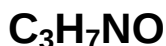
1,5-diphenylcarbazine pure p.a.

CHEM*113372202

1 g	5 g	Appearance	white or pink crystalline powder
10 g	25 g	Solubility in ethanol	passes test
50 g		Cr (VI) sensitivity	min. 0,00000005 g/ml
		Hg (II) sensitivity	min. 0,000002 g/ml
		Residue on roasting (as SO ₄)	max. 0,05%
		Diphenylcarbazon and other organic impurities	passes test

N,N-DIMETHYLOFORMAMIDE

N,N-Dimetyloformamid



M = 73,1 g/mol

CAS: 68-12-2

WE: 200-679-5



H: 225
P: 210
RID/ADR: 3, III

UN: 2265



Physical and Chemical Properties:

Character:	liquid	bottom:	2,2% v/v
Colour:	colourless	top:	16% v/v
Odor:	ammonia	Viscosity (20°C):	0,9243 mPa·s
pH:	7 (200g/l, 20°C)	Vapor pressure:	3,5 hPa (20°C)
Melting point:	-61°C	Density:	0,95 g/cm ³ (20°C)
Boiling point:	153°C	Solubility:	
Auto-ignition temperature:	440°C	in water:	soluble
Ignition temperature:	57,8°C	in organic solvent:	soluble
Explosion limits:		log P _{o/w} :	-0,85

n,n-dimethyloformamide pure

CHEM*423551209

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay	min. 99,0 %
3 l	5 l	Density (20°C)	0,946 - 0,95 g/cm ³
10 l	20 l	Water (KF)	max. 0,1 %
30 l	60 l	Residue on evaporation	max. 0,02 %
200 l			

n,n-dimethyloformamide pure p.a.

CHEM*113551200

50 ml	100 ml	Appearance	colourless, clear liquid
250 ml	500 ml	Assay	min. 99,8 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	0,948 - 0,95 g/cm ³
10 l	20 l	Water (KF)	max. 0,05 %
		Acids (as CH ₃ COOH)	max. 0,003 %
		Base (as C ₂ H ₇ N)	max. 0,002 %
		Residue on evaporation	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0002 %

n,n-dimethyloformamide HPLC**CHEM*613551200**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		275 nm	min. 60 %
		280 nm	min. 80 %
		290 nm	min. 90 %
		300 nm	min. 98 %
		320 nm	min. 99 %
		Fluorescence (as quinine):	
		365 nm	max. 1 ppb

DIMETHYLGLYOXIME

Dimetyloglioksym



M = 116,12 g/mol

CAS: 95-45-4

WE: 202-420-1



H: 228
P: not applicable
RID/ADR: 4.1, III

UN: 2926



Physical and Chemical Properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapor pressure:	not applicable
Odor:	characteristic	Density:	no data
pH:	no data	Bulk density:	approx 620 kg/m ³
Melting point:	238 - 242°C	Solubility:	
Boiling point:	not applicable	in water:	0,6 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol
Ignition temperature:	no data		

dimethylglyoxime pure

CHEM*423554405

10 g	25 g	Appearance	white powder
50 g	75 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in C ₂ H ₅ OH	max. 0,05 %
500 g	1 kg	Residue on roasting (as SO ₄)	max. 0,1 %

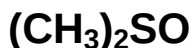
dimethylglyoxime pure p.a.

CHEM*113554406

10 g	25 g	Appearance	white powder
50 g	75 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in C ₂ H ₅ OH	max. 0,02 %
500 g		Residue on roasting (as SO ₄)	max. 0,05 %
		Melting point	~240 °C
		Ni(II) sensitivity	min. 0,0000004 g/ml

DIMETHYL SULFOXIDE

Dimetylu sulfotlenek



M = 78,13 g/mol

CAS: 67-68-5

WE: 200-664-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and Chemical Properties:

Character:	liquid	bottom:	1,8% v/v
Colour:	colourless	top:	63,0% v/v
Odor:	odorless	Vapor pressure:	0,8 mbar (20°C)
pH:	no data	Dynamic viscosity:	2,14 mPa.s (20°C)
Melting point:	18,5°C	Density:	1,1 g/cm ³ (20°C)
Boiling point:	189°C	Solubility:	
Auto-ignition temperature:	300-302°C	in water:	soluble
Ignition temperature:	95°C	in organic solvent:	no data
Explosion limits:			

dimethyl sulfoxide pure

CHEM*423635509

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Water (KF)	max. 0,3 %
1 l	2.5 l		
3 l	5 l		

dimethyl sulfoxide pure p.a.

CHEM*113635509

50 ml	100 ml	Assay	min. 99,7 %
250 ml	500 ml	Density (20°C)	1,099 - 1,101 g/cm ³
1 l	2.5 l	Refractive index (20°C)	1,478 - 1,479
3 l	5 l	Water (KF)	max. 0,2 %
10 l	20 l		
30 l	60 l		

dimethyl sulfoxide HPLC**CHEM*113635510**

1 l	2.5 l	Assay (GC)	min. 99,5 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		280 nm	min. 60 %
		300 nm	min. 75 %
		320 nm	min. 90 %
		330 nm	min. 95%
		360 nm	min. 98 %
		Fluorescence (as quinine):	
		365 nm	max. 2 ppb

1,4-DIOXANE

1,4-Dioksan



M = 88,11 g/mol

CAS: 123-91-1

WE: 204-661-8



H: 225,319, 335 351, EUH019, EUUH066
P: 210, 223, 281, 305+351+338, 308+313, 403+235
RID/ADR: 3, II UN: 1165



Physical and Chemical Properties:

Character:	liquid	Vapor pressure:	41 mbar (20°C)
Colour:	colourless	Density:	1,03 g/cm ³ (20°C)
Odor:	aromatic	Solubility:	
pH:	6 - 8 (500 g/l H ₂ O, 20°C)	in water:	soluble
Melting point:	11,8°C	in organic solvent:	soluble
Boiling point:	101,3°C	log P _{OW} :	0,42
Auto-ignition temperature:	180°C	Viscosity (20°C):	1,32 mPa·s
Ignition temperature:	11°C	Refractive index (20°C):	1,42241
Explosion limits:		Critical temperature:	314°C
bottom:	1,9% v/v	Critical pressure:	5,2 MPa
top:	22,5% v/v		

1,4 dioxane pure

CHEM*412923000

100 ml	250 ml	Density (20°C)	1,031 - 1,035 g/cm ³
		Refractive index (20°C)	1,419 - 1,425
500 ml	1 l	Free acid (as CH ₃ COOH)	max. 0,01 %
2.5 l	3 l	Peroxides (as H ₂ O ₂)	max. 0,015 %
5 l	10 l	Residue on evaporation	max. 0,01 %
20 l	60 l		

1,4 dioxane pure p.a.

CHEM*112923006

50 ml	100 ml	Density (20°C)	1,032 - 1,034 g/cm ³
		Refractive index (20°C)	1,420 - 1,424
250 ml	500 ml	Water	max. 0,2 %
1 l	2.5 l	Free acid (as CH ₃ COOH)	max. 0,005 %
		Acetal	max. 0,5 %
3 l	5 l	Peroxides (as H ₂ O ₂)	max. 0,005 %
10 l	20 l	Residue on evaporation	max. 0,005 %
60 l			

DITHIZONE

Ditizon



M = 256,33 g/mol

CAS: 60-10-6

WE: 200-454-1



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and Chemical Properties:

Character:	solid	Ignition temperature:	no data
Colour:	brown	Explosion limits:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	168 °C	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvent:	no data

ditizon wsk.

CHEM*112917203

1 g	5 g	Assay	min. 98,0 %
7,5 g	10 g	Heavy metals (as Pb)	max. 0,001 %
15 g	25 g	Residue on roasting (as SO ₄)	max. 0,2 %

EOSIN Y

Eozyna



M = 647,89 g/mol

CAS: 15086-94-9

WE: 239-138-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	orange - brown	Density:	no data
Odor:	odorless	Bulk density:	no data
pH:	no data	Solubility:	
Melting point:	300°C	in water:	<0,1% (20°C)
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:	no data		

eosin Y

CHEM*243767005

10 g	25 g	Appearance	red powder
50 g	75 g	Solubility in 70% ethanol	passes test
		Sensitivity	passes test
100 g	250 g	Residue on roasting	max. 0,1%

EOSIN Y SOLUTION IN ETHANOL

Eozyna Y roztwór w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Ignition temperature:	23°C (ethanol)
Colour:	no data	Ignition temperature:	no data
Odor:	ethanol	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	approx 425°C (ethanol)	in organic solvent:	soluble

eosin Y solution 0,1% in ethanol

CHEM*243768299

100 ml	250 ml	Assay	approx 1 g/l
500 ml	1 l		

eosin Y solution 1% in ethanol

CHEM*243768300

100 ml	250 ml	Assay	approx 10 g/l
500 ml	1 l		

EOSIN Y soluble in water

Eozyna żółtawa rozpuszczalna w wodzie



M = 691,86 g/mol

CAS: 17372-87-1

WE: 241-409-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	brown - black	Vapor pressure:	no data
Odor:	odorless	Density:	1,018 g/cm ³
pH:	~9,2 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 710 kg/m ³
Melting point:	295 - 296°C	Solubility:	
Boiling point:	no data	in water:	300 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvent:	alcohol - 10 g/l (20°C)
Ignition temperature:	no data		

Eosin Y disodium salt

CHEM*243768301

10 g	25 g	Percentage coefficient of absorption	
50 g	75 g	(1%; 1cm; 490-520 nm, water)	1100 - 1400
100 g	250 g	Loss on drying (110°C)	max. 6,0 %
500 g	1 kg	TLC test	passes test
		Solubility in water	passes test
		Halogenated compounds (as Br)	max. 4%
		Appearance	orange, red or brown powder

EOSIN Y SOLUTION*Eozyna żółtawa w roztworze*

M = 691,86 g/mol

CAS: 17372-87-1

WE: 241-409-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	no data	Vapor pressure:	no data
Odor:	no data	Density:	no data
pH:	~9,2	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	soluble
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

eosin Y disodium salt solution 1%**CHEM*243768302**

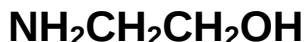
100 ml	250 ml	Assay	approx 10 g/l
500 ml	1 l		
2.5 l	5 l		

eosin Y disodium salt solution 5%**CHEM*243768303**

100 ml	250 ml	Assay	approx 50 g/l
500 ml	1 l		

ETHANOLAMINE

Etanoloamina



M = 61,1 g/mol

CAS: 141-43-5

WE: 205-483-3



H: 302, 312, 332, 314
P: 280, 302+352, 301+330+331, 305+351+338
RID/ADR: 8, III UN: 2491



Physical and chemical properties:

Character:	liquid	top:	17% v/v
Colour:	colourless - yellow	Dynamic viscosity:	24,1 mPas (20°C)
Odor:	ammonia	Vapor pressure (25°C):	0,67 hPa
pH:	no data	Density:	1,015-1,018 g/cm ³ (20°C)
Melting point:	10,5°C	Solubility:	
Boiling point:	170-172°C	in water:	soluble
Auto-ignition temperature:	410°C	in other solvents:	ethanol, glycol, chloroform
Ignition temperature:	85°C		
Explosion limits:		log P _(w/o) :	-1,31
bottom:	5,5% v/v		

ethanolamine pure

***423814801**

500 ml	1 l	Appearance	colourless, clear liquid
2.5 l	3 l	Assay	98,0 -107,0 %
5 l	10 l	Density (20°C)	1,014 – 1,02 g/cm ³
20 l	30 l	Refractive index (20°C)	1,4535 - 1,455
		Residue on roasting (as SO ₄)	max. 0,1 %

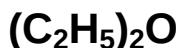
ethanolamine pure p. a.

CHEM*113814802

100 ml	250 ml	Appearance	colourless - yellow liquid
500 ml	1 l	Assay	99,0 -100,5 %
2.5 l	3 l	Density (20°C)	1,015 – 1,018 g/cm ³
5 l	10 l	Refractive index (20°C)	1,4535 - 1,4545
20 l	30 l	Residue on roasting (as SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

DIETHYL ETHER

Eter dietylowy



M = 74,12 g/mol

CAS: 60-29-7

WE: 200-467-2



H: 224, 302, 336, EUH019, EUH066
P: 210, 280, 301+310, 304+340
RID/ADR: 3, I UN: 1155



Physical and chemical properties:

Character:	liquid	top:	49% v/v
Colour:	colourless	Viscosity (20°C):	0,242 mPa·s
Odor:	characteristic	Vapor pressure:	587 mbar (20°C)
Melting point:	-118°C	Density:	0,71 g/cm ³ (20°C)
Boiling point:	34,6°C	Solubility:	
Auto-ignition temperature:	180°C	in w	69 g/l (20°C)
Ignition temperature:	-40°C	in other solvents:	chloroform,
Explosion limits:			ethanol, benzene,
bottom:	1,7% v/v		sulfuric acid

diethyl ether pure p. a.

CHEM*113842106

100 ml	200 ml	Appearance	colourless clear liquid
250 ml	500 ml	Identity	passes test
1 l	2.5 l	Assay	min. 99,5 %
200 l		Colour	max. 10 Hazen
		Density (20°C)	0,714 - 0,716 g/cm ³
		Odor	passes test
		Water (KF)	max. 0,2 %
		Acids (as CH ₃ COOH)	max. 0,00022 %
		Aldehydes	passes test
		Ethanol	max. 0,1 %
		Methanol	max. 0,02 %
		Peroxides (as H ₂ O ₂)	max. 0,00015 %
		Residue on evaporation	max. 0,001 %
		Stabilizer (BHT)	5 - 7 ppm

Diethyl ether HPLC**CHEM*613842106**

1 l	2.5 l	Assay (GC)	min. 99,5 %
		Water	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		Stabilizer (BHT)	~5 ppm
		UV - transmission (1cm, water):	
		230 nm	min. 50 %
		250 nm	min. 80 %
		260 nm	min. 90 %
		280 nm	min. 95 %
		300 nm	min. 99 %

PETROLEUM ETHER BOILING RANGE 40÷60°C

Eter naftowy 40÷60°C

M = not applicable

CAS: not applicable

WE: not applicable



H: 205, 304, 411
P: 210, 240, 273, 301+310, 331
RID/ADR: 3, II UN: 3295



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	no data	Vapor pressure:	no data
Odor:	no data	Density:	0,640 - 0,670 g/cm ³
pH:	no data	Solubility:	
Melting point:	no data	in water:	no data
Boiling point:	no data	in organic solvent:	no data
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

Petroleum ether boiling range 40÷60°C pure

CHEM*413846904

100 ml	250 ml	Density (20°C)	0,640 - 0,670 g/cm ³
500 ml	1 l	Start of distillation	min. 40°C
		End of distillation	max. 60°C
2.5 l	3 l	pH of water extract	neutral
5 l	10 l	Residue on evaporation	max. 0,002%
20 l	30 l	Aromatic hydrocarbons	max. 0,002%
60 l	200 l	Sulphur	passes test
		Non-volatile matter	passes test

Petroleum ether boiling range 40÷60°C pure p. a.

CHEM*113846900

100 ml	250 ml	Density (20°C)	0,640 - 0,665 g/cm ³
500 ml	1 l	Start of distillation	min. 40°C
		End of distillation	max. 60°C
2.5 l	3 l	pH of water extract	neutral
5 l	10 l	Residue on evaporation	max. 0,001%
20 l	30 l	Aromatic hydrocarbons	max. 0,001%
60 l	200 l	Sulphur	passes test
		Non-volatile matter	passes test

Petroleum ether boiling range 40÷60°C GC for pesticide analysis

CHEM*613846901

500 ml	1 l	Water	0,02%
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005%

Petroleum ether boiling range 40÷60°C HPLC**CHEM*613846900**

1l	2.5 l		
		Water	max. 0,01%
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005%
		UV-transmission (1cm, water):	
		210nm	min. 55%
		220nm	min. 76%
		230nm	min. 90%
		240nm	min. 98%
		250nm	min. 99%

PETROLEUM ETHER BOILING RANGE 60÷90°C

Eter naftowy 60÷90°C

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 304, 319, 411
P: 210, 240, 273, 301+310, 331
RID/ADR: 3, II UN: 3295



Physical and chemical properties:

Character:	liquid	bottom:	1,1% v/v
Colour:	colourless	top:	7,4% v/v
Odor:	characteristic	Vapor pressure:	no data
pH:	no data	Density:	0,700 g/cm ³ (20°C)
Melting point:	< -20°C	Solubility:	
Boiling point:	63-100°C	in water:	insoluble
Auto-ignition temperature:	>200°C	in organic solvent:	no data
Ignition temperature:	<-26°C		
Explosion limits:			

Petroleum ether boiling range 60÷90°C pure

CHEM*413846905

250 ml	500 ml	Boiling point	60 ÷ 90°C
1 l	2.5 l	pH of water extract	neutral
3 l	5 l	Residue on evaporation	max. 0,002 %
20 l	60 l	Aromatic hydrocarbons	max. 0,002 %
200 l			

Petroleum ether boiling range 60÷90°C pure p. a.

CHEM*113846901

250 ml	500 ml	Boiling point	60 ÷ 90°C
1 l	2.5 l	pH of water extract	neutral
3 l	5 l	Residue on evaporation	max. 0,001 %
20 l		Aromatic hydrocarbons	max. 0,001 %

Petroleum ether boiling range 60÷90°C**CHEM*757651422**

100 ml	250 ml	Boiling point	60 ÷ 90°C
500 ml	1 l	pH of water extract	neutral
2.5 l	3 l	Residue on evaporation	max. 0,004 %
5 l	10 l	Aromatic hydrocarbons	max. 0,002 %
20 l	30 l		
60 l	200 l		

ETHYLBENZENE

Etylobenzen

C₈H₁₀

M = 106,16 g/mol

CAS: 100-41-4

WE: 202-849-4



H: 225, 332
P: 210
RID/ADR: 3, II

UN: 1175



Physical and chemical properties:

Character:	liquid	top:	7,8% v/v
Colour:	colourless	Viscosity (25°C):	0,678 mPa·s
Odor:	aromatic	Vapor pressure:	9,3 hPa (20°C)
pH:	no data	Density:	0,87 g/cm ³ (20°C)
Melting point:	-94,9°C	Solubility:	
Boiling point:	136,2°C	in water:	0,015% wag. (25°C)
Auto-ignition temperature:	432°C	in organic solvent:	ethanol, diethyl ether
Ignition temperature:	15°C	log P _{OW} :	3,15
Explosion limits:			
bottom:	1,0% v/v		

ethylbenzene pure

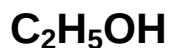
CHEM*423904709

100 ml	250 ml	Appearance	colourless liquid
500 ml	1 l	Assay	min. 99,5 %
2.5 l	3 l	Colour	max. 15 Hazen
5 l	10 l	Density (20°C)	0,866 - 0,868 g/cm ³
20 l		Residue on evaporation	max. 0,004 %
		Active chlorine (Cl ₂)	max. 0,0004 %
		Total sulphur (S)	max. 0,0003 %

ethylbenzene pure p. a.

CHEM*113904709

50 ml	100 ml	Appearance	colourless liquid
250 ml	500 ml	Assay	min. 99,9 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	0,866 - 0,868 g/cm ³
		Residue on evaporation	max. 0,002 %
		Active chlorine (Cl ₂)	max. 0,0002 %
		Total sulphur (S)	max. 0,0001 %

ETHANOL SOLUTION 0,05%*Etanol 0,05%*

M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

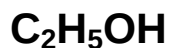
Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity 20°C:	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 0,05% pure p. a.**CHEM*113964221**

500 ml

Assay

approx 0,05 %

ETHANOL SOLUTION 0,1%*Etanol 0,1%*

M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity 20°C:	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 0,1% pure p. a.**CHEM*113964222**

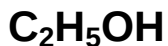
500 ml

Assay

approx 0,1 %

ETHANOL SOLUTION 40%

Etanol 40%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 226
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity 20°C:	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	approx 0,947 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 40% pure

CHEM*423964106

500 ml

Assay

min. 40,0 % v/v

Density (20°C)

approx 0,947 g/cm³

ethanol solution 40% pure p. a.

CHEM*113964802

500 ml

Assay

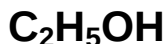
min. 40,0 % v/v

Density (20°C)

approx 0,947 g/cm³

ETHANOL SOLUTION 50%

Etanol 50%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 226
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity (20°C):	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	approx 0,93 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 50% pure

CHEM*423964105

500 ml	Assay	min. 50,0 % v/v
	Density (20°C)	approx 0,93 g/cm ³
	Aldehydes	max. 0,001 %
	Methanol	max. 0,1 %
	Higher alcohols	max. 0,001 %

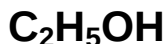
ethanol solution 50% pure p. a.

CHEM*113964803

500 ml	Assay	min. 50,0 % v/v
	Density (20°C)	approx 0,93 g/cm ³
	Aldehydes	max. 0,0005 %
	Methanol	max. 0,05 %
	Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 60%

Etanol 60%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 226
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity (20°C):	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	approx 0,909 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 60% pure

CHEM*423964104

500 ml	Assay	min. 60,0 % v/v
	Density (20°C)	approx 0,909 g/cm ³
	Aldehydes	max. 0,001 %
	Methanol	max. 0,1 %
	Higher alcohols	max. 0,001 %

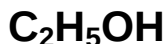
ethanol solution 60% pure p. a.

CHEM*113964804

500 ml	Assay	min. 60,0 % v/v
	Density (20°C)	approx 0,909 g/cm ³
	Aldehydes	max. 0,0005 %
	Methanol	max. 0,05 %
	Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 70%

Etanol 70%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 226
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Viscosity 20°C:	no data
Odor:	characteristic	Vapor pressure:	no data
pH:	neutral	Density:	approx 0,885 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvent:	soluble
Ignition temperature:	no data		

ethanol solution 70% pure

CHEM*423964200

100 ml	250 ml	Assay	min. 70,0 % v/v
		Density (20°C)	approx 0,885 g/cm ³
500 ml	1 l	Aldehydes	max. 0,001 %
		Methanol	max. 0,1 %
		Higher alcohols	max. 0,001 %

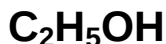
ethanol solution 70% pure p. a.

CHEM*113964201

100 ml	250 ml	Assay	min. 70,0 % v/v
		Density (20°C)	approx 0,885 g/cm ³
500 ml	1 l	Aldehydes	max. 0,0005 %
		Methanol	max. 0,05 %
		Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 75%

Etanol 75%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Viscosity 20°C:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	characteristic	Density:	approx 872 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	soluble
Auto-ignition temperature:	no data	log P _(w/o) :	0,82
Ignition temperature:	no data		
Explosion limits:	no data		

ethanol solution 75% pure

CHEM*423964202

500 ml	1 l	Assay	min. 75,0 % v/v
5 l		Density (20°C)	approx 0,872 g/cm ³
		Aldehydes	max. 0,001 %
		Methanol	max. 0,1 %
		Higher alcohols	max. 0,001 %

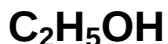
ethanol solution 75% pure p. a.

CHEM*113964202

500 ml	1 l	Assay	min. 75,0 % v/v
5 l		Density (20°C)	approx 0,872 g/cm ³
		Aldehydes	max. 0,0005 %
		Methanol	max. 0,05 %
		Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 80%

Etanol 80%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	Viscosity 20°C:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	characteristic	Density:	approx 8595 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvent:	soluble
Auto-ignition temperature:	no data	log P _(w/o) :	0,82
Ignition temperature:	no data		
Explosion limits:	no data		

ethanol solution 80% pure

CHEM*423964206

500 ml	Assay	min. 80,0 % v/v
	Density (20°C)	approx 0,8595 g/cm ³
	Aldehydes	max. 0,001 %
	Methanol	max. 0,1 %
	Higher alcohols	max. 0,001 %

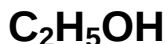
ethanol solution 80% pure p. a.

CHEM*113964805

500 ml	Assay	min. 80,0 % v/v
	Density (20°C)	approx 0,8595 g/cm ³
	Aldehydes	max. 0,0005 %
	Methanol	max. 0,05 %
	Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 96%

Etanol 96%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	top:	19% v/v
Colour:	colourless	Viscosity 20°C:	1,078 mPa·s
Odor:	characteristic	Vapor pressure:	60 hPa (20°C)
pH:	neutral	Density:	approx 0,808 g/cm ³ (20°C)
Melting point:	-117°C	Solubility:	
Boiling point:	78°C	in water:	soluble
Auto-ignition temperature:	425°C	in organic solvent:	soluble
Ignition temperature:	12°C	log P _(w/o) :	0,82
Explosion limits:			
bottom:	3,3% v/v		

ethanol solution 96% pure

CHEM*423964203

100 ml	250 ml	Appearance	colourless, clear liquid
500ml	1 l	Assay	min. 96,0 %(V/V)
5 l		Density (20°C)	max. 0,808 g/cm ³
		Refractive index (20°C)	max. 1,364
		Acids (as CH ₃ COOH)	max. 0,003 %
		Aldehydes (as CH ₃ CHO)	max. 0,001 %
		Methanol	max. 0,1 %
		Higher alcohols	max. 0,001 %
		Time of decolouration of KMnO ₄	min.. 5 min.
		Miscibility with water	passes test
		Residue on evaporation	max. 0,001 %
		Furfural	passes test
		Ketones	passes test
		Organic fouling	max. 0,5 %
		Heavy metals (as Pb)	max. 0,0001 %

ethanol 96% pure, compatible Polish Pharmacopoeia**CHEM* 423964802**

100 ml	250 ml	Assay	min. 96,0% (V/V)
500ml	1 l	Density (20°C)	approx 0,808 g/cm ³
		Water	3,1 - 4,9%
		Aldehydes (as CH ₃ CHO)	max. 0,001%
		Acids (as CH ₃ COOH)	max. 0,003%
		Higher alcohols	max. 0,001%
		Methanol (CH ₃ OH)	max. 0,1%
		Heavy metals (as Pb)	max. 0,0001%
		Time of decolouration of KMnO ₄	min. 5 min.
		Heavy metals (as Pb)	max. 0,0001%
		Iron (Fe)	max. 0,0001%
		Furfurol	passes test
		Benzene (UV)	max. 0,0002%
		Volatile impurities (GC)	passes test
		Residue on evaporation	max. 0,001%
		Ketones	passes test
		Miscibility with water	passes test
		Colour	max. 10 Hazen
		Appearance	colourless, clear liquid

ethanol 96% pure p. a.**CHEM*113964200**

100 ml	250 ml	Appearance	colourless, clear liquid
500ml	1 l	Assay	min. 96,0 % (V/V)
		Density (20°C)	max. 0,808 g/cm ³
5 l	10 l	Refractive index (20°C)	max. 1,364
		Acids (as CH ₃ COOH)	max. 0,002 %
		Aldehydes (as CH ₃ CHO)	max. 0,0005 %
		Methanol	max. 0,05 %
		Higher alcohols	max. 0,001 %
		Time of decolouration of KMnO ₄	min.. 10 min.
		Miscibility with water	passes test
		Residue on evaporation	max. 0,001 %
		Furfurol	passes test
		Ketones	passes test
		Organic fouling	max. 0,2 %
		Heavy metals (as Pb)	max. 0,0001 %

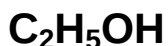
ethanol 96% sp. pure**CHEM*613964203**

500 ml

Appearance	colourless, clear liquid
Assay	min. 96,0 %
Colour	max. 10Hazen
Density (20°C)	max. 0,808 g/cm ³
Water	max. 0,2 %
Acidity	max. 0,0005 meq/g
Alakalinity	max. 0,0002 meq/g
Aldehydes (as CH ₃ CHO)	max. 0,001 %
Higher alcohols	max. 0,01 %
Time of decolouration of KMnO ₄	min. 10 min.
Methanol	max. 0,05 %
Residue on evaporation	max. 0,001 %
2-Propanol	max. 0,01 %
Carbonyl compounds (as CO)	max. 0,003 %
Heavy metals (as Pb)	max. 0,0001 %
Solubility in water	passes test
Acetone, 2-propanol	passes test

ETHANOL DEHYDRATED SOLUTION 99,8%

Etanol bezwodny 99,8%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	top:	19% v/v
Colour:	colourless	Viscosity 20°C:	1,078 mPa·s
Odor:	characteristic	Vapor pressure:	60 hPa (20°C)
pH:	neutral	Density:	approx 0,79 g/cm ³ (20°C)
Melting point:	-117°C	Solubility:	
Boiling point:	78°C	in water:	soluble
Auto-ignition temperature:	425°C	in organic solvent:	soluble
Ignition temperature:	12°C	log P _(w/o) :	0,82
Explosion limits:			
bottom:	3,3% v/v		

ethanol dehydrated solution 99,8% pure CHEM*423964800

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	min. 99,8 %(V/V)
5 l		Colour	max. 10 Hazen
		Density (20°C)	0,789 - 0,791 g/cm ³
		Water	max. 0,2 %
		Acids (as CH ₃ COOH)	max. 0,001 %
		Bases (as NH ₃)	max. 0,0003 %
		Aldehydes (as CH ₃ CHO)	max. 0,001 %
		Higher alcohols	max. 0,01 %
		Time of decolouration of KMnO ₄	min. 5 min.
		Methanol	max. 0,05 %
		Residue on evaporation	max. 0,001 %
		Carbonyl compounds (as CO)	max. 0,008 %
		Heavy metals (as Pb)	max. 0,0001 %

ethanol dehydrated solution 99,8% pure p. a.**CHEM*113964800**

100 ml	250 ml	Appearance	colourless, clear liquid
		Assay	min. 99,8 %(V/V)
500 ml	1 l	Colour	max. 10 Hazen
		Density (20°C)	0,789 - 0,791 g/cm ³
5 l		Water	max. 0,2 %
		Acids (as CH ₃ COOH)	max. 0,001 %
		Bases (as NH ₃)	max. 0,0003 %
		Aldehydes (as CH ₃ CHO)	max. 0,0005 %
		Higher alcohols	max. 0,001 %
		Time of decolouration of KMnO ₄	min. 10 min.
		Methanol	max. 0,01 %
		Residue on evaporation	max. 0,001 %
		Carbonyl compounds (as CO)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0001 %

ethanol dehydrated solution 99,8% sp.pure**CHEM*613964202**

500 ml	Appearance	colourless, clear liquid
	Assay	min. 99,8 %(V/V)
	Colour	max. 10 Hazen
	Density (20°C)	0,789 - 0,791 g/cm ³
	Water	max. 0,2 %
	Acids (as CH ₃ COOH)	max. 0,001 %
	Bases (as NH ₃)	max. 0,0003 %
	Aldehydes (as CH ₃ CHO)	max. 0,001 %
	Higher alcohols	max. 0,01 %
	Time of decolouration of KMnO ₄	min. 5 min.
	Methanol	max. 0,05 %
	Residue on evaporation	max. 0,001 %
	2-Propanol	max. 0,01 %
	Carbonyl compounds (as CO)	max. 0,008 %
	Heavy metals (as Pb)	max. 0,0001 %

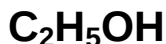
ethanol dehydrated solution 99,8% pharmaceutically purified**CHEM*423964801**

500 ml

Colour	colourless
Power (20°C)	min. 99,8 %
Time of decolouration of KMnO_4	10 min.
Acids	max. 0,002 %
Appearance	liquid clear
Aldehydes	max. 0,005 %
Methanol	max. 0,005 %
Higher alcohols	max. 0,005 %
Cyclohexane	max. 0,002 %
Esters	max. 0,007 %
Residue on evaporation	max. 0,001 %

ETHANOL SOLUTION 99,9%

Etanol 99,9%



M = 46,07 g/mol

CAS: 64-17-5

WE: 200-578-6



H: 225
P: 210
RID/ADR: 3, II

UN: 1170



Physical and chemical properties:

Character:	liquid	top:	19% v/v
Colour:	colourless	Viscosity 20°C:	1,078 mPa·s
Odor:	characteristic	Vapor pressure:	60 hPa (20°C)
pH:	neutral	Density:	approx 0,79 g/cm ³ (20°C)
Melting point:	-117°C	Solubility:	
Boiling point:	78°C	in water:	soluble
Auto-ignition temperature:	425°C	in organic solvent:	soluble
Ignition temperature:	12°C	log P _(w/o) :	0,82
Explosion limits:			
bottom:	3,3% v/v		

ethanol 99,9% pure p. a.

CHEM*113964807

100 ml	250 ml	Assay	min. 99,9% (V/V)
		Density (20°C)	approx 0,790 g/cm ³
500 ml		Water	max. 0,1%
		Aldehydes (as CH ₃ CHO)	max. 0,0005%
		Acids (as CH ₃ COOH)	max. 0,001%
		Higher alcohols	max. 0,0005%
		Methanol (CH ₃ OH)	max. 0,05%
		Carbonyl compounds (as CH ₃ CHO)	max. 0,003%
		Heavy metals (as Pb)	max. 0,0001%
		Time of decolouration of KMnO ₄	min. 10 min.
		Furfurol	passes test
		Residue on evaporation	max. 0,0005%
		Ketones	passes test
		Miscibility with water	passes test
		Appearance	colourless, clear liquid

ETHYL ACETATE

Etylu octan



M = 88,11 g/mol

CAS: 141-78-6

WE: 205-500-4



H: 225, 319, 336, EUH066
P: 210, 240, 305+351+338
RID/ADR: 3, II UN: 1173



Physical and chemical properties:

Character:	liquid	top:	11,5% v/v
Colour:	colourless	Viscosity 25°C:	0,426 mPa·s
Odor:	aromatic	Vapor pressure:	97 hPa (20°C)
pH:	no data	Density:	0,90 g/cm ³ (20°C)
Melting point:	-83°C	Solubility:	
Boiling point:	77°C	in water:	75 g/l (20°C)
Auto-ignition temperature:	460°C	in organic solvent:	soluble
Ignition temperature:	-4°C		
Explosion limits:			
bottom:	2,2% v/v		

ethyl acetate purified

CHEM*324050300

2.5 l	3 l	Assay	min. 98,0 %
5 l	10 l	Colour	max. 10 Hazen
20 l	30 l	Density (20°C)	0,898 - 0,901 g/cm ³
60 l	200 l	Water	max. 0,2 %
		Wolne acids (as CH ₃ COOH)	max. 0,01 %
		Non-volatile matter	max. 0,005 %
		Organic fouling	passes test

ethyl acetate pure

CHEM*424050300

500 ml	1 l	Assay	min. 99,0 %
2.5 l	3 l	Colour	max. 10 Hazen
5 l	10 l	Density (20°C)	0,898 - 0,901 g/cm ³
20 l	30 l	Water	max. 0,1 %
60 l	200 l	Free acids (as CH ₃ COOH)	max. 0,01 %
		Non-volatile matter	max. 0,005 %
		Organic fouling	passes test

ethyl acetate pure p. a.**CHEM*114050300**

250 ml	500 ml	Assay	min. 99,5 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	0,898 - 0,901 g/cm ³
10 l	20 l	Water	max. 0,05 %
30 l	60 l	Free acids (as CH ₃ COOH)	max. 0,005 %
200 l		Non volatile matter	max. 0,0025 %
		Organic fouling	passes test
		H ₂ SO ₄ test	passes test

ethyl acetate HPLC**CHEM*614050300**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		260 nm	min. 70 %
		270 nm	min. 90 %
		280 nm	min. 95 %
		300 nm	min. 99 %
		Fluorescence (as quinine):	
		254 nm	max. 2 ppb
		365 nm	max. 1 ppb

ethyl acetate GC for pesticide analysis**CHEM*614050302**

500 ml	1 l	Assay (GC)	min. 99,8 %
2.5 l		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

ethyl acetate GC**CHEM*614050303**

1 l	2.5 l	Assay	min. 99,8 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		Appearance	colourless, clear liquid
		Signal (GC) in the range:	
		1,2,4-trichlorobenzene - decachlorobiphenyl	max. 3 pg/ml

ethyl acetate GC standard**CHEM*614050301**

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

1,10-PHENANTHROLINE

1,10-Fenantrolina



M = 198,23 g/mol

CAS: 5144-89-8

WE: 200-629-2



H: 301, 410

P: 273

RID/ADR: 6.1, III

UN: 2811



Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	white	Density:	no data
Odor:	odorless	Bulk density:	approx 300 kg/m ³
pH:	no data	Solubility:	
Melting point:	117-120°C	in water:	approx 3,3 g/l (20°C)
Boiling point:	no data	in organic solvents:	ethanol, acetone
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:	no data		

1,10-phenanthroline pure p. a. ind.

CHEM*224129505

5 g	10 g	Assay	min. 99,5 %
25 g	50 g	Melting point	117 - 120°C
100 g		Residue on roasting (as SO ₄)	max. 0,05 %
		Water	8,5 - 9,5 %
		Redox test	passes test
		Molar absorptivity coefficient:	
		E (pH 4,5; λ = 505 ÷ 520 nm)	min. 11 000

1,10-PHENANTHROLINE HYDROCHLORIDE MONOHYDRATE

1,10-fenantroliny chlorowodorek 1 hydrat



M = 234,69 g/mol

CAS: 18851-33-7

WE: 223-325-1



H: 301, 410

P: 273

RID/ADR: 6.1, III

UN: 2811



Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	white	Density:	no data
Odor:	characteristic	Bulk density:	approx 370 kg/m ³
pH:	no data	Solubility:	
Melting point:	224-225°C	in water:	soluble
Boiling point:	not applicable	in organic solvents:	soluble
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:	no data		

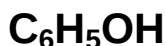
1,10-Phenanthroline hydrochloride monohydrate pure p. a. ind.

CHEM*224130006

5 g	10 g	Assay	min. 99,5 %
25 g	50 g	Appearance	white or yellow powder
100 g	200 g	Water	max. 8,0 %
250 g		Residue on roasting (as SO ₄)	max. 0,2 %
		Fe (II) sensitivity	min. 0,0000001 g/ml
		Redox test	passes test

PHENOL

Fenol



M = 94,11 g/mol

CAS: 108-95-2

WE: 203-632-7



H: 301, 311, 314, 331, 341, 373
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 6.1, II UN: 1671



Physical and chemical properties:

Character:	solid	Density:	1,07 g/cm ³ (20°C)
Colour:	colourless	Solubility:	
Odor:	characteristic	in water:	7,6%
pH:	approx 5 (50g/l, H ₂ O, 20°C)	in organic solvents:	ethanol, diethyl ether, glycerol, chloroform, benzene
Melting point:	41°C	Critical temperature:	419°C
Boiling point:	180 - 182°C	Critical pressure:	6,13 MPa
Auto - ignition temperature:	605°C	Refractive index (41°C):	1,5418
Ignition temperature:	75°C	Viscosity (45°C):	4,036 mPa·s
Explosion limits:			
bottom:	0,3% v/v		
top:	2,4% v/v		
Vapor pressure:	0,2 hPa (20°C)		

phenol pure

CHEM*424144506

1 kg

Appearance	colourless or pink crystals
Assay	min. 98,0 %
Melting point	38 - 42 °C

phenol pure p. a.

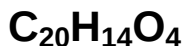
CHEM*114144507

1 kg

Appearance	colourless or pink crystals
Assay	min. 99,0 %
Clarity od solution	passes test
Melting point	38 – 42 °C
Water (KF)	max. 0,5 %
Free acid	max. 0,01%
Residue on evaporation	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Iron (Fe)	max. 0,0001 %

PHENOLPHTHALEIN

Fenoloftaleina



M = 318,33 g/mol

CAS: 77-09-8

WE: 201-004-7



H: 341, 350, 361F

P: 201, 280, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapor pressure:	no data
Colour:	white	Density:	approx 1,3 g/cm ³
Odor:	weak	Bulk density:	approx 350-450 kg/m ³
Melting point:	258-263°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto - ignition temperature:	no data	in organic solvents:	ethanol approx 14 g/l; acetone, diethyl ether
Ignition temperature:	no data		
Explosion limits:	no data		

phenolphthalein ind.

CHEM*214145003

5 g	10 g	Appearance	white or yellow powder
25 g	50 g	Molar absorptivity coefficient:	
100 g	250 g	E (pH 9,8; 540÷560 nm)	min. 21000
500 g	750 g	Solubility in ethanol	passes test
1 kg	2 kg	pH sensitivity	passes test
5 kg	10 kg	TLC test	passes test
20 kg		Residue on roasting	max. 0,2 %

PHENOLPHTHALEIN ETHANOL SOLUTION

Fenoloftaleina roztwór alkoholowy



M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 341, 350
P: 201, 210, 233, 281, 308+313
RID/ADR: 3, III UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	alcoholic	Density:	approx 0,9 g/cm ³ (20°C)
pH:	7,8 - 10	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	soluble
Auto - ignition temperature:	approx 425°C		
Ignition temperature:	approx 23°C		

phenolphthalein solution 0,1% ind.

CHEM*274145134

100 ml	250 ml	Assay	0,09 - 0,11 %
500 ml	1 l	Colour	max. 50 Hazen
		pH sensitivity	passes test

phenolphthalein solution 0,2% ind.

CHEM*274145132

100 ml	250 ml	Assay	0,19 - 0,21 %
500 ml	1 l	Colour	max. 50 Hazen
		pH sensitivity	passes test

phenolphthalein solution 0,5% ind.

CHEM*274145135

100 ml	250 ml	Assay	0,49 - 0,51 %
500 ml	1 l	Colour	max. 50 Hazen
		pH sensitivity	passes test

PHENOLPHTHALEIN 1% SOLUTION IN ETHANOL

Fenoloftaleina roztwór 1% in ethanol



M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 341, 350
P: 201, 210, 233, 281, 308+313
RID/ADR: 3, III UN: 1993



Physical and chemical properties:

Character:	liquid	Bottom:	3,3%
Colour:	colourless	Top:	19%
Odor:	ethanol	Vapor pressure:	no data
pH:	7,2 - 10	Density:	approx 0,9 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	approx 425°C	in organic solvents:	soluble
Ignition temperature:	14°C		
Explosion limits:			

phenolphthalein solution 1% in ethanol ind.

CHEM*274145136

100 ml	250 ml	Assay	0,9 – 1,1 %
500 ml	1 l	Colour	max. 50 Hazen
		pH sensitivity	passes test

PHENOLPHTHALEIN 2% SOLUTION IN ETHANOL

Fenoloftaleina roztwór 2% in ethanol



M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 341, 350
P: 201, 210, 233, 281, 308+313
RID/ADR: 3, III UN: 1993



Physical and chemical properties:

Character:	liquid	Bottom:	3,4%
Colour:	colourless	Top:	15%
Odor:	ethanol	Vapor pressure:	no data
pH:	no data	Density:	0,9 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	approx 425°C	in organic solvents:	soluble
Ignition temperature:	23°C		
Explosion limits:			

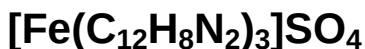
Phenolphthalein 2% ind.

CHEM*274145138

100 ml	250 ml	Assay	1,9 – 2,1 %
500 ml	1 l	Colour	max. 90 Hazen
		pH sensitivity	passes test

FERROIN INDICATOR SOLUTION 1/40mol/kg

Ferroiny siarczan roztwór 1/40 molarny



M = 692,52 g/mol

CAS: 14634-91-4

WE: 231-791-2

H: 412

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	red	Vapor pressure:	no data
Odor:	odorless	Density:	1,006 g/cm ³ (20°C)
pH:	2,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	not applicable		
Ignition temperature:	not applicable		

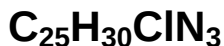
ferroin indicator solution

CHEM* 224238538

50 ml	100 ml	Appearance	red, clear liquid
250 ml	500 ml	Redox potential E ₀ in 1M H ₂ SO ₄ solution	1,05 - 1,06
		Redox test	passes test
1 l		Absorption spectrum	passes test

CRYSTAL VIOLET

Fiolet krystaliczny



M = 407,99 g/mol

CAS: 548-62-9

WE: 208-953-6



H: 302, 318, 351, 410

P: 273, 280, 281, 305+351+338, 308+313

RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	2,5 - 3,5 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 220 - 400 kg/m ³
Melting point:	189 - 194°C	Solubility:	
Boiling point:	no data	in water:	approx 16 g/l (25°C)
Auto - ignition temperature:	no data	in organic solvents:	ethanol - 5 g/l (20°C)
Ignition temperature:	no data		

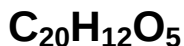
Crystal Violet ind.

CHEM*124251505

25 g	50 g	Assay	min. 90,0 %
100 g	250 g	Loss on drying	max. 10,0 %
500 g	1 kg	TLC test	passes test
		Coefficient of maximum absorption P*15 nm	0,98 - 1,25

FLUORESCEIN

Fluoresceina



M = 332,32 g/mol

CAS: 2321-07-5

WE: 219-031-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	brown	Density:	no data
Odor:	weak characteristic	Bulk density:	no data
Melting point:	314 - 316°C	Solubility:	
Boiling point:	no data	in water:	0,3g/l (20°C)
Auto - ignition temperature:	no data	in organic solvents:	ethanol 20g/l (20°C)
Ignition temperature:	no data		

Fluorescein pure

CHEM*424277704

5 g	10 g	Appearance	brown powder
25 g	50 g	Percentage coefficient of absorption (1%; 1cm; 490 ± 5 nm; water + Na ₂ CO ₃)	min. 1800
100 g	250 g	Loss on drying	max. 3,0 %
500 g		Solubility in ethanol	passes test
		Residue on roasting (as SO ₄)	max. 0,5 %
		Resorcinol	max. 3,0 %

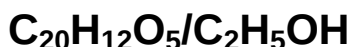
Fluorescein pure p. a.

CHEM*114277705

5 g	10 g	Appearance	brown powder
25 g	50 g	Percentage coefficient of absorption (1%; 1cm; 490 ± 5 nm; water + Na ₂ CO ₃)	min. 2200
100 g	500 g	Loss on drying	max. 2,0 %
		Solubility in ethanol	passes test
		Residue on roasting (as SO ₄)	max. 0,3 %
		Resorcinol	max. 3,0 %

FLUORESC EIN SOLUTION IN ETHANOL

Fluoresceina roztwór w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	yellow - brown	Explosion limits:	no data
pH:	no data	Density:	no data
Odor:	weak characteristic	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	no data		

Fluorescein solution 0,1% ind.

CHEM*524277708

100 ml

250 ml

Assay

0,09 – 0,11 %

500 ml

1 l

Fluorescein solution 1% ind.

CHEM*524277707

100 ml

250 ml

Assay

0,9 – 1,1 %

500 ml

1 l

FORMALDEHYDE 1 % SOLUTION

Formaldehyd roztwór 1%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 302, 317, 351
P: 280, 302+352, 308+313
RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	no data
Colour:	colourless	top:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	approx 1,0019 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	no data	in organic solvents:	ethanol, diethyl eter, methanol, n-buthanol, n-propanol
Ignition temperature:	no data		
Explosion limits:			

formaldehyde solution 1% pure

CHEM*424321739

500 ml	1 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	1,0 ± 0,1 %
10 l		Density	approx 1,0019 g/cm ³ (18°C)

formaldehyde solution 1% pure p. a.

CHEM*114321739

500 ml	1 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	1,0 ± 0,1 %
10 l		Density	approx 1,0019 g/cm ³ (18°C)

FORMALDEHYDE SOLUTION 3%

Formaldehyd roztwór 3%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 302, 317, 351

P: 280, 302+352, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	no data
Colour:	colourless	top:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	1,0106 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	w wodzie:	soluble
Auto - ignition temperature:	no data	w rozp. organicznych:	ethanol, eter etylowy,
Ignition temperature:	no data		methanol, n-butanol,
Explosion limits:			n-propanol

formaldehyde solution 3% pure

CHEM* 424321741

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	3,0 ± 0,1 %
		Density	approx 1,0102 g/cm ³ (18°C)

formaldehyde solution 3% pure p. a.

CHEM* 114321743

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	3,0 ± 0,1 %
		Density	approx 1,0102 g/cm ³ (18°C)

FORMALDEHYDE SOLUTION 4%

Formaldehyd roztwór 4%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 302, 317, 351

P: 280, 302+352, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	no data
Colour:	colourless	top:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	1,0106 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	no data	in organic solvents:	ethanol, diethyl eter, methanol, n-butanol, n-propanol
Ignition temperature:	no data		
Explosion limits:			

formaldehyde solution 4% pure

CHEM*424321739

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	4,0 ± 0,1 %
		Density	approx 1,0106 g/cm ³ (18°C)

formaldehyde solution 4% pure p. a.

CHEM*114321739

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	4,0 ± 0,1 %
		Density	approx 1,0106 g/cm ³ (18°C)

FORMALDEHYDE SOLUTION 5%

Formaldehyd roztwór 5%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	1,013 g/cm ³ (18°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:			
bottom:	no data		

formaldehyde solution 5% pure

CHEM*424321738

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	5,0 ± 0,1 %
20 l		Density	approx 1,013 g/cm ³ (18°C)

formaldehyde solution 5% pure p. a.

CHEM*114321738

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	5,0 ± 0,1 %
20 l		Density	approx 1,013 g/cm ³ (18°C)

FORMALDEHYDE SOLUTION 10%

Formaldehyd roztwór 10%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	1,026 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:			
bottom:	no data		

formaldehyde solution 10% pure

CHEM*424321735

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	10,0 ± 0,5 %
20 l		Density	approx 1,026 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,05 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution 10% pure p. a.

CHEM*114321735

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	10,0 ± 0,5 %
20 l		Density	approx 1,026 g/cm ³ (20°C)
		Organic acids(as HCOOH)	max. 0,03 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE SOLUTION 15%

Formaldehyd roztwór 15%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
 P: 301+330+331, 302+352, 305+351+338, 309, 310
 RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	1,03 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:			
bottom:	no data		

formaldehyde solution 15% pure

CHEM*424321736

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	15,0 ± 0,5 %
20 l		Density	approx 1,03 g/cm ³ (20°C)
		Organic acids(as HCOOH)	max. 0,05 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution 15% pure p. a.

CHEM*114321736

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	15,0 ± 0,5 %
20 l		Density	approx 1,03 g/cm ³ (20°C)
		Organic acids(as HCOOH)	max. 0,03 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE SOLUTION 20%

Formaldehyd roztwór 20%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	no data
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	1,039 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	no data		
Ignition temperature:	no data		
Explosion limits:			
bottom:	no data		

formaldehyde solution 20% pure

CHEM*424321734

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	20,0 ± 0,5 %
20 l		Density	approx 1,039 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,05 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution 20% pure p. a.

CHEM*114321737

1 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	20,0 ± 0,5 %
20 l		Density	approx 1,039 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,03 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE SOLUTION APPROX 25%

Formaldehyd roztwór około 25%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: 8,III UN: 2209



Physical and chemical properties:

Character:	liquid	top:	73% v/v
Colour:	colourless	Vapor pressure:	no data
Odor:	sharp	Density:	1,059 g/cm ³ (20°C)
pH:	approx 3 - 4 (20°C)	Solubility:	
Melting point:	<-15°C	in water:	soluble
Boiling point:	> 95°C	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	>300°C		
Ignition temperature:	>61°C		
Explosion limits:			
bottom:	7% v/v		

formaldehyde solution approx 25% pure

CHEM*424321731

1 l	5 l	Appearance	colourless, clear liquid
10 l		Assay	25,0 ± 1,0 %
		Density	approx 1,059 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,05 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution approx 25% pure p. a.

CHEM*114321732

1 l	5 l	Appearance	colourless, clear liquid
10 l		Assay	25,0 ± 1,0 %
		Density	approx 1,059 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,03 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE SOLUTION 36-38%

Formaldehyd roztwór 36-3%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: 8, III UN: 2209



Physical and chemical properties:

Character:	liquid	Vapor pressure:	approx 1,36 hPa
Colour:	colourless	Density:	1,111 – 1,117g/cm ³ (20°C)
Odor:	sharp	Solubility:	
Melting point:	-92°C	in water:	soluble
Boiling point:	96 - 98°C	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	approx 430°C		
Ignition temperature:	approx 64°C		
Explosion limits:		log P _{ow} :	-1,0
bottom:	7% v/v		
top:	73% v/v		

formaldehyde solution 36-38% purified

CHEM*324321733

2.5 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay	36,0 – 38,0 %
20 l	30 l	Organic acids (as HCOOH)	max. 0,08 %
60 l		Iron (Fe)	max. 0,0008 %

formaldehyde solution 36-38% pure

CHEM*424321733

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay	36,0 – 38,0 %
3 l	5 l	Density	1,07 – 1,09 g/cm ³ (20°C)
10 l	20 l	Organic acids (as HCOOH)	max. 0,05 %
30 l	60 l	Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution 36-38% pure p. a.**CHEM*114321734**

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	36,0 – 38,0 %
2.5 l	3 l	Density	1,07 – 1,09 g/cm ³ (20°C)
5 l	10 l	Organic acids (as HCOOH)	max. 0,03 %
20 l	30 l	Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE SOLUTION 40%

Formaldehyd roztwór 40%

HCHO

M = 30,03 g/mol

CAS: 50-00-0

WE: 200-001-8



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: 8, III UN: 2209



Physical and chemical properties:

Character:	liquid	top:	73% v/v
Colour:	colourless	Vapor pressure:	approx 1,36 hPa (200C)
Odor:	sharp	Density:	1,092 g/cm ³ (20°C)
pH:	approx 3 - 4 (20°C)	Solubility:	
Melting point:	-118°C	in water:	soluble
Boiling point:	96 - 98°C	in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol
Auto - ignition temperature:	approx 300°C		
Ignition temperature:	approx 62°C		
Explosion limits:			
bottom:	7% v/v		

formaldehyde solution 40% pure

CHEM*424321737

500 ml	1 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	40,0 ± 1,0 %
10 l		Density	approx 1,092 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,05 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

formaldehyde solution 40% pure p. a.

CHEM*114321733

500 ml	1 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	40,0 ± 1,0 %
10 l		Density	approx 1,092 g/cm ³ (20°C)
		Organic acids (as HCOOH)	max. 0,03 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

FORMALDEHYDE BUFFER SOLUTION

Formaldehyd roztwór buforowany

HCHO

M = 30,03 g/mol



H: 302, 317, 351

P: 280, 302+352, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	no data
Colour:	colourless	top:	no data
Odor:	no data	Vapor pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		
Explosion limits:			

formaldehyde buffer solution 4%

CHEM*114321729

1 l	2.5 l	Appearance	colourless, clear liquid
3 l	5 l	Formaldehyde	approx 4,0 %
10 l		Di-sodium hydrogen phosphate anhydrous	passes test
		Sodium dihydrogenphosphate anhydrous	passes test

FORMALDEHYDE BUFFER SOLUTION

Formaldehyd roztwór buforowany

HCHO

M = 30,03 g/mol



H: 301, 311, 315, 317, 319, 331, 335, 351
P: 301+330+331, 302+352, 305+351+338, 309, 310
RID/ADR: 8, III UN: 2209



Physical and chemical properties:

Character:	liquid	bottom:	no data
Colour:	colourless	top:	no data
Odor:	no data	Vapor pressure:	no data
pH:	7,4 – 7,8	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto - ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		
Explosion limits:			

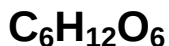
formaldehyde buffer solution 10%

CHEM*114321730

1 l	2.5 l	Appearance	colourless, clear liquid
3 l	5 l	Formaldehyde	approx 10,0 %
10 l		Di-sodium hydrogenphosphate anhydrous	passes test
		Sodium dihydrogenphosphate anhydrous	passes test

D-(-)-FRUCTOSE

D-fruktoza



M = 180,16 g/mol

CAS: 57-48-7

WE: 200-333-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	bottom:	no data
Colour:	colourless – white	top:	no data
Odor:	odorless	Vapor pressure:	no data
pH:	approx 5-6 (100 g/l H ₂ O, 20°C)	Density:	approx 1,65 g/cm ³ (20°C)
Melting point:	approx 105°C	Bulk density:	approx 700-800 kg/m ³
Boiling point:	no data	Solubility:	
Auto - ignition temperature:	no data	in water:	500 g/l (20°C)
Ignition temperature:	no data	in organic solvents:	acetone
Explosion limits:			

D-(-)-Fructose pure

CHEM*444366102

50 g	100 g	Identity	passes test
250 g	500 g	Water	max. 0,5 %
		Acidity	passes test
750 g	1 kg	Residue on roasting (as SO ₄)	max. 0,1 %
2 kg	5 kg	Specific rotation	-93,5 ÷ -91,0 °
		Chlorides (Cl)	max. 0,005 %
10 kg	25 kg	Sulfates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	passes test
		Lead (Pb)	max. 0,5 ppm

D-(-)-Fructose pure p. a.

CHEM*114366103

50 g	100 g	Identity	passes test
250 g	500 g	Water	max. 0,2 %
		Acidity	passes test
750 g	1 kg	Residue on roasting (as SO ₄)	max. 0,05 %
2 kg	5 kg	Specific rotation	-93,5 ÷ -91,0 °
		Chlorides (Cl)	max. 0,002 %
10 kg	15 kg	Sulfates (SO ₄)	max. 0,002 %
		Arsenic (As)	max. 0,00005 %
		Barium (Ba)	passes test
		Lead (Pb)	max. 0,2 ppm

BASIC FUCHSIN

Fuksyna zasadowa



M = 337,85 g/mol

CAS: 632-99-5

WE: 211-189-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green	Vapor pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 5 - 6 (1 g/l H ₂ O, 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	approx 235°C	Solubility:	
Boiling point:	not applicable	in water:	4 g/l (25°C)
Auto - ignition temperature:	no data	in organic solvents:	ethanol - 30 g/l (25°C)
Ignition temperature:	no data		

Basic Fuchsin

CHEM*124381405

5 g	10 g	Appearance	green powder
25 g	50 g	Percentage coefficient of absorption (1%; 1 cm; 50 % ethanol; 549÷552 nm)	min. 1700
100 g		Maximum of absorption (50% ethanol)	549 – 552 nm
		Coefficient of maximum absorption P -/+ 15 nm	1,16 - 1,35
		Loss on drying	max. 10 %

GLYCERIN

Gliceryna



M = 92,1 g/mol

CAS: 56-81-5

WE: 200-289-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	0,9 v/v
Colour:	colourless	top:	no data
Odor:	odorless	Vapour pressure:	<0,01 mmHg (20°C)
pH:	5,5 - 8	Density:	1,26 g/cm ³ (20°C)
Melting point:	20°C	Solubility	
Boiling point:	182°C	in water:	soluble
Auto - ignition temperature:	approx 370°C	in organic solvents:	no data
Ignition temperature:	160°C		
Explosion limits:			

Glycerin purified

CHEM*324433203

2.5 l	3 l	Assay	min. 98,0 %
5 l	10 l	Water	max. 2 %
20 l	30 l	Acids (as CH ₃ COOH)	max. 0,002 %
60 l	200 l	Aldehydes and substances reducing	passes test
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0002 %

Glycerin pure

CHEM*424433203

100 ml	250 ml	Assay	98,5 – 100,0 %
500 ml	1 l	Water	max. 1,5 %
2.5 l	3 l	Acids (as CH ₃ COOH)	max. 0,001 %
5 l	10 l	Aldehydes i substances reducing	passes test
20 l	30 l	Esters (as glycerol tributyrate)	max. 0,1 %
60 l		Organic halogenated	max. 0,0005 %
		Sulfated ash	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

Glycerin pure p. a.**CHEM*114433204**

100 ml	250 ml	Assay	99,5 – 100,0 %
		Water	max. 0,5 %
500 ml	1 l	Acids (as CH ₃ COOH)	max. 0,001 %
2.5 l	3 l	Aldehydes and substances reducing	passes test
		Esters (as glycerol tributyrat)	max. 0,08 %
5 l	10 l	Organic halogenated	max. 0,0005 %
20 l	30 l	Sulfated ash	max. 0,005 %
60 l		Chlorides (Cl)	max. 0,0002 %
		Sulfates (SO ₄)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,00004 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,00005 %

GLYCERIN SYNTHETIC

Gliceryna syntetyczna



M = 92,1 g/mol

CAS: 56-81-5

WE: 200-289-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	bottom:	0,9 v/v
Colour:	colourless	top:	no data
Odor:	characteristic	Viscosity (20°C):	1450 mPa s
pH:	approx 5	Density:	1,261-1,263 g/cm ³ (20°C)
Melting point:	18°C	Solubility	
Boiling point:	290°C	in water:	soluble
Auto - ignition temperature:	429°C	in organic solvents:	ethanol
Ignition temperature:	approx 180°C	log P _(OW) :	-2,66
Explosion limits:			

Glycerin synthetic pure

CHEM*424433204

100 ml	250 ml	Assay	min 99,0 %
500 ml	1 l	Colour	max. 10 Hazen
2.5 l	3 l	Aliphatic acids and esters	max. 0,20 meq/hg
5 l	10 l	Diethylene glycol and related substances (as diethylene glycol)	max. 0,15 %
20 l	30 l	DEG and related substances (total impurities)	max. 1,5 %
		Refractive index (20°C)	1,470 - 1,475
		Relative density 25/25	1,2615 - 1,2635
		Assay water	0,5 %

Glycerin synthetic pure p. a.**CHEM*114433203**

100 ml	250 ml	Acidity/Alkalinity *	passes test
		Aldehydes*	passes test
500 ml	1 l	Assay */**	min 99,7 %
2.5 l	3 l	Chlorides*	passes test
		Chlorinated compounds*	passes test
5 l	10 l	Colour	max. 10 Hazen
20 l	30 l	Impurities A and related substances**	passes test
		Aliphatic acids and esters	max. 0,20 meq/hg
		Diethylene glycol and related substances (diethylene glycol)	max. 0,10 %
		DEG and related substances (total impurities)	max. 1,0 %
		Halogenated compounds**	passes test
		Heavy metals	max. 0,0005 %
		Identity IR**	passes test
		Identity - method B*	passes test
		Refractive index (20°C)	1,470 - 1,475
		Residue on roasting*	passes test
		Relative density 25/25	1,2615 - 1,2635
		Saccharides**	passes test
		Sulfates*	passes test
		Water	0,3 %

*USP

**EP

GLICERIN SOLUTION 85%

Glicceryna roztwór 85%



M = 92,1 g/mol

CAS: 56-81-5

WE: 200-289-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,2249 g/cm ³ (20°C)
pH:	5,5 - 8	Solubility	
Melting point:	no data	in water:	soluble
Boiling point:	182 °C/20 mmHg	in organic solvents:	no data
Auto - ignition temperature:	no data		
Ignition temperature:	160 °C		

glicerin solution 85% pure

CHEM*424433204

500 ml	1 l	Assay	85,0 % ± 1,0 %
		Density (20°C)	approx 1,2249 g/cm ³
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

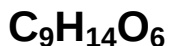
glicerin 85% pure p. a.

CHEM*114433206

500 ml	1 l	Assay	85,0 % ± 1,0 %
		Density (20°C)	approx 1,2249 g/cm ³
		Chlorides (Cl)	max. 0,0002 %
		Sulfates (SO ₄)	max. 0,0005 %
		Arsenic (As)	max. 0,00004 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,00005 %

GLYCERYL TRIACETATE

Gliceryny trioctan



M = 218,21 g/mol

CAS: 102-76-1

WE: 203-051-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	7,73% v/v
Colour:	colourless	Dynamic viscosity:	~23 mPa*s (20°C)
Odor:	rancid	Vapour pressure:	<0,1 mbar (20°C)
pH:	5,0 - 6,0 (50 g/l H ₂ O, 20°C)	Density:	1,16 g/cm ³ (20°C)
Melting point:	3°C	Solubility	
Boiling point:	258-260°C	in water:	64 g/l (20°C)
Auto - ignition temperature:	432°C	in organic solvents:	no data
Ignition temperature:	138°C	log P _(w/o) :	0,25
Explosion limits:		Factor of bioconcentration:	0,2
bottom:	1,05% v/v		

Glyceryl triacetate pure

CHEM*424435806

500 ml	1 l	Assay	min 98,0 %
2,5 l	3 l	Density (20°C)	1,158 - 1,164 g/cm ³
5 l	10 l	Free acids (as CH ₃ COOH)	max. 0,05 %
		Refractive index(20°C)	1,43 - 1,433
		Residue on roasting	max. 0,01 %

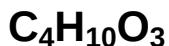
Glyceryl triacetate pure p. a.

CHEM*114435807

500 ml	1 l	Assay	min 99,0 %
2,5 l	3 l	Density (20°C)	1,159 - 1,163 g/cm ³
5 l	10 l	Free acids (as CH ₃ COOH)	max. 0,02 %
		Refractive index(20°C)	1,431 - 1,433
		Residue on roasting	max. 0,006 %

DIETHYLENE GLYCOL

Glikol dietylenowy



M = 106,12 g/mol

CAS: 111-46-6

WE: 203-872-2



H: 302

P: 301+312

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	12% v/v
Colour:	colourless	Viscosity w temp. 20°C:	35,7 mPa·s
Odor:	odorless	Vapour pressure:	0,03 hPa (20°C)
pH:	6 - 8 (200 g/l H ₂ O)	Density:	1,12 g/cm ³ (20°C)
Melting point:	6,5°C	Solubility	
Boiling point:	244,8°C	in water:	soluble
Auto - ignition temperature:	225°C	in organic solvents:	soluble
Ignition temperature:	124°C	log P _{OW} :	-1,98
Explosion limits:			
bottom:	2% v/v		

diethylene glycol pure

CHEM*424465108

250 ml	500 ml	Assay (GC)	min. 98,0 %
1 l	2.5 l	Density (20°C)	1,115 - 1,118 g/cm ³
3 l	5 l	Refractive index	1,446 - 1,448
10 l	20 l	Water	max. 0,5 %
30 l	60 l		
200 l			

diethylene glycol pure p. a.

CHEM*114465109

50 ml	100 ml	Assay (GC)	min. 98,5 %
250 ml	500 ml	Density (20°C)	1,116 - 1,118 g/cm ³
1 l	2.5 l	Refractive index	1,446 - 1,448
3 l	5 l	Water	max. 0,2 %
10 l	20 l	Residue on roasting	max. 0,003 %
30 l	60 l	Free acids (as CH ₃ COOH)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0001 %

ETHYLENE GLYCOL

Glikol etylenowy



M = 62,07 g/mol

CAS: 107-21-1

WE: 203-473-3



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	15,3% obj
Colour:	colourless	Viscosity (20°C):	21 mPa·s
Odor:	characteristic	Vapour pressure:	0,07 mbar (20°C)
Melting point:	-13°C	Density:	~1,114 g/cm ³ (20°C)
Boiling point:	197,6°C	Solubility	
Auto - ignition temperature:	410°C	in water:	soluble
Ignition temperature:	111-115°C	in organic solvents:	soluble
Explosion limits:			
bottom:	3,2% v/v		

Ethylene glycol purified

CHEM*324466303

2.5 l	3 l	Assay (GC)	min. 98,0 %
5 l	10 l	Density (20°C)	1,111 - 1,115 g/cm ³
		Water	max. 0,5 %
20 l	30 l	Free acids (as CH ₃ COOH)	max. 0,002 %
60 l	200 l	Residue on roasting	max. 0,05 %
		Appearance	colourless, liquid

Ethylene glycol pure

CHEM*424466303

250 ml	500 ml	Assay (GC)	min 98,5 %
		Density (20°C)	1,111 - 1,115 g/cm ³
1 l	2.5 l	Water	max. 0,3 %
3 l	5 l	Free acids (as CH ₃ COOH)	max. 0,001 %
10 l	20 l	Residue on roasting	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
30 l	60 l	Heavy metals (as Pb)	max. 0,0005 %
200 l		Iron (Fe)	max. 0,0001 %
		Appearance	colourless, oily liquid

Ethylene glycol pure p. a. **CHEM*114466303**

100 ml	250 ml	Assay (GC)	min 99,0 %
		Density (20°C)	1,113 - 1,115 g/cm ³
500 ml	1 l	Water	max. 0,2 %
2.5 l	3 l	Free acids (as CH ₃ COOH)	max. 0,001 %
		Residue on roasting	max. 0,005 %
5 l	10 l	Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,002 %
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,00005 %
60 l		Appearance	colourless, liquid

ETHYLENE GLYCOL SOLUTIONS

c < 25%

Glikol etylenowy roztwory



M = 62,07 g/mol

CAS: 107-21-1

WE: 203-473-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless	Density:	1,0108 g/cm ³ (20°C)
Odor:	odorless	Solubility	
pH:	no data	in water:	soluble
Melting point:	approx -15°C	in organic solvents:	soluble
Boiling point:	no data		
Explosion limits:	not applicable		

Ethylene glycol 10% purified

CHEM*324466299

2.5 l	3 l	Assay (GC)	10,0 ± 0,5 %
5 l	10 l	Density (20°C)	1,0108 g/cm ³
20 l	30 l	Appearance	colourless, liquid
60 l			

Ethylene glycol 20% purified

CHEM*324466302

2.5 l	3 l	Assay (GC)	20,0 ± 0,5 %
5 l	10 l	Density (20°C)	1,024 g/cm ³
20 l	30 l	Appearance	colourless, liquid
60 l		Freezing temperature	approx -8°C

ETHYLENE GLYCOL SOLUTIONS

$c \geq 25\%$

Glikol etylenowy roztwory



M = 62,07 g/mol

CAS: 107-21-1

WE: 203-473-3



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless	Density:	(20°C)
Odor:	odorless	Solubility	
pH:	no data	in water:	soluble
Melting point:		in organic solvents:	soluble
Boiling point:	no data		
Explosion limits:	not applicable		

Ethylene glycol 30% purified

CHEM*324466305

2.5 l	3 l	Assay (GC)	30,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,037 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l		Freezing temperature	approx -16°C

Ethylene glycol 40% purified

CHEM*324466304

2.5 l	3 l	Assay (GC)	40,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,051 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l		Freezing temperature	approx -26°C

Ethylene glycol 50% purified

CHEM*324466301

2.5 l	3 l	Assay (GC)	50,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,064 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l		Freezing temperature	approx -36°C

Ethylene glycol 60% purified**CHEM*324466309**

2.5 l	3 l	Assay (GC)	60,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,0765 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l			

ETHYLENE GLYCOL SOLUTION WITH CORROSION INHIBITOR

Glikol etylenowy z inhibitorem korozji, roztwory



M = not applicable

CAS: not applicable

WE: not applicable



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless	Density:	(20°C)
Odor:	odorless	Solubility	
pH:	no data	in water:	soluble
Melting point:		in organic solvents:	soluble
Boiling point:	no data		
Explosion limits:	not applicable		

Ethylene glycol 30% with corrosion inhibitor

CHEM*324466313

2.5 l	3 l	Assay (GC)	30,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,037 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l		Freezing temperature	approx -16°C

Ethylene glycol 40% with corrosion inhibitor

CHEM*324466310

2.5 l	3 l	Assay (GC)	40,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,051 g/cm ³
20 l	30 l	Appearance	colourless, oily liquid
60 l		Freezing temperature	approx -26°C

Ethylene glycol 60% with corrosion inhibitor

CHEM*324466314

2.5 l	3 l	Assay (GC)	60,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,0765 g/cm ³
20 l	30 l	Appearance	colourless, liquid
60 l			

PROPYLENE GLYCOL

Glikol propylenowy



M = 76,1 g/mol

CAS: 57-55-6

WE: 200-338-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	17,4% v/v
Colour:	colourless	Vapour pressure:	0,2 mbar (20°C)
Odor:	characteristic	Density:	approx 1,04 g/cm ³ (20°C)
pH:	6 - 8 (100 g/l H ₂ O, 20°C)	Bulk density:	not applicable
Melting point:	-59°C	Solubility	
Boiling point:	188°C	in water:	soluble
Auto - ignition temperature:	371°C	in organic solvents:	no data
Ignition temperature:	99°C	log P _{OW} :	no data
Explosion limits:			
bottom:	2,4% v/v		

Propylene Glycol purified

CHEM*324489006

2.5 l	3 l	Appearance	colourless, clear oily liquid
5 l	10 l	Assay	min. 98,5 %
20 l	30 l	Density (20°C)	1,035 - 1,04 g/cm ³
60 l		Water	max. 0,5 %
		Residue on roasting	max. 0,01 %

Propylene Glycol pure

CHEM*424489006

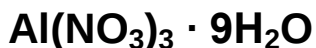
100 ml	250 ml	Appearance	colourless, clear oily liquid
500 ml	1 l	Assay	min. 99,5 %
2.5 l	3 l	Colour	max. 10 Hazen
5 l	10 l	Density (20°C)	1,035 - 1,04 g/cm ³
20 l	30 l	Water	max. 0,2 %
60 l		Acidity	max. 0,0005 meq/g
		Residue on roasting	max. 0,005 %
		Chlorides (Cl)	max. 0,0001 %

Propylene Glycol pure p. a.**CHEM*114489005**

50 ml	100 ml	Appearance	colourless, clear, liquid
250 ml	500 ml	Assay	min. 99,8 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	1,035 - 1,04 g/cm ³
10 l	20 l	Water	max. 0,1 %
30 l	60 l	Acidity	max. 0,0005 meq/g
		Residue on roasting	max. 0,002 %
		Chlorides (Cl)	max. 0,00005 %

ALUMINUM NITRATE NONAHYDRATE

Glinu azotan 9 hydrat



M = 375,13 g/mol

CAS: 7784-27-2

WE: 236-751-8



H: 272, 315, 319

P: 302+352, 305+351+338

RID/ADR: 5.1, III

UN: 1438



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	nitric acid	Density:	1,058 g/cm ³
pH:	approx 2-4 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 880 kg/m ³
Melting point:	73°C	Solubility	
Boiling point:	135°C	in water:	730 g/l (20°C)
Auto - ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Aluminum nitrate nonahydrate pure

CHEM*424531209

100 g	250 g	Appearance	colourless crystals
500 g	1 kg	Assay	98,0 – 102,0 %
		Substances insoluble in water	max. 0,02 %
		pH (5%, 20°C)	2,0 – 4,0
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,03 %
		Heavy metals (as Pb)	max. 0,001 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
		Iron (Fe)	max. 0,01 %

Aluminum nitrate nonahydrate pure p. a.

CHEM*114531200

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	98,5 – 101,0 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	2,5 - 3,5
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,03 %
		Iron (Fe)	max. 0,004 %

ALUMINUM CHLORIDE

Glinu chlorek



M = 133,34 g/mol

CAS: 7446-70-0

WE: 231-208-1



H: 314

P: 260, 280, 301*330*331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1726



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1 hPa (100°C)
Odor:	sharp	Density:	2,44 g/cm ³ (20°C)
pH:	approx 2,4 (100 g/l H ₂ O, 20°C)	Bulk density:	1200 kg/m ³
Melting point:	190°C	Solubility	
Boiling point:	no data	in water:	450 g/l (20°C)
Auto - ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Aluminum chloride pure

CHEM*424534802

50 g	100 g	Assay	min. 98,5 %
250 g	500 g	Substances insoluble in water	max. 0,5 %
750 g	1 kg	Heavy metals (Ni+Pb+Cu+Cr+Zn)	max. 0,015 %
2 kg	5 kg	Iron (Fe)	max. 0,03 %

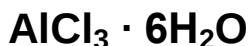
Aluminum chloride pure p. a.

CHEM*114534802

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Sulfates (SO ₄)	max. 0,01 %
500 g	750 g	Lead (Pb)	max. 0,0005 %
1 kg		Sodium (Na)	max. 0,001 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

ALUMINUM CHLORIDE HEXAHYDRATE

Glinu chlorek 6 hydrat



M = 241,45 g/mol

CAS: 7784-13-6

WE: 231-208-1



H: 315, 319

P: 302*352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	2,4 g/cm ³ (20°C)
pH:	approx 2,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 800 kg/m ³
Melting point:	100°C	Solubility	
Boiling point:	no data	in water:	1330 g/l (20°C)
Auto - ignition temperature:	not applicable	in organic solvents:	ethanol, diethyl ether, CCl ₄ , chloroform, nitrobenzene
Ignition temperature:	not applicable		

Aluminum chloride 6 hydrat pure

CHEM*424535202

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Sulfates (SO ₄)	max. 0,01 %
750 g	1 kg	Lead (Pb)	max. 0,005 %
2 kg	5 kg	Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,07 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,01 %

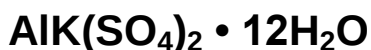
Aluminum chloride 6 hydrat pure p. a.

CHEM*114535203

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	pH (5%, 25°C)	2,5÷3,5
500 g	750 g	Sulfates (SO ₄)	max. 0,005 %
1 kg		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,005 %

ALUMINUM POTASSIUM SULFATE DODECAHYDRATE

Glinu potasu siarczan 12 hydrat



M = 474,39 g/mol

CAS: 7784-24-9

WE: 233-141-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Density:	1,74 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 900 kg/m ³
pH:	approx 3,0 -3,5 (20 g/l H ₂ O, 20°C)	Solubility	
Melting point:	92°C	in water:	139 g/l (20°C)
Boiling point:	>280°C	in organic solvents:	no data
Auto - ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Aluminum potassiumsium sulfate dodecahydrate pure

CHEM*424526602

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Chlorides (Cl)	max. 0,004 %
1 kg	3 kg	Ammonia salt (NH ₄)	max. 0,01 %
5 kg		Arsenic (As)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0003 %
		Copper (Cu)	max. 0,0003 %
		Lead (Pb)	max. 0,0004 %
		Iron (Fe)	max. 0,002 %

Aluminum potassium sulfate dodecahydrate pure p. a.

CHEM*114526603

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	pH (5%, 20°C)	3 - 3,5
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	Chlorides (Cl)	max. 0,0005 %
3 kg		Ammonia salt (NH ₄)	max. 0,005 %
		Arsenic (As)	max. 0,00005 %
		Cadmium(Cd)	max. 0,0003 %
		Copper (Cu)	max. 0,0003 %
		Lead (Pb)	max. 0,0004 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

ALUMINUM POTASSIUM SULFATE SOLUTION 10%*Glinu potasu siarczan, roztwór 10%*

M = 258,2 g/mol

CAS: 10043-67-1

WE: 233-141-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

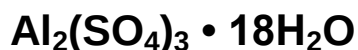
Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	no data	Solubility	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	not applicable		

Aluminum potassium sulfate solution 10%**CHEM*524526604**

250 ml	500 ml	Assay	10,0 % ± 0,5 %
		Chlorides (Cl)	max. 0,0005 %
1 l		Iron (Fe)	max. 0,001 %

ALUMINUM SULFATE OCTADECALHYDRATE

Glinu siarczan 18 hydrat



M = 666,42 g/mol

CAS: 7784-31-8

WE: 233-135-0

H: not applicable

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	1,72 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 820 kg/m ³
pH:	approx 2,5 - 4,0 (20 g/l H ₂ O, 20°C)	Solubility	
Melting point:	90°C	in water:	364 g/l (20°C)
Boiling point:	>87°C	in organic solvents:	no data
Explosion limits:	not applicable		

Aluminum sulfate octadecahydrate pure

CHEM*424547304

50 g	100 g	Assay	98,0 – 107,0 %
250 g	500 g	Substances insoluble in water	max. 0,05 %
750 g	1 kg	Chlorides (Cl)	max. 0,01 %
2 kg	5 kg	Ammonia salt (NH ₄)	max. 0,02 %
10 kg	15 kg	Heavy metals (as Pb)	max. 0,002 %
25 kg		Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,04 %
		Iron (Fe)	max. 0,01 %

Aluminum sulfate octadecahydrate pure p. a. CHEM*114547305

25 g	50 g	Assay	99,0 – 106,0 %
100 g	250 g	Substances insoluble in water	max. 0,02 %
500 g	750 g	pH (5 %, 20°C)	2,5 - 3,5
1 kg	2 kg	Chlorides (Cl)	max. 0,002 %
5 kg	10 kg	Ammonia salt (NH ₄)	max. 0,005 %
15 kg		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Aluminum sulfate octadecahydrate FP reagent CHEM*424547306

100 g	250 g	Assay	98,0 – 106,0 %
500 g	750 g	pH (5 %, 20°C)	2,9 - 3,5
1 kg	2 kg	Ammonia salt (NH ₄)	passes test
5 kg	10 kg	Potassium (K) + Calcium (Ca)	max. 0,8 %
15 kg	25 kg	Chlorides (Cl)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0005 %
		Iron (Fe)	max. 0,015 %

ALUMINIUM SULFATE SOLUTION 0,3%*Glinu siarczan roztwór 0,3%*

M = 342,15 g/mol

CAS: 10043-01-3

WE: 233-135-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 2,5 - 4,0	Solubility	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Aluminium sulfate solution 0,3%**CHEM*524547306**

5 l

Assay

0,3 ± 0,01 %

ALUMINUM SULFATE SOLUTION 30%

Glinu siarczan roztwór 30%



M = 342,15 g/mol

CAS: 7784-31-8

WE: 233-135-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density (19°C):	approx 1,347 g/cm ³
pH:	approx 2,5 - 4,0	Solubility	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Aluminum sulfate solution 30% pure

CHEM*524547304

500 ml	1 l	Assay	30,0 ± 1,0 %
5 l	10 l	Density (19°C)	approx 1,347 g/cm ³
20 l	30 l		
60 l			

ALUMINUM OXIDE

Glinu tlenek prażony



M = 101,94 g/mol

CAS: 1344-28-1

WE: 215-691-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	3,94 g/cm ³ (20°C)
pH:	approx 7,3 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 920 kg/m ³
Melting point:	approx 2050°C	Solubility	
Boiling point:	2980°C	in water:	insoluble
Auto - ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Aluminum oxide pure

CHEM*424560600

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min 96,0 %
500 g	1 kg	Substances soluble in water	max. 0,75 %
		Loss on roasting	max. 3,0 %
		Nitrates (NO ₃)	max. 0,05 %
		Chlorides (Cl)	max. 0,02 %
		Sulfates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,015 %
		Iron (Fe)	max. 0,03 %

Aluminum oxide pure p. a.

CHEM*114560600

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min 98,5 %
500 g	1 kg	Substances soluble in water	max. 0,25 %
		Loss on roasting	max. 1 %
		Nitrates (NO ₃)	max. 0,02 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,005 %
		Iron (Fe)	max. 0,01 %

ALUMINUM HYDROXIDE

Glinu wodorotlenek



M = 78,00 g/mol

CAS: 21645-51-2

WE: 244-492-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	<0,1hPa (20°C)
Odor:	odorless	Density:	2,42 g/cm ³ (20°C)
pH:	approx 8 - 9 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	300°C	Solubility	
Boiling point:	no data	in water:	insoluble
Auto - ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Aluminum hydroxide pure

CHEM*424573407

100 g	250 g	Appearance	white, crystalline powder
500 g	750 g	Assay (Al ₂ O ₃)	63,0 – 67,0 %
1 kg	15 kg	Bases (as Na)	max. 0,3 %
		Sulfates (SO ₄)	max. 0,02 %
		Iron (Fe)	max. 0,01 %

Aluminum hydroxide pure p. a.

CHEM*114573106

100 g	250 g	Appearance	white, crystalline powder
500 g	750 g	Assay (Al ₂ O ₃)	min. 64,0 %
1 kg	15 kg	Bases (as Na)	max. 0,15 %
		Sulfates (SO ₄)	max. 0,01 %
		Iron (Fe)	max. 0,005 %

ALUMINUM HYDROXIDE SOLUTION 3%

Glinu wodorotlenek roztwór 3%



M = 78,00 g/mol

CAS: 21645-51-2

WE: 244-492-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Solubility	
Melting point:	no data	in water:	no data
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	not applicable		
Ignition temperature:	not applicable		

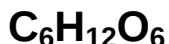
Aluminum hydroxide solution 3%

CHEM*524573407

1 l	2.5 l	Assay	3,0 % ± 0,1 %
3 l	5 l		
10 l	20 l		
30 l			

D-(+)-GLUCOSE

D-(+)-Glukoza bezwodna



M = 180,16 g/mol

CAS: 50-99-7

WE: 200-075-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	colourless	Density:	1,562 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 700 kg/m ³
pH:	6 - 7 (100 g/l H ₂ O, 20°C)	Solubility	
Melting point:	153-156°C	in water:	~470 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data
Auto - ignition temperature:	~500°C	log P(w/o):	-3,29
Ignition temperature:	no data		
Explosion limits:	no data		

D-(+)-Glucose pure

CHEM*444595600

100 g	250 g	Substances insoluble in water	max. 0,01 %
		Loss on drying (105 ± 5°C)	max. 0,5 %
500 g	750 g	Acids (as CH ₃ COOH)	max. 0,05 %
1 kg	2 kg	Residue on roasting (as SO ₄)	max. 0,05 %
5 kg	10 kg	Chlorides (Cl)	max. 0,01 %
		Sulfates i sulfites (as SO ₄)	max. 0,01 %
15 kg		Arsenic (As)	max. 0,0004 %
		Iron (Fe)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Spcific rotation (20°C, 10%, H ₂ O)	+52,5 ÷ +53,3 °

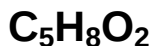
D-(+)-Glucose pure p. a.

CHEM*114595600

25 g	50 g	Substances insoluble in water	max. 0,005 %
		Loss on drying (105±5°C)	max. 0,2 %
100 g	250 g	Acids (as CH ₃ COOH)	max. 0,015 %
500 g	750 g	Starch	passes test
1 kg	5 kg	Residue on roasting (as SO ₄)	max. 0,02 %
		Chlorides (Cl)	max. 0,0025 %
10 kg	20 kg	Sulfates i sulfites (as SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00004 %
		Iron (Fe)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Specific rotation (20°C, 10%, H ₂ O)	+52,5 ÷ +53 °

GLUTARALDEHYDE 25% SOLUTION

Glutarowy aldehyd 25%



M = 100,12 g/mol

CAS: 111-30-8

WE: 203-856-5



H: 302, 314, 317, 331, 334, 400
 P: 280, 310+330+331, 305+351+338, 309, 310
 RID/ADR: 6.1 (8), II

UN: 2927



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless - yellow	Vapour pressure:	22 hPa (20°C)
Odor:	characteristic	Density:	1,060 - 1,065 g/cm ³ (20°C)
pH:	approx 3,3 (20°C)	Bulk density:	not applicable
Melting point:	~-5°C	Solubility	
Boiling point:	approx 100°C	in water:	soluble
Auto - ignition temperature:	not applicable	in organic solvents:	acetone, ethanol

Ignition temperature: not applicable

Glutaraldehyde 25% solution

CHEM*424610237

100 ml	250 ml	Assay	24,0 – 26,0 %
500 ml	1 l	Colour	max. 50 Hazen
		pH (20°C)	3,2 - 4,2
2.5 l	3 l	Methanol	max. 0,3%
5 l			

HEXANE

Heksan



M = 86,18 g/mol

CAS: 110-54-3

WE: 203-777-6



H: 225, 304, 315, 336, 361f, 373, 411
 P: 210, 240, 273, 301+310, 302+352,
 331, 403+235
 RID/ADR: 3, II UN: 1208



Physical and chemical properties

Character:	liquid	top:	7,4% v/v
Colour:	colourless	Viscosity (20°C):	0,31 mPa·s
Odor:	characteristic	Vapour pressure:	160 mbar (20°C)
Melting point:	-95°C	Density:	0,66 g/cm ³ (20°C)
Boiling point:	68°C	Solubility:	
Auto-ignition temperature:	223°C	in water:	0,1 g/l (15°C)
Ignition temperature:	-22°C	in organic solvents:	soluble
Explosion limits:		log P _{ow} :	3,6
bottom:	1,2% v/v		

n-Hexane 95% pure

CHEM*414663207

100 ml	250 ml	Assay (GC)	min. 95,0 %
500 ml	1 l	Water (KF)	max. 0,01 %
2.5 l	3 l	Non-volatile matter	max. 0,001 %
5 l	10 l	Acidity	max. 0,0005 meq/g
20 l	30 l	Organic hydrocarbons	max. 0,01 %
60 l		Sulphur (S)	max. 0,005 %

n-Hexane 99% pure p. a.**CHEM*114663206**

50 ml	100 ml	Assay	min. 99,0 %
		Water	max. 0,01 %
250 ml	500 ml	Free acids (as CH ₃ COOH)	max. 0,002 %
1 l	2.5 l	Residue on evaporation	max. 0,001 %
3 l	5 l	Substances darkening under the influence of H ₂ SO ₄	max. 10 Hazen
10 l	20 l	Tiophene (C ₄ H ₄ S)	passes test
		Aromatic compounds (as benzene)	max. 0,01 %
		Barium (Ba)	max. 0,00001 %
		Chromium (Cr)	max. 0,000002 %
		Tin (Sn)	max. 0,00001 %
		Zinc (Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Nickel (Ni)	max. 0,000002 %
		Lead (Pb)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %
		Colour	max. 10Hazen

n-Hexane 99% HPLC**CHEM*614663206**

1 l	2.5 l	Assay	min. 99,0 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1 cm, water):	
		200 nm	min. 50%
		210 nm	min. 70%
		220 nm	min. 90%
		230 nm	min. 98%
		240 nm	min. 99%
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

n-Hexane, trihalomethane max. 1ppb**CHEM*614663209**

500 ml	1 l	Assay (GC)	min. 95,0 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Non-volatile matter	max. 0,0005 %
		Trihalomethane	max. 1 ppb

n-Hexane 99% GC for pesticide analysis **CHEM*614663208**

500 ml	1 l	Assay	min. 99,0 %
2.5 l		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

n-Hexane 99% GC **CHEM*614663210**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,01%
		Colour	max. 10 Hazen
		Signal (GC) in the range from 1,2,4-trichlorobenzene to decachlorodiphenyl	max. 3 pg/ml

n-Hexane 99% GC standard **CHEM*614663207**

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

HEXANE – MIXTURE OF ISOMERS

Heksan frakcja z nafty

C₆H₁₄

M = 86,18 g/mol

CAS: not applicable

WE: not applicable



H: 225, 304, 315, 336, 361F, 373, 411
P: 210, 240, 273, 301+330+331, 302+352,
331, 403+235
RID/ADR: 3, II

UN: 1208



Physical and chemical properties:

Character:	liquid	bottom:	1,1% v/v
Colour:	colourless	top:	7,5% v/v
Odor:	characteristic	Vapour pressure:	124 mbar (20°C)
pH:	no data	Density:	0,66 g/cm ³ (20°C)
Melting point:	-95°C	Solubility:	
Boiling point:	67-69°C	in water:	insoluble
Auto-ignition temperature:	225°C	in organic solvents:	ethanol, ethyl ether, chloroform
Ignition temperature:	-21°C		
Explosion limits:			

Hexane mixture of isomers

CHEM*424664000

100 ml	250 ml	Density (15°C)	0,66 - 0,715 g/cm ³
500 ml	1 l	Boiling point	65 - 80 °C
2.5 l	3 l	Water	max. 0,02 %
5 l	10 l	Organic hydrocarbons	max. 0,01 %
20 l	30 l	Bromine number	max. 0,1 g Br/100 g
60 l	200 l		

Hexane mixture of isomers HPLC

CHEM*614664000

1 l	2.5 l	Assay (GC)	min. 45 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1 cm, water):	
		210 nm	min. 60%
		220 nm	min. 80%
		230 nm	min. 95%
		240 nm	min. 98%
		250 nm	min. 99%

HEXANE MIXTURE OF ISOMERS PURE

Heksan frakcja heksanowa czysta

C₆H₁₄

M = 86,18 g/mol

CAS: not applicable

WE: not applicable



H: 225, 304, 315, 336, 361F, 373, 411
P: 210, 240, 273, 301+330+331, 302+352,
331, 403+235
RID/ADR: 3, II UN: 1208



Physical and chemical properties:

Character:	liquid	bottom:	1,1% v/v
Colour:	colourless	top:	7,5% v/v
Odor:	characteristic	Vapour pressure:	124 mbar (20°C)
pH:	no data	Density:	0,66 g/cm ³ (20°C)
Melting point:	-95°C	Solubility:	
Boiling point:	67-69°C	in water:	insoluble
Auto-ignition temperature:	225°C	in organic solvents:	ethanol, ethyl ether, chloroform
Ignition temperature:	-21°C		
Explosion limits:			

hexane mixture of isomers pure

CHEM*424664005

100 ml	250 ml	Density (15°C)	0,665 – 0,685g/cm ³
500 ml	1 l	Boiling point	64 ÷ 70°C
2,5 l	3 l	n-Hexane	min. 55,0 %
5 l	10 l	Benzene	max. 0,01%
20 l	30 l	Bromine number (g Br/100g)	max. 0,01
60 l	200 l	Aromatic compounds	max. 0,01%
		Water (KF)	max. 0,001%
		Sulphur	max. 2 ppm
		Colour [Hazen]	max. 20

HEPTANE

Heptan

C₇H₁₆

n-heptan

M = 100,21 g/mol

CAS: 142-82-5

WE: 205-563-8



H: 225, 304, 315, 336, 410
P: 210, 273, 280, 301+310, 302+352, 331, 403+235
RID/ADR: 3, II UN: 1206



Physical and chemical properties:

Character:	liquid	top:	6,7% v/v
Colour:	colourless	Viscosity (20°C):	0,42 m Pa·s
Odor:	characteristic	Vapour pressure:	48 mbar (20°C)
Melting point:	-90°C	Density:	0,68 g/cm ³ (20°C)
Boiling point:	98°C	Solubility:	
Auto-ignition temperature:	223°C	in water:	0,003 g/l (25°C)
Ignition temperature:	-4°C	in organic solvents:	ethanol, acetone, ethyl ether, chloroform
Explosion limits:			
bottom:	1,1% v/v		

n-heptan pure

CHEM*424704700

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Colour	max. 20 Hazen
2.5 l	3 l	Density (20°C)	0,69 - 0,71 g/cm ³
5 l	10 l	Boiling point	92 ÷ 99 °C
20 l	30 l	Refractive index (20°C)	1,39 - 1,401
60 l		Water	max. 0,01 %
		Sulphur (S)	max. 0,005 %

n-heptan pure p. a.

CHEM*114704700

50 ml	100 ml	Assay	min. 99,5%
250 ml	500 ml	Density (15°C)	0,5 – 2,0 g/cm ³
1 l	2.5 l	Density (20°C)	ok. 0,688 g/cm ³
3 l	5 l	Aromatic substances	max. 0,0005%
10 l	20 l	Insoluble substances	max. 0,00005%
		Water	max. 0,01%
		Refractive index	1,385 – 1,389
		Free acids (as CH ₃ COOH)	max. 0,0005%

n-heptan HPLC		CHEM*614704700
1 l	2.5 l	Assay (GC) min. 99,5 %
		Water (KF) max. 0,01 %
		Acidity max. 0,0005 meq/g
		Residue on evaporation max. 0,0005 %
		UV - transmission (1 cm, water):
		210 nm min. 60%
		220 nm min. 80%
		230 nm min. 95%
		240 nm min. 98%
		250 nm min. 99%
		Fluorescence (as quinine)
		254 nm max. 1 ppb
		365 nm max. 1 ppb
n-heptan GC for pesticide analysis		CHEM*614704703
500 ml	1 l	Assay (GC) min. 95,0 %
2.5 l		Water (KF) max. 0,02 %
		Acidity max. 0,0005 meq/g
		Residue on evaporation max. 0,0005 %
n-heptan GC		CHEM*614704701
1 l	2.5 l	Assay (GC) min. 95,0 %
		Water (KF) max. 0,02 %
		Acidity max. 0,0005 meq/g
		Residue on evaporation max. 0,0005 %
n-heptan GC standard		CHEM*614704702
25 ml	50 ml	Purity min. 99,9 %
75 ml	100 ml	

HYDRAZINIUM SULFATE

Hydrazyny siarczan



M = 130,12 g/mol

CAS: 10034-93-2

WE: 233-110-4



H: 301, 311, 317, 331, 350, 410
P: 201, 273, 280, 302+352, 304+340, 309, 310
RID/ADR: 6.1, III UN: 3288



Physical and chemical properties:

Character:	solid	Explosion limit:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,37 g/cm ³ (20°C)
pH:	1,5 (50 g/l H ₂ O, 20°C)	Bulk density:	~450 kg/m ³
Melting point:	254 °C	Solubility:	
Boiling point:	no data	in water:	30 g/l (20°C); 16.4g/l (0°C); 140 g/l (80°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol
Ignition temperature:	not applicable		

Hydrazinium sulfate pure

CHEM*424758400

50 g	100 g	Appearance	colourless crystals or white crystalline powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Insoluble substances in water	max. 0,01 %
		Residue on roasting(as SO ₄)	max. 0,1 %
		Chlorides (Cl)	max. 0,005 %
		Heavy metals(as Pb)	max. 0,0025 %
		Iron (Fe)	max. 0,001 %

Hydrazinium sulfate pure p. a.

CHEM*114758400

25 g	50 g	Appearance	colourless crystals or white powder
100 g	250 g	Assay (iodometric)	min. 99,0 %
500 g	750 g	Insoluble substances in water	max. 0,005 %
1 kg		Residue on roasting(as SO ₄)	max. 0,05 %
		Chlorides (Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

HYDRAZINE MONOHYDRATE

Hydrazine monohydrate



M = 50,06 g/mol

CAS: 7803-57-8

WE: 206-114-9



H: 226, 301, 311, 314, 317,
331, 350, 410

P: 201, 273, 280,
301+330+331, 302+352,
304+340, 305+351+338

RID/ADR: 8 (6.1), II UN: 2030



Physical and chemical properties:

Character:	liquid	Bottom:	4,7% v/v
Colour:	yellow	Vapour pressure:	15-20 mmHg (20°C)
Odor:	ammonia	Density:	1,01 – 1,02 g/cm ³ (20°C)
pH:	10,6-10,7 (1%)	Solubility:	
Melting point:	od -32 do -62 °C	in water:	soluble
Boiling point:	107-109°C	in organic solvents:	ethanol, diethyl ether
Auto-ignition temperature:	no data	log P _{OW} :	-3,8
Ignition temperature:	no data	Viscosity (25°C):	1,50 mPa s
Explosion limit:		Refractive index:	1,43
Top:	100% v/v		

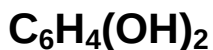
Hydrazine monohydrate pure

CHEM*424759836

1 l	2.5 l	Assay	38,0 – 42,0 %
3 l	5 l	Chlorides (Cl)	max. 0,0001%
		Sulfates (SO ₄)	max. 0,0001%
10 l	20 l	Inorganic residue	max. 0,002%
30 l	60 l	Sodium (Na)	max. 0,0001%
		Iron (Fe)	max. 0,0001%
		Refractive index	1,371 – 1,375
		Appearance	colourless liquid

HYDROQUINONE

Hydrochinon



M = 110,11 g/mol

CAS: 123-31-9

WE: 204-617-8



H: 302, 317, 318, 341, 351, 400

P: 273, 280, 302+352, 305+351+338, 308+313

RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Vapour pressure:	<0,1 hPa (25°C)
Colour:	colourless - white	Density:	1,358 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 600 kg/m ³
pH:	3 - 4 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	170°C	in water:	approx 70 g/l (20°C)
Boiling point:	286°C	in organic solvents:	ethanol, ether
Auto-ignition temperature:	516°C		
Ignition temperature:	165°C		
Explosion limits:	no data		

Hydroquinone pure

CHEM*424763505

10 g	25 g	Assay	min. 99,0 %
50 g	75 g	Melting point	172 ÷ 175°C
100 g	250 g		
500 g			

8-HYDROXYQUINOLINE

8-Hydroksychinolina

C₉H₇NO

M = 145,16 g/mol

CAS: 148-24-3

WE: 205-711-1



H: 302, 332

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	no data
Melting point:	72,5 - 74,0°C	Solubility:	
Boiling point:	267°C	in water:	2,2 g/l (60°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

8-Hydroxyquinoline pure p. a.

CHEM*114772206

5 g	10 g	Appearance	white - yellow powder or crystals
25 g	50 g	Assay	min. 99,5 %
75 g	100 g	Melting point	72,5 - 74,0°C
250 g		Substances insoluble in C ₂ H ₅ OH	max. 0,05 %
		Residue on roasting(as SO ₄)	max. 0,05 %
		Mg sensitivity	passes test
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,01 %

HYDROXYLAMINE HYDROCHLORIDE

Hydroksyloaminy chlorowodorek

HONH₃Cl

M = 69,49 g/mol

CAS: 5470-11-1

WE: 226-798-2



H: 290, 302, 315, 317, 319, 373, 400
P: 273, 280, 302+352, 305+351+338
RID/ADR: 8, II UN: 3259



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Density:	1,67 g/cm ³ (20°C)
Odor:	weak chlorine	Bulk density:	about 900 kg/m ³
pH:	about 3 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	157°C	in water:	830 g/l (20°C)
Boiling point:	>150°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Hydroxylamine hydrochloride pure

CHEM*424792203

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	pH (5%, 20°C)	2,5 - 3,5
750 g	1 kg		

Hydroxylamine hydrochloride pure p. a.

CHEM*114792204

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Insoluble substances in ethanol	passes test
500 g	750 g	pH (5%, 20°C)	2,5 - 3,5
1 kg		Free acids (as HCl)	max. 0,25 meq/g
		Residue on roasting (as SO ₄)	max. 0,05 %
		Sulphur compounds (SO ₄)	max. 0,002 %
		Ammonia salt (NH ₄)	max. 0,1 %
		Heavy metals(as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

HYDROXYLAMINE HYDROCHLORIDE SOLUTION $1\% \leq c < 10\%$

Hydroksyloaminy chlorowodorek roztwory

HONH₃Cl

M = 69,49 g/mol

CAS: 5470-11-1

WE: 226-798-2



H: 317

P: 280, 302+352

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	no data
Odor:	weak chlorine	Density:	no data
pH:	2,5 - 3,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

Hydroxylamine hydrochloride 1%

CHEM*524792204

250 ml

500 ml

Assay

1,0 % ± 0,1 %

1 l

Hydroxylamine hydrochloride 2%

CHEM*524792205

250 ml

500 ml

Assay

2,0 % ± 0,1 %

1 l

CORROSION INHIBITOR SOLUTION

Inhibitor korozji roztwór

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 318, 335
P: 280, 302+352, 305+351+338, 313, 321
RID/ADR: 3, III UN: 1105



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	green	Explosion limits:	no data
Odor:	no data	Vapour pressure:	not applicable
pH:	11-12	Density:	1,31 – 1,35 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 102°C	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	insoluble

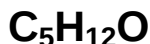
Corrosion inhibitor solution

CHEM*324466310

1 l	2.5 l	Na ₂ O + SiO ₂	min. 31,0 %
3 l	5 l	Molar module	2,5 ± 0,1
10 l	20 l	EDTA	min. 0,8 %
30 l		Density (20°C)	1,31 – 1,35 g/cm ³
20 l			

ISOAMYL ALCOHOL

Izoamylny alkohol



M = 88,15 g/mol

CAS: 123-51-3

WE: 204-633-5



H: 226, 332, 335, EUH066

P: 210, 304+340

RID/ADR: 3, III

UN: 1105



Physical and chemical properties:

Character:	liquid	bottom:	1,2 % v/v
Colour:	colourless	top:	8 % v/v
Odor:	characteristic	Vapour pressure:	3 hPa (20°C)
pH:	approx 7 (25 g/l H ₂ O, 20°C)	Density:	0,81-0,815 g/cm ³ (20°C)
Melting point:	-117°C	Solubility:	
Boiling point:	131-132°C	in water:	25 g/l (20°C)
Auto-ignition temperature:	340°C	in organic solvents:	methanol, diethyl ether
Ignition temperature:	43°C		
Explosion limits:		log P _{OW} :	1,28

Isoamyl alcohol pure

CHEM*424855608

100 ml	250 ml	Assay	min. 99,0 %
500 ml	1 l	Density (20°C)	0,810 - 0,815 g/cm ³
2.5 l	3 l	Water (KF)	max. 0,3 %
5 l	10 l	Free acids (as CH ₃ COOH)	max. 0,01 %
20 l	30 l	Furfural	max. 0,003 %
60 l	200 l	Residue on evaporation	max. 0,005 %
		H ₂ SO ₄ Test	passes test

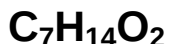
Isoamyl alcohol pure p. a.

CHEM*114855609

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Density (20°C)	0,810 - 0,815 g/cm ³
1 l	2.5 l	Water (KF)	max. 0,2 %
3 l	5 l	Free acids (as CH ₃ COOH)	max. 0,01 %
10 l	20 l	Furfural	max. 0,0001 %
60 l	200 l	Residue on evaporation	max. 0,003 %
		H ₂ SO ₄ test	passes test

ISOAMYL ACETATE

Izoamylu octan



M = 130,19 g/mol

CAS: 123-92-2

WE: 204-662-3



H: 226, EUH066
P: 210
RID/ADR: 3, III

UN: 3272



Physical and chemical properties:

Character:	liquid	Viscosity w temp. 20°C:	0,80 mPa·s
Colour:	colourless	Vapour pressure:	5 hPa (20°C)
Odor:	banana - pear	Density:	0,87 g/cm ³ (20°C)
Melting point:	-78,5°C	Solubility:	
Boiling point:	138-142°C	in water:	2,12 g/l H ₂ O (20°C)
Auto-ignition temperature:	380°C	in organic solvents:	ethyl ether, ethanol benzene, chloroform, glacial acetic acid
Ignition temperature:	25°C		
Explosion limits:			
bottom:	1% v/v		
top:	10% v/v		

Isoamyl acetate pure

CHEM*424858509

250 ml	500 ml	Assay (GC)	min. 98,0 %
1 l	2,5 l	Density (20°C)	0,870 - 0,874 g/cm ³
3 l	5 l	Free acids (as CH ₃ COOH)	max. 0,02 %
10 l	20 l	Non-volatile matter	max. 0,005 %
		Water (KF)	max. 0,5 %

Isoamyl acetate pure p. a.

CHEM*114858509

50 ml	100 ml	Assay (GC)	min. 99,0 %
250 ml	500 ml	Density (20°C)	0,870 - 0,874 g/cm ³
1 l	2,5 l	Free acids (as CH ₃ COOH)	max. 0,01 %
3 l	5 l	Non-volatile matter	max. 0,003 %
10 l		Water (KF)	max. 0,5 %

ISOBUTYL ALCOHOL

Izobutylowy alkohol



M = 74,12 g/mol

CAS: 78-83-1

WE: 201-148-0



H: 226, 315, 318, 335, 336
P: 210, 302+352, 304+340, 305+351+338
RID/ADR: 3, III UN: 1212



Physical and chemical properties:

Character:	liquid	top:	10,9% v/v
Colour:	colourless	viscosity w temp. 20°C:	4,0 mPa·s
Odor:	characteristic	Vapour pressure:	12 hPa (20°C)
Melting point:	-108°C	Density:	0,802 g/cm ³ (20°C)
Boiling point:	108°C	Solubility:	
Auto-ignition temperature:	430°C	in water:	85 g/l (20°C)
Ignition temperature:	28°C	in other solvents:	soluble
Explosion limits:		log P(w/o):	0,65/0,83
bottom:	1,7% v/v		

Isobutyl alcohol pure

CHEM*424861001

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay (GC)	min. 98,5 %
3 l	5 l	Density (20°C)	0,801 - 0,805 g/cm ³
10 l	20 l	Water	max. 0,2 %
30 l	60 l	Residue on evaporation	max. 0,001 %
200 l			

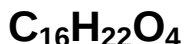
Isobutyl alcohol pure p. a.

CHEM*114861002

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (GC)	min. 99,0 %
2.5 l	3 l	Density (20°C)	0,801 - 0,802 g/cm ³
5 l	10 l	Water	max. 0,1 %
20 l	30 l	Residue on evaporation	max. 0,0005 %
60 l	200 l		

DIISOBUTYL PHTHALATE

Di-izobutylyl ftalan



M = 278,35 g/mol

CAS: 84-69-5

WE: 201-553-2



H: 360FD, 410
P: 201, 273, 308+313
RID/ADR: 9, III

UN: 3082



Physical and chemical properties:

Character:	oleista liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	>0,01 hPa (20°C)
Odor:	no data	Density:	1,037-1,041 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	- 50°C	in water:	0,4 g/l
Boiling point:	327°C	in organic solvents:	ethyl ether, ethanol acetone, benzene
Auto-ignition temperature:	approx 400°C		
Ignition temperature:	170°C	log P _{OW} :	4,11 (20°C)

Diisobutyl phthalate pure

CHEM*423145001

500 ml	1 l	Water	approx 0,3 %
2,5 l	3 l	Colour (Hazen)	min. 60
5 l	10 l	Ignition temperature	max. 170°C
20 l	30 l	Esters (as diisobutyl phthalate)	min. 99,0 %
60 l		Density (20°C)	1,037-1,041 g/cm ³
		Free acids	max. 0,04 %
		Refractive index	1,488 - 1,492

Diisobutyl phthalate pure p. a.

CHEM*113145002

100 ml	250 ml	Water	approx 0,15 %
500 ml	1 l	Colour (Hazen)	min. 60
5 l	10 l	Ignition temperature	max. 170°C
20 l		Esters (as diisobutyl phthalate)	min. 99,5 %
		Density (20°C)	1,037-1,041 g/cm ³
		Free acids	max. 0,02 %
		Refractive index	1,488 - 1,492

ISOOCTANE

Izooktan



M = 114,26 g/mol

CAS: 540-84-1

WE: 208-759-1



H: 225, 304, 315, 336, 410
 P: 210, 240, 273, 301+310, 331, 403+235
 RID/ADR: 3, II UN: 1262



Physical and chemical properties:

Character:	liquid	top:	6% v/v
Colour:	colourless	viscosity w temp. 20°C:	0,50 mPa·s
Odor:	odorless	Vapour pressure:	54,12 hPa (21°C)
Melting point:	-107°C	Density:	0,69 g/cm ³ (20°C)
Boiling point:	99°C	Solubility:	
Auto-ignition temperature:	410°C	in water:	insoluble
Ignition temperature:	-12°C	in organic solvents:	benzene, ethyl ether, ethanol
Explosion limits:			
bottom:	1% v/v		

isooctane pure

CHEM*424872907

100 ml	250 ml	Assay	min. 97,0 %
500 ml	1 l	Water	max. 0,05 %
		Refractive index	1,390 - 1,392
2.5 l	3 l		
5 l	10 l		
20 l	30 l		
60 l			

isooctane pure p. a.

CHEM*114872906

50 ml	100 ml	Assay (GC)	min. 99,0 %
250 ml	500 ml	Residue on evaporation	max. 0,002 %
		Water	max. 0,05 %
1 l	2.5 l	Barium (Ba)	max. 0,0005 %
3 l	5 l	Boron (B)	max. 0,0005 %
10 l	20 l	Chromium (Cr)	max. 0,0005 %
30 l		Tin (Sn)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Aluminium (Al)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0003 %
		Cobalt (Co)	max. 0,000005 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %
		Copper (Cu)	max. 0,000005 %

Nickel (Ni)	max. 0,000005 %
Lead (Pb)	max. 0,000005 %
Calcium (Ca)	max. 0,0005 %
Iron (Fe)	max. 0,00005 %
Free acids(as CH ₃ COOH)	max. 0,001 %

isooctane HPLC	CHEM*614872907

1 l	2.5 l	Assay (GC)	min. 99,5 %
		Water (KF)	0,01 %
		Acidity	0,0005 meq/g
		Residue on evaporation	0,0005 %
		UV - transmission (1 cm, water):	
		220 nm	min. 80%
		230 nm	min. 95%
		240 nm	min. 98%
		250 nm	min. 99%

isooctane GC for pesticide analysis	CHEM*614872909

500 ml	1 l	Assay (GC)	min. 99,5 %
2.5 l		Water (KF)	0,02 %
		Acidity	0,0005 meq/g
		Residue on evaporation	0,0005 %

isooctane GC	CHEM*614872910

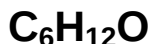
1 l	2.5 l	Assay	min. 99,9 %

isooctane GC standard	CHEM*614872908

25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

ISOPROPYLACETONE

Izopropyloaceton



M = 100,16 g/mol

CAS: 108-10-1

WE: 203-550-1



H: 225, 319, 332, 335, EUH066
P: 210, 304+340, 305+351+338
RID/ADR: 3, II UN: 1262



Physical and chemical properties:

Character:	liquid	bottom:	1,2 % v/v
Colour:	colourless	top:	8,0 % v/v
Odor:	sharp	Viscosity (25°C):	0,542 mPa·s
Melting point:	-84,7°C	Vapour pressure:	21,33 hPa (20°C)
Boiling point:	116°C	Density:	0,80 g/cm ³ (20°C)
Auto-ignition temperature:	475°C	Solubility:	
Ignition temperature:	14°C	in water:	17 g/l (20°C)
Explosion limits:		in organic solvents:	soluble

isopropylacetone pure

CHEM*424879506

250 ml	500 ml	Assay (GC)	min. 99,0 %
1 l	2.5 l	Residue on evaporation	max. 0,005 %
		Water	max. 0,2 %
3 l	5 l	Colour	max. 15 as Hz
10 l	20 l	Density (20°C)	0,8 - 0,803 g/cm ³
		Free acids(as CH ₃ COOH)	max. 0,02 %

isopropylacetone pure p. a.

CHEM*114879507

50 ml	100 ml	Assay (GC)	min. 99,0 %
250 ml	500 ml	Residue on evaporation	max. 0,005 %
		Water	max. 0,1 %
1 l	2.5 l	Colour	max. 15 as Hz
3 l	5 l	Density (20°C)	0,798 - 0,802 g/cm ³
10 l	20 l	Barium (Ba)	max. 0,00001 %
		Chromium (Cr)	max. 0,000002 %
		Zinc (Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Nickel (Ni)	max. 0,000002 %
		Lead (Pb)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

Acidity

max. 0,0004 meq/g

isopropylacetone sp.pure**CHEM*114879509**

1 l

Assay (GC)

min. 99,8 %

Residue on evaporation

max. 0,001 %

Water

max. 0,04 %

Colour

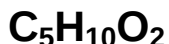
max. 15 as Hz

Free acids (as CH₃COOH)

max. 0,008 %

ISOPROPYL ACETATE

Izopropylu octan



M = 102,13 g/mol

CAS: 108-21-4

WE: 203-561-1



H: 225, 319, 336, EUH066
P: 210, 233, 305+351+338
RID/ADR: 3, II

UN: 1220



Physical and chemical properties:

Character:	liquid	bottom:	1,8% v/v
Colour:	colourless	top:	8% v/v
Odor:	sharp	Vscosity:	0,525 mPa*s (20°C)
Melting point:	-73°C	Vapour pressure:	61 hPa (20°C)
Boiling point:	88 - 90°C	Density:	0,87 g/cm ³ (20°C)
Auto-ignition temperature:	460°C	Solubility:	
Ignition temperature:	4°C	in water:	31 g/l H ₂ O
Explosion limits:		in organic solvents:	soluble

Isopropyl acetate pure

CHEM*414893705

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Density (25°C)	0,871-0,873 g/cm ³
1 l	2.5 l	Water	max. 0,1 %
3 l	5 l	Free acids(as CH ₃ COOH)	max. 0,01 %
		Non-volatile residue	max. 0,004 %

Isopropyl acetate pure p. a.

CHEM*114893705

50 ml	100 ml	Assay	min. 99,5 %
250 ml	500 ml	Density (25°C)	0,871-0,873 g/cm ³
1 l	2.5 l	Water	max. 0,05 %
3 l	5 l	Free acids(as CH ₃ COOH)	max. 0,005 %
		Non-volatile residue	max. 0,002 %
		Barium (Ba)	max. 0,00001 %
		Bismuth (Bi)	max. 0,00001 %
		Chromium (Cr)	max. 0,000002 %
		Zinc (Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Lithium (Li)	max. 0,00001 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Molybdenum (Mo)	max. 0,00001 %

Nickel (Ni)	max. 0,000002 %
Lead (Pb)	max. 0,00001 %
Potassium (K)	max. 0,00005 %
Sodium (Na)	max. 0,00005 %
Strontium (Sr)	max. 0,00001 %
Calcium (Ca)	max. 0,00005 %
Iron (Fe)	max. 0,00001 %

CRYSTALLINE IODINE

Jod krystaliczny

I₂

M = 253,81 g/mol

CAS: 7553-56-2

WE: 231-442-4



H: 312, 332, 400

P: 273, 302+352

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	purple	Vapour pressure:	0,29 hPa (20°C)
Odor:	sharp	Density:	4,93 g/cm ³ (20°C)
Melting point:	113,5°C	Bulk density:	about 2100 kg/m ³
Boiling point:	184°C	Solubility:	
Auto-ignition temperature:	not applicable	in water:	0,3 g/l (20°C)
Ignition temperature:	not applicable	in other solvents:	soluble

crystalline iodine sublimate pure

CHEM*424912406

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Non-volatile matter	max. 0,02 %
500 g	750 g	Chlorine and bromine (as Cl)	max. 0,01 %
1 kg	5 kg		
10 kg	20 kg		

crystalline iodine sublimate pure p. a.

CHEM*114912407

10 g	25 g	Assay	min. 99,8 %
50 g	100 g	Non-volatile matter	max. 0,01 %
250 g	500 g	Chlorine and bromine (as Cl)	max. 0,005 %
750 g	1 kg		
5 kg	10 kg		
25 kg			

IODINE (POTASSIUM IODIDE IODATE) ANALYTICAL WEIGHED AMOUNT

Potasu jodek - jodan, odważka analityczna

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid/liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Iodine 0,05 mol/l (potassium iodide iodate) analytical weighed amount CHEM*164912608

1 szt.

10 szt.

Concentration after dilution to 1000 ml in 20°C

0,05 mol/l ± 0,2 %

Iodine 0,1 mol/l (potassium iodide iodate) analytical weighed amount CHEM* 167431003

1 szt.

10 szt.

Concentration after dilution to 1000 ml in 20°C

0,1 mol/l ± 0,2 %

IODINE

STANDARD SOLUTION (C < 1 MOL/L)

Jod roztwory mianowane

I₂

M = 253,81 g/mol

CAS: 7553-56-2

WE: 231-442-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	red - brown	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data

iodine standard solution 0,001 mol/l CHEM*804912414

500 ml	1 l	Titer	0,000996 - 0,001006 mol/l

iodine standard solution 0,005 mol/l CHEM*804912412

500 ml	1 l	Titer	0,00498 - 0,00502 mol/l

iodine standard solution 0,01 mol/l CHEM*804912406

500 ml	1 l	Titer	0,00996 - 0,01006 mol/l

iodine standard solution 0,0125 mol/l CHEM*804912413

500 ml	1 l	Titer	0,01245 - 0,01255 mol/l

iodine standard solution 0,02 mol/l CHEM*804912411

500 ml	1 l	Titer	0,01992 - 0,02008 mol/l

iodine standard solution 0,025 mol/l CHEM*804912409

500 ml	1 l	Titer	0,0249 - 0,0251 mol/l

iodine standard solution 0,05 mol/l CHEM*804912405

500 ml	1 l	Titer	0,0498 - 0,0502 mol/l

iodine standard solution 0,1 mol/l CHEM*804912407

500 ml	1 l	Titer	0,0996 - 0,1006 mol/l

iodine standard solution 0,5 mol/l**CHEM*804912410**

100 ml

250 ml

Titer

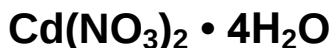
0,498 - 0,502 mol/l

500 ml

1 l

CADMIUM NITRATE TETRAHYDRATE

Kadmu azotan 4 hydrat



M = 308,47 g/mol

CAS: 10022-68-1

WE: 233-710-6



H: 302, 312, 332, 410
P: 273, 302+352
RID/ADR: 5.1, II UN: 3087



Physical and chemical properties:

Character:	solid	Density:	2,46 g/cm ³ (20°C)
Colour:	colourless - white	Bulk density:	1100 kg/m ³
Odor:	weak	Solubility:	
pH:	approx 3,9 (50 g/l H ₂ O, 20°C)	in water:	3260 g/l (60°C)
Melting point:	59°C	in organic solvents:	no data
Boiling point:	350°C		
Vapour pressure:	no data		

Cadmium nitrate tetrahydrate pure

CHEM*424967503

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Ammonia salt (NH ₄)	max. 0,02 %
		Zinc (Zn)	max. 0,02 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,01 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,1 %
		Iron (Fe)	max. 0,001 %

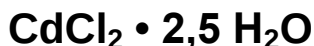
Cadmium nitrate tetrahydrate pure p. a.

CHEM*114967504

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Ammonia salt (NH ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,005 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,005 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
		Iron (Fe)	max. 0,0001 %

CADMIUM CHLORIDE HEMI(PENTAHYDRATE)

Kadmu chlorek 2,5 hydrat



M = 228,34 g/mol

CAS: 7790-78-5

WE: 233-296-7



H: 301, 330, 340, 350, 360FD, 372, 410
P: 201, 273, 304+340, 309, 310
RID/ADR: 6.1, III UN: 2570



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	3,32 g/cm ³ (25°C)
pH:	3,5 - 6	Bulk density:	no data
Melting point:	34°C	Solubility:	
Boiling point:	no data	in water:	1680 g/l (20°C); 1800 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	acetone
Ignition temperature:	not applicable		

Cadmium chloride hemi(pentahydrate) pure

CHEM*424968708

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
		Total nitrogen (N)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,01 %
		Copper(Cu)	max. 0,001 %
		Lead (Pb)	max. 0,02 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
		Iron (Fe)	max. 0,002 %

Cadmium chloride hemi(pentahydrate) pure p. a.

CHEM*114968709

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		pH (5%, 20°C)	3,5 - 6
		Total nitrogen (N)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,005 %
		Copper(Cu)	max. 0,001 %
		Lead (Pb)	max. 0,005 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,025 %
		Iron (Fe)	max. 0,0005 %

CADMIUM ACETATE DIHYDRATE

Kadmu octan 2 hydrat



M = 266,52 g/mol

CAS: 5743-04-4

WE: 208-853-2



H: 302, 312, 332, 410

P: 273, 302+352

RID/ADR: 6.1, III

UN: 2570



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	acetic acid	Density:	2,01 g/cm ³ (25°C)
pH:	approx 7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1200 kg/m ³
Melting point:	256°C	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Cadmium acetate dihydrate pure

CHEM*427974203

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	Total nitrogen (N)	max. 0,006 %
15 kg		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,02 %
		Copper(Cu)	max. 0,005 %
		Lead(Pb)	max. 0,02 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,15 %
		Iron (Fe)	max. 0,002 %

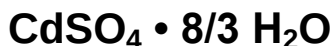
Cadmium acetate dihydrate pure p. a.

CHEM*114974204

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		pH (5%, 20°C)	6,7 – 7,3
		Total nitrogen (N)	max. 0,004 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Copper(Cu)	max. 0,001 %
		Lead(Pb)	max. 0,005 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,1 %
		Iron (Fe)	max. 0,0005 %

CADMIUM SULFATE 8/3-HYDRATE

Kadmu siarczan hydrat



M = 228,34 g/mol

CAS: 7790-84-3

WE: 233-331-6



H: 301, 330, 340, 350, 360FD, 372, 410
 P: 201, 273, 304+340, 309, 310
 RID/ADR: 6.1, III UN: 2570



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless - white	Density:	3,10 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	no data
pH:	3,0 - 6,0 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	41°C	in water:	1130 g/l (20°C)
Boiling point:	-	in organic solvents:	weak in methanol and ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Cadmium sulfate 8/3-hydrate pure

CHEM*424976704

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg		Total nitrogen (N)	max. 0,006 %
		Chlorides (Cl)	max. 0,005 %
		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,02 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,02 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,15 %
		Iron (Fe)	max. 0,002 %

Cadmium sulfate 8/3-hydrate pure p. a.

CHEM*114976705

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	pH (5%, 20°C)	4,5 – 6,0
1 kg		Substances insoluble in water	max. 0,005 %
		Total nitrogen (N)	max. 0,004 %
		Chlorides (Cl)	max. 0,0001 %
		Arsenic (As)	max. 0,00005 %
		Zinc (Zn)	max. 0,005 %
		Copper(Cu)	max. 0,001 %
		Lead(Pb)	max. 0,01 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
		Iron (Fe)	max. 0,0005 %

CADMIUM OXALATE HYDRATE

Kadmu szczawian hydrat



M = 218,44 g/mol

CAS: 814-88-0

WE: 212-408-8



H: 302, 312, 332
P: 273, 280, 302+352
RID/ADR: 6.1(b)/III

UN: 2570



Physical and chemical properties:

Character:	solid	Bottom:	no data
Colour:	white	Viscosity (20°C):	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	no data
Boiling point:	no data	Solubility:	
Auto-ignition temperature:	no data	in water:	insoluble
Ignition temperature:	no data	in organic solvents:	no data
Explosion limits:			
Top:	no data		

Cadmium oxalate hydrate pure p. a.

CHEM*114976706

5 g	10 g	Assay	min. 99%
25 g	50 g	Chlorides (Cl)	max. 0,001%
100 g	250 g	Sulphates (SO ₄)	max. 0,005%
		Nitrates (NO ₃)	max. 0,01%
		Potassium (K)	max. 0,02%
		Zinc (Zn)	max. 0,005%
		Copper (Cu)	max. 0,002%
		Lead (Pb)	max. 0,005%
		Iron (Fe)	max. 0,0001%
		Appearance	white powder or crystals

CADMIUM OXIDE

Kadmu tlenek brązowy

CdO

M = 128,4 g/mol

CAS: 1306-19-0

WE: 215-146-2



H: 330, 341, 350, 361FD, 372
 P: 201, 273, 304+340, 309, 310
 RID/ADR: 6.1, III UN: 2570



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red-brown	Vapour pressure:	1,3 hPa (1000°C)
Odor:	odorless	Density:	6,95 g/cm ³ (w 20°C)
pH:	not applicable	Bulk density:	approx 400 kg/m ³
Melting point:	950°C	Solubility:	
Boiling point:	1559°C	in water:	insoluble
Auto-ignition temperature:	not applicable	in other solvents:	soluble
Ignition temperature:	not applicable		

Cadmium oxide pure

CHEM*424980004

25 g	50 g	Appearance	brown powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in H ₂ SO ₄	max. 0,1 %
1 kg		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,02 %
		Copper (Cu)	max. 0,01 %
		Lead (Pb)	max. 0,03 %
		Sodium, potassium, calcium (Na + K + Ca)	max. 0,1 %
		Iron (Fe)	max. 0,01 %

CADMIUM CARBONATE

Kadmu węglan



M = 172,41 g/mol

CAS: 513-78-0

WE: 208-168-9



H: 302, 312, 332, 410

P: 273, 302+352

RID/ADR: 6.1, III

UN: 2570



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	odorless	Density:	4,26 g/cm ³ (w 20°C)
pH:	not applicable	Bulk density:	approx 600 kg/m ³
Melting point:	357°C (decomposition)	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

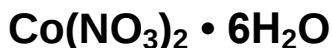
Cadmium carbonate pure

CHEM*424980809

25 g	50 g	Assay	min. 97,0 %
100 g	250 g	Substances insoluble w HCl	max. 0,02 %
500 g	750 g	Chlorides (Cl)	max. 0,03 %
		Sulphates (SO ₄)	max. 0,02 %
		Iron (Fe)	max. 0,01 %
1 kg		Lead (Pb)	max. 0,05 %
		Zinc (Zn)	max. 0,01 %
		Residue on roasting	25,5 – 27,5 %

COBALT (II) NITRATE HEXAHYDRATE

Kobaltu azotan 6 hydrat



M = 291,04 g/mol

CAS: 10026-22-9

WE: 233-402-1



H: 317, 334, 341, 350, 360FD, 410
P: 201, 273, 280, 302+352, 304+341, 308+313
RID/ADR: 5.1, II UN: 1477



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red-brown	Vapour pressure:	not applicable
Odor:	weak	Density:	1,88 g/cm ³ (20°C)
pH:	approx 4,0 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 800 kg/m ³
Melting point:	55°C	Solubility:	
Boiling point:	>74°C	in water:	1330 g/l (0°C), 2170 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Cobalt (II) nitrate hexahydrate pure

CHEM*425121401

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Substances insoluble in water	max. 0,01%
500 g	750 g	Chlorides (Cl)	max. 0,01%
1 kg		Sulphates (SO ₄)	max. 0,01%
		Iron (Fe)	max. 0,002%
		Appearance	red crystals

Cobalt (II) nitrate hexahydrate pure p. a.

CHEM*115121402

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005%
500 g	750 g	Chlorides (Cl)	max. 0,005%
1 kg		Sulphates (SO ₄)	max. 0,005%
		Zinc (Zn)	max. 0,005%
		Magnesium (Mg)	max. 0,005%
		Copper (Cu)	max. 0,001%
		Nickel (Ni)	max. 0,05%
		Lead (Pb)	max. 0,001%
		Potassium (K)	max. 0,01%
		Sodium (Na)	max. 0,05%
		Calcium (Ca)	max. 0,005%
		Iron (Fe)	max. 0,001%
		Appearance	red-brown crystals

COBALT (II) CHLORIDE

Kobaltu (II) chlorek



M = 129,84 g/mol

CAS: 7646-79-9

WE: 231-589-4



H: 302, 317, 334, 350I, 360F, 410
P: 201, 273, 281, 304+341, 308+313
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	blue	Density:	3,37 g/cm ³
Odor:	odorless	Bulk density:	approx 1250 kg/m ³
pH:	no data	Solubility:	
Melting point:	724°C	in water:	no data
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	0,85
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

cobalt chloride pure

CHEM*425123406

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Water (KF)	max. 2,0 %
500 g	750 g	Appearance	blue powder
1 kg			

cobalt chloride pure p. a.

CHEM*115123407

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Water (KF)	max. 1,0 %
500 g	750 g	Appearance	blue powder
1 kg			

COBALT (II) CHLORIDE HEXAHYDRATE

Kobaltu (II) chlorek 6 hydrat



M = 237,93 g/mol

CAS: 7791-13-1

WE: 231-589-4



H: 302, 317, 334, 350I, 360F, 410
P: 201, 273, 281, 304+341, 308+313
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	purple	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,92 g/cm ³ (25°C)
pH:	approx 4,9 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 1250 kg/m ³
Melting point:	56°C	Solubility:	
Boiling point:	no data	in water:	76 g/l (0°C), 191 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

cobalt (II) chloride hexahydrate pure

CHEM*425123403

25 g	50 g	Assay	98,0 – 102,0 %
100 g	250 g	Substances insoluble in water	max. 0,01%
500 g	750 g	Sulphates (SO ₄)	max. 0,01%
1 kg		Alkali metals and alkaline earth metals (as SO ₄)	max. 0,2%
		Heavy metals (as Cu)	max. 0,01%
		Zinc (Zn)	max. 0,01%
		Nickel (Ni)	max. 0,25%
		Iron (Fe)	max. 0,005%
		Appearance	purple crystals

cobalt (II) chloride hexahydrate pure p. a.

CHEM*115123404

25 g	50 g	Assay	99,0 – 101,0 %
100 g	250 g	Substances insoluble in water	max. 0,005%
500 g	750 g	Total nitrogen (N)	max. 0,005%
1 kg		Sulphates (SO ₄)	max. 0,005%
		Alkali metals and alkaline earth metals (as SO ₄)	max. 0,1%
		Heavy metals (as Cu)	max. 0,005%
		Zinc (Zn)	max. 0,005%
		Nickel (Ni)	max. 0,15%
		Iron (Fe)	max. 0,002%
		Appearance	purple crystals

COBALT (II) SULFATE HEPTAHYDRATE

Kobaltu (II) siarczan hydrat



M = 281,10 g/mol

CAS: 10026-24-1

WE: 233-334-2



H: 302, 317, 334, 341, 350I, 360F, 410
P: 201, 281, 302+352, 304+340, 308+313
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red-brown	Vapour pressure:	no data
Odor:	odorless	Density:	1,95 g/cm ³ (25°C)
pH:	approx 4,0 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 900 kg/m ³
Melting point:	98°C	Solubility:	
Boiling point:	no data	in water:	260 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble
Ignition temperature:	not applicable		

Cobalt (II) sulfate heptahydrate pure

CHEM*425129409

50 g	100 g	Assay	98,5 – 102,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Chlorides (as Cl)	max. 0,01 %
2 kg	5 kg	Zinc (Zn)	max. 0,01 %
10 kg		Nickel (Ni)	max. 0,1 %
		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

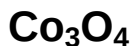
Cobalt (II) sulfate heptahydrate pure p. a.

CHEM*115129400

25 g	50 g	Assay	99,5 – 102,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Chlorides (as Cl)	max. 0,002 %
1 kg		Nitrogen (N)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Potassium (K)	max. 0,005 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,03 %
		Lead (Pb)	max. 0,001 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

COBALT (II,III) OXIDE

Kobaltu (II,III) tlenek czarny



M = 240,8 g/mol

CAS: 1308-06-1

WE: 215-157-2



H: 315, 317, 319, 335, 351

P: 201, 281, 304+340, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	black	Vapour pressure:	not applicable
Odor:	odorless	Density:	6,11 g/cm ³ (20°C)
pH:	no data	Bulk density:	780 kg/m ³
Melting point:	approx 895°C	Solubility:	
Boiling point:	> 900°C	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

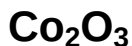
Cobalt (II,III) oxide pure

CHEM*425136801

25 g	50 g	Assay Co	min. 70,5 %
100 g	250 g	Nickel (Ni)	max. 0,3 %
500 g	750 g	Iron (Fe)	max. 0,05 %
1 kg		Copper(Cu)	max. 0,02 %
		Manganese (Mn)	max. 0,01 %
		Lead(Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,3 %
		Zinc (Zn)	max. 0,01 %
		Sieve residue 0,045 mm	max. 0,5 %
		Volatile substances at 105°C	max. 0,5 %
		Substances soluble in water	max. 0,3 %

COBALT (III) OXIDE

Kobaltu (III) tlenek



M = 165,86 g/mol

CAS: 1308-04-9

WE: 215-156-7



H: 302, 317, 351

P: 201, 281, 302+352, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	not applicable
Odor:	odorless	Density:	5,7-6,7 g/cm ³ (20°C)
pH:	no data	Bulk density:	500 kg/m ³
Melting point:	1900°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Cobalt (III) oxide pure

CHEM*425130806

25 g	50 g	Assay Co	min. 70 %
100 g	250 g	Nickel (Ni)	max. 0,03 %
500 g	750 g	Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,01 %
1 kg			

COBALT (II) HYDROXIDE

Kobaltu (II) wodorotlenek



M = 92,95 g/mol

CAS: 21041-93-0

WE: 244-166-4



H: 302, 312, 315, 319, 332, 335
P: 280, 302+352, 305+351+338
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red or blue	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,597 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	insoluble
Boiling point:	no data	in other solvents:	soluble
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Cobalt (II) hydroxide pure

CHEM*425132207

25 g	50 g	Assay Co	min. 50,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,1 %
500 g	750 g	Total nitrogen (N)	max. 0,02 %
1 kg		Chlorides (Cl)	max. 0,01 %
		Zinc (Zn)	max. 0,05 %
		Heavy metals (as Cu)	max. 0,01 %
		Nickel (Ni)	max. 0,5 %
		Sulphates (SO ₄)	max. 0,01 %
		Iron (Fe)	max. 0,01 %
		Alkali metals and alkaline earth metals (sulphates)	max. 0,25 %

Xylene

Ksylen (mieszanina izomerów)

C₈H₁₀

M = 106,17 g/mol

CAS: 1330-20-7

WE: 215-535-7



H: 226, 312, 315, 332

P: 302+352

RID/ADR: 3, III

UN: 1307



Physical and chemical properties:

Character:	liquid	top:	8,0 % v/v
Colour:	colourless	Vapour pressure:	8,7 mbar (20°C)
Odor:	characteristic	Density:	0,86 g/cm ³ (20°C)
Melting point:	-25°C	Solubility:	
Boiling point:	137-142°C	in water:	weak
Auto-ignition temperature:	465°C	in other solvents:	ethanol, ethyl ether, CS ₂
Ignition temperature:	24°C	log P _{OW} :	3,12 - 3,2
Explosion limits:			
bottom:	1,1 % v/v		

xylene purified

CHEM*325208607

2.5 l	3 l	Appearance	colourless liquid
5 l	10 l	Water	max. 0,05 %
20 l	30 l	pH of water extract	neutral
60 l	200 l	Total sulphur	max. 0,0005 %
		Thioxene	passes test
		Residue on evaporation	max. 0,003 %
		Colouration with H ₂ SO ₄	passes test

xylene pure

CHEM*425208607

100 ml	250 ml	Appearance	colourless liquid
500 ml	1 l	Hydrocarbons C ₈	min. 98,0%
2.5 l	3 l	Density (20°C)	0,855 - 0,87 g/cm ³
5 l	10 l	Boiling point	137 - 141 °C
20 l	30 l	Water	max. 0,02 %
60 l	200 l	pH of water extract	neutral
		Total sulphur	max. 0,0005 %
		Thioxene	passes test
		Residue on evaporation	max. 0,0025 %

ylene pure p. a.**CHEM*115208603**

50 ml	100 ml	Appearance	colourless liquid
250 ml	500 ml	Hydrocarbons C ₈	min. 98,5 %
1 l	2.5 l	Colour	max. 10 Hazen
3 l	5 l	Density (20°C)	0,86 - 0,866 g/cm ³
10 l	20 l	Boiling point	137 - 140 °C
30 l	60 l	Water	max. 0,02 %
200 l		Benzene	max. 0,01%
		Ethylbenzene	max. 25,0%
		Toluene	max. 0,1%
		pH of water extract	neutral
		Total sulphur	max. 0,0005 %

SULFAMIC ACID

Kwas amidosulfonowy



M = 97,09 g/mol

CAS: 5329-14-6

WE: 226-218-8



H: 315, 319, 412
P: 273, 305+351+338, 302+352
RID/ADR: 8, III UN: 2967



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	0,0078 hPa (20°C)
Odor:	odorless	Density:	2,13 g/cm ³ (25°C)
pH:	approx 1,18 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 600 kg/m ³
Melting point:	205°C	Solubility:	
Boiling point:	no data	in water:	213 g/l (20°C), 470 g/l (80°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sulfamic acid pure

CHEM*425255203

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
500 g	1 kg	Sulphates (SO ₄)	max. 0,1%
2 kg	5 kg	Iron (Fe)	max. 0,01 %

Sulfamic acid pure p. a.

CHEM*115255203

25 g	50 g	Assay	99,3 - 100,3 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	1 kg	Residue on roasting	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,001 %
		Copper(Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

GLYCINE

Kwas aminooctowy (glicyna)



M = 75,07 g/mol

CAS: 56-40-6

WE: 200-272-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white - colourless	Vapour pressure:	not applicable
Odor:	weak	Density:	1,607 g/cm ³ (20°C)
pH:	5,9 - 6,4 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	240°C, >250°C	Solubility:	
Boiling point:	not applicable	in water:	approx 225 g/l (20°C)
Auto-ignition temperature:	no data	in other solvents:	HCl
Ignition temperature:	no data		

Glycine pure p. a.

CHEM*115275608

25 g	50 g	Appearance	white crystalline powder
100 g	250 g	Assay	98,5 - 101,0 %
500 g	750 g	Appearance of 10% solution	passes test
1 kg		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %

L-ASCORBIC ACID

Kwas L(+) askorbinowy



M = 176,13 g/mol

CAS: 50-81-7

WE: 200-066-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	1,65 g/cm ³
Odor:	odorless	Bulk density:	approx 600 - 900 kg/m ³
pH:	2,2 - 2,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	192°C	in water:	330 g/l (24°C)
Boiling point:	192°C	in organic solvents:	ethanol – 20g/l (20°C)
Auto-ignition temperature:	no data	log P _{OW} :	-2,15
Ignition temperature:	380°C		
Explosion limits:	no data		

L-Ascorbic acid pure

CHEM*425291508

25 g	50 g	Appearance	white crystals or crystalline powder
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Specific rotation	(25°C, 10%, H ₂ O) +20,5 ÷ +21,5 °
1 kg		Residue on roasting (as SO ₄)	max. 0,2 %
		Oxalic acid (H ₂ C ₂ O ₄)	max. 0,3 %
		Heavy metals (as Pb)	max. 0,0005 %
		Copper(Cu)	max. 0,001 %
		Lead(Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

L-Ascorbic acid pure p. a.

CHEM*115291509

25 g	50 g	Appearance	white crystals or crystalline powder
100 g	250 g	Assay	min. 99,0 – 100,0 %
500 g	750 g	Identity	passes test
1 kg		Specific rotation	(25°C, 10%, H ₂ O) +20,0 ÷ +21,5 °
		Melting point	191 - 192 °C
		pH (20°C)	2,2 - 2,5
		Residue on roasting (as SO ₄)	max. 0,1 %
		Oxalic acid (H ₂ C ₂ O ₄)	max. 0,2 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0003 %
		Copper(Cu)	max. 0,0005 %
		Lead(Pb)	max. 0,0005 %
		Mercury (Hg)	max. 0,0001 %
		Iron (Fe)	max. 0,0002 %

NITRIC ACID ANALYTICAL WEIGHED AMOUNT

Kwas azotowy odważka analityczna

HNO₃

M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless - yellow	Density:	no data
Odor:	odorless	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	no data
Boiling point:	no data		
Auto-ignition temperature:	not applicable		

Nitric acid 0,1 mol/l analytical weighed amount

CHEM*165296834

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

NITRIC ACID 0,1%

Kwas azotowy roztwór 0,1%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Density:	approx 1,00 g/cm ³ (20°C)
Colour:	colourless - yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	no data		
Boiling point:	no data		

Nitric acid solution 0,1% pure p. a.

CHEM*115296044

500 ml	1 l	Assay	0,1 ± 0,01 %
		Density	approx 1,000 g/cm ³
		Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 1%

Kwas azotowy roztwór 1%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Density:	approx 1,0036 g/cm ³ (20°C)
Colour:	colourless - yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	no data		
Boiling point:	no data		

Nitric acid solution 1% pure

CHEM*425296042

1l	Assay	1,0 ± 0,1 %
	Density	approx 1,0036 g/cm ³
	Heavy metals (as Pb)	max. 0,0003 %
	Residue on roasting (as SO ₄)	max. 0,005 %
	Chlorides (Cl)	max. 0,0003 %
	Sulphates (SO ₄)	max. 0,001 %
	Arsenic (As)	max. 0,000003 %
	Iron (Fe)	max. 0,0005 %

Nitric acid solution 1% pure p. a.

CHEM*115296042

1l	Assay	1,0 ± 0,1 %
	Density	approx 1,0036 g/cm ³
	Heavy metals (as Pb)	max. 0,0001 %
	Residue on roasting (as SO ₄)	max. 0,002 %
	Chlorides (Cl)	max. 0,0001 %
	Sulphates (SO ₄)	max. 0,0002 %
	Arsenic (As)	max. 0,000002 %
	Iron (Fe)	max. 0,0001 %

NITRIC ACID 2%

Kwas azotowy roztwór 2%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Density:	1,0091 g/cm ³ (20°C)
Colour:	colourless or yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	no data		
Boiling point:	no data		

Nitric acid solution 2% pure

CHEM*425296034

1l	Assay	2,0 ± 0,1 %
	Density	approx 1,0091 g/cm ³
	Heavy metals (as Pb)	max. 0,0003 %
	Residue on roasting (as SO ₄)	max. 0,005 %
	Chlorides (Cl)	max. 0,0003 %
	Sulphates (SO ₄)	max. 0,001 %
	Arsenic (As)	max. 0,000003 %
	Iron (Fe)	max. 0,0005 %

Nitric acid solution 2% pure p. a.

CHEM*115296034

1l	Assay	2,0 ± 0,1 %
	Density	approx 1,0091 g/cm ³
	Heavy metals (as Pb)	max. 0,0001 %
	Residue on roasting (as SO ₄)	max. 0,002 %
	Chlorides (Cl)	max. 0,0001 %
	Sulphates (SO ₄)	max. 0,0002 %
	Arsenic (As)	max. 0,000002 %
	Iron (Fe)	max. 0,0001 %

NITRIC ACID 3%

Kwas azotowy roztwór 3%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Density:	1,0146 g/cm ³ (20°C)
Colour:	colourless or yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	no data		
Boiling point:	no data		

Nitric acid solution 3% tech.

CHEM*325296020

1l	Assay	3,0 ± 0,1 %
	Density	approx 1,0146 g/cm ³

Nitric acid solution 3% pure

CHEM*425296043

1l	Assay	3,0 ± 0,1 %
	Density	approx 1,0146 g/cm ³
	Heavy metals (as Pb)	max. 0,0003 %
	Residue on roasting (as SO ₄)	max. 0,005 %
	Chlorides (Cl)	max. 0,0003 %
	Sulphates (SO ₄)	max. 0,001 %
	Arsenic (As)	max. 0,000003 %
	Iron (Fe)	max. 0,0005 %

Nitric acid solution 3% pure p. a.

CHEM*115296051

1l	Assay	3,0 ± 0,1 %
	Density	approx 1,0146 g/cm ³
	Heavy metals (as Pb)	max. 0,0001 %
	Residue on roasting (as SO ₄)	max. 0,002 %
	Chlorides (Cl)	max. 0,0001 %
	Sulphates (SO ₄)	max. 0,0002 %
	Arsenic (As)	max. 0,000002 %
	Iron (Fe)	max. 0,0001 %

NITRIC ACID 5%

Kwas azotowy roztwór 5%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Density:	approx 1,0256 g/cm ³ (20°C)
Colour:	colourless or yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	approx -3°C		
Boiling point:	approx 101°C		

Nitric acid solution 5% pure

CHEM*425296038

1l	Assay	5,0 ± 0,1 %
	Density	approx 1,0256 g/cm ³
	Heavy metals (as Pb)	max. 0,0003 %
	Residue on roasting (as SO ₄)	max. 0,005 %
	Chlorides (Cl)	max. 0,0003 %
	Sulphates (SO ₄)	max. 0,001 %
	Arsenic (As)	max. 0,000003 %
	Iron (Fe)	max. 0,0005 %

Nitric acid solution 5% pure p. a.

CHEM*115296037

1l	Assay	5,0 ± 0,1 %
	Density	approx 1,0256 g/cm ³
	Heavy metals (as Pb)	max. 0,0001 %
	Residue on roasting (as SO ₄)	max. 0,002 %
	Chlorides (Cl)	max. 0,0001 %
	Sulphates (SO ₄)	max. 0,0002 %
	Arsenic (As)	max. 0,000002 %
	Iron (Fe)	max. 0,0001 %

NITRIC ACID 10%

Kwas azotowy roztwór 10%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Density:	approx 1,0543 g/cm ³ (20°C)
Colour:	colourless or yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	approx -3°C		
Boiling point:	approx 101°C		

Nitric acid solution 10% tech.

CHEM*325296025

5 l	10 l	Assay	10,0 ± 0,5 %
20 l		Density	approx 1,0543 g/cm ³

Nitric acid solution 10% pure

CHEM*425296035

1 l	5 l	Assay	10,0 ± 0,5 %
		Density	approx 1,0543 g/cm ³
		Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid 10% solution pure p. a.

CHEM*115296038

1 l	5 l	Assay	10,0 ± 0,5 %
		Density	approx 1,0543 g/cm ³
		Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 15%

Kwas azotowy roztwór 15%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Density:	approx 1,0842 g/cm ³ (20°C)
Colour:	colourless or yellow	Solubility:	
Odor:	odorless	in water:	soluble
pH:	<1 (20°C)	in organic solvents:	no data
Melting point:	approx -3°C		
Boiling point:	approx 101°C		

Nitric acid solution 15% tech.

CHEM*325296026

5 l	10 l	Assay	15,0 ± 0,5 %
20 l		Density	approx 1,0842 g/cm ³

Nitric acid solution 15% pure

CHEM*425296044

1 l	2.5 l	Assay	15,0 ± 0,5 %
5 l	10 l	Density	approx 1,0842 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid 15% solution pure p. a.

CHEM*115296047

1 l	5 l	Assay	15,0 ± 0,5 %
5 l	10 l	Density	approx 1,0842 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 20%

Kwas azotowy roztwór 20%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,115 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	approx -19°C	in organic solvents:	ethyl ether
Boiling point:	approx +116°C		

Nitric acid solution 20% tech.

CHEM*325296033

5 l	10 l	Assay	20,0 ± 0,5 %
20 l		Density	approx 1,115 g/cm ³

Nitric acid solution 20% pure

CHEM*425296048

1 l	2.5 l	Assay	20,0 ± 1,0 %
5 l	10 l	Density	approx 1,115 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid solution 20% pure p. a.

CHEM*115296048

1 l	2.5 l	Assay	20,0 ± 1,0 %
5 l	10 l	Density	approx 1,115 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 25%

Kwas azotowy roztwór 25%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,1469 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	approx -19°C	in organic solvents:	ethyl ether
Boiling point:	approx +116°C		

Nitric acid solution 25% pure

CHEM*425296037

1 l	2.5 l	Assay	25,0 ± 1,0 %
5 l	10 l	Density	approx 1,1469 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid solution 25% pure p. a.

CHEM*115296036

1 l	2.5 l	Assay	25,0 ± 1,0 %
5 l	10 l	Density	approx 1,1469 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 30%

Kwas azotowy roztwór 30%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,18 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	approx -19°C	in organic solvents:	ethyl ether
Boiling point:	approx +116°C		

Nitric acid solution 30% tech.

CHEM*325296032

5 l	10 l	Assay	30,0 ± 1,0 %
20 l		Density	approx 1,18 g/cm ³

Nitric acid solution 30% pure

CHEM*425296032

1 l	2.5 l	Assay	30,0 ± 1,0 %
5 l	10 l	Density	approx 1,18 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid solution 30% pure p. a.

CHEM*115296039

1 l	2.5 l	Assay	30,0 ± 1,0 %
5 l	10 l	Density	approx 1,18 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 40%

Kwas azotowy roztwór 40%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,2463 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	ethyl ether
Boiling point:	no data		

Nitric acid solution 40% tech.

CHEM*325296029

5 l	10 l	Assay	40,0 ± 1,0 %
20 l		Density	approx 1,2463 g/cm ³

Nitric acid solution 40% pure

CHEM*425296030

1 l	2.5 l	Assay	40,0 ± 1,0 %
5 l	10 l	Density	approx 1,2463 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0003 %
		Residue on roasting (as SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid solution 40% pure p. a.

CHEM*115296035

1 l	2.5 l	Assay	40,0 ± 1,0 %
5 l	10 l	Density	approx 1,2463 g/cm ³
20 l	30 l	Heavy metals (as Pb)	max. 0,0001 %
		Residue on roasting (as SO ₄)	max. 0,002 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID 50%

Kwas azotowy roztwór 50%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,31 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	ethyl ether
Boiling point:	no data		

Nitric acid solution 50% pure

CHEM*425296030

100 ml	250 ml	Assay	50,0 ± 1,0 %
500 ml	1 l	Density	approx 1,31 g/cm ³
2.5 l	5 l	Heavy metals (as Pb)	max. 0,0003 %
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,005 %
5 l	6 l	Chlorides (Cl)	max. 0,0003 %
10 l	20 l	Sulphates (SO ₄)	max. 0,001 %
30 l	60 l	Arsenic (As)	max. 0,000003 %
		Iron (Fe)	max. 0,0005 %

Nitric acid solution 50% pure p. a.

CHEM*115296035

100 ml	250 ml	Assay	50,0 ± 1,0 %
500 ml	1 l	Density	approx 1,31 g/cm ³
2.5 l	5 l	Heavy metals (as Pb)	max. 0,0001 %
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,002 %
5 l	6 l	Chlorides (Cl)	max. 0,0001 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0002 %
30 l	60 l	Arsenic (As)	max. 0,000002 %
		Iron (Fe)	max. 0,0001 %

NITRIC ACID APPROX 55%*Kwas azotowy roztwór 55%*

M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2031

**Physical and chemical properties:**

Character:	liquid	Vapour pressure:	no data
Colour:	colourless or yellow	Density:	1,3393 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	ethyl ether
Boiling point:	no data		

Nitric acid solution approx 55% tech.**CHEM*325296030**

5 l

20 l

Assay

55,0 ± 1,0 %

60 l

Density

approx 1,3393 g/cm³

NITRIC ACID 65%

Kwas azotowy roztwór 65%



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 272, 290, 314

P: 260, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 2031



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless or yellow	Vapour pressure:	approx 3,99 mbar (20°C)
Odor:	sharp	Density:	1,4 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -32°C	in water:	soluble
Boiling point:	121°C	in organic solvents:	ethyl ether
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

Nitric acid solution 63-65% tech.

CHEM*325296031

1 l	5 l	Assay	64,5 – 66,5 %
10 l	20 l	Density	approx 1,4 g/cm ³
30 l	60 l		

Nitric acid solution 65% pure

CHEM*425296031

100 ml	250 ml	Assay	min. 65%
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,005%
2.5 l	5 l	Sulphates (SO ₄)	max. 0,001%
1 l	2.5 l	Chlorides (Cl)	max. 0,0003%
5 l	6 l	Phosphates (PO ₄)	max. 0,001%
10 l	20 l	Iron (Fe)	max. 0,0005%
30 l	60 l	Heavy metals (as Pb)	max. 0,0003%
		Arsenic (As)	max. 0,000003%
		Chromium (Cr)	max. 0,0002%
		Zinc (Zn)	max. 0,00005%
		Magnesium (Mg)	max. 0,0001%
		Manganese (Mn)	max. 0,00005%
		Copper (Cu)	max. 0,00005%
		Nickel (Ni)	max. 0,0001%
		Lead (Pb)	max. 0,0001%

Nitric acid solution 65% pure p. a.**CHEM*115296032**

100 ml	250 ml	Assay	min. 65%
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,002%
2.5 l	5 l	Chlorides (Cl)	max. 0,0001%
1 l	2.5 l	Phosphates (PO ₄)	max. 0,00005%
5 l	6 l	Sulphates (SO ₄)	max. 0,0002%
10 l	20 l	Heavy metals (as Pb)	max. 0,0001%
30 l	60 l	Arsenic (As)	max. 0,000002%
		Chromium (Cr)	max. 0,00005%
		Zinc (Zn)	max. 0,00005%
		Aluminium (Al)	max. 0,0001%
		Magnesium (Mg)	max. 0,00005%
		Manganese (Mn)	max. 0,00005%
		Copper (Cu)	max. 0,00005%
		Nickel (Ni)	max. 0,00005%
		Lead (Pb)	max. 0,00005%
		Iron (Fe)	max. 0,0001%

NITRIC ACID STANDARD SOLUTION ($C \leq 0,5 \text{ MOL/L}$)

Kwas azotowy, roztwory mianowane

HNO_3

M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless or yellow	Density:	(20°C)
Odor:	odorless	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	no data
Boiling point:	no data		
Auto-ignition temperature:	not applicable		

Nitric acid standard solution 0,1 mol/l

CHEM*809683166

500 ml	1l	Titer	0,0996 – 0,1004 mol/l
2.5 l	3 l		

Nitric acid standard solution 0,2 mol/l

CHEM*809683162

500 ml	1l	Titer	0,1992 – 0,2008 mol/l
2.5 l	3 l		

Nitric acid standard solution 0,25 mol/l

CHEM*809683170

500 ml	1l	Titer	0,249 – 0,251 mol/l
2.5 l	3 l		

Nitric acid standard solution 0,5 mol/l

CHEM*809683163

500 ml	1l	Titer	0,498 – 0,502 mol/l
2.5 l	3 l		

NITRIC ACID

STANDARD SOLUTION ($0,5 < C \leq 2 \text{ MOL/L}$)

Kwas azotowy, roztwory mianowane



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
 P: 280, 305+351+338
 RID/ADR: 8, II UN: 2031



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless or yellow	Density:	not applicable
Odor:	odorless	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	no data
Boiling point:	no data		
Auto-ignition temperature:	not applicable		

Nitric acid standard solution 1 mol/l

CHEM*809683168

500 ml

1l

Titer

0,996 – 1,004 mol/l

2.5 l

3 l

Nitric acid standard solution 2 mol/l

CHEM*809683169

500 ml

1l

Titer

1,992 – 2,008 mol/l

2.5 l

3 l

NITRIC ACID STANDARD SOLUTION (C > 3,5 MOL/L)

Kwas azotowy, roztwory mianowane



M = 63,01 g/mol

CAS: 7697-37-2

WE: 231-714-2



H: 314
P: 280, 305+351+338
RID/ADR: 8, II UN: 2031



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless or yellow	Density:	
Odor:	odorless	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	no data	in organic solvents:	no data
Boiling point:	no data		
Auto-ignition temperature:	not applicable		

Nitric acid standard solution 4 mol/l

CHEM*809683165

500 ml

1l

Titer

3,984 – 4,016 mol/l

Nitric acid standard solution 5 mol/l

CHEM*809683171

500 ml

1l

Titer

4,98 – 5,02 mol/l

Nitric acid standard solution 6 mol/l

CHEM*809683167

500 ml

1l

Titer

5,976 – 6,024 mol/l

BENZOIC ACID

Kwas benzoowy



M = 122,12 g/mol

CAS: 65-85-0

WE: 200-618-2



H: 302, 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	1,3 hPa (20°C)
Colour:	white	Density:	1,32 g/cm ³ (20°C)
Odor:	characteristic	Bulk density:	approx 500 kg/m ³
pH:	2,5 - 3,5 (1,5 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	121 - 125°C	in water:	2,9 g/l (25°C)
Boiling point:	249°C (760 mmHg)	in organic solvents:	chloroform
Auto-ignition temperature:	572°C	log P _{OW} :	1,9
Ignition temperature:	121°C		
Explosion limits:	no data		

Benzoic Acid pure

CHEM*425302309

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Melting point	121 ÷ 123 °C
500 g	750 g	Solubility in ammonia solution	passes test
1 kg	5 kg	Residue on roasting (as SO ₄)	max. 0,03 %
15 kg		Substances darkening under the influence of H ₂ SO ₄	passes test
		Substances reducing KMnO ₄ (as O)	max. 0,016 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,0008 %
		Appearance	white crystals

Benzoic Acid pure p. a.

CHEM*115302300

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Melting point	121 ÷ 122 °C
500 g	750 g	Solubility in ammonia solution	passes test
1 kg	5 kg	Residue on roasting (as SO ₄)	max. 0,01 %
15 kg		Substances darkening under the influence of H ₂ SO ₄	passes test
		Substances reducing KMnO ₄ (as O)	max. 0,008 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0004 %
		Appearance	white crystals

BORIC ACID

Kwas borowy



M = 61,83 g/mol

CAS: 10043-35-3

WE: 233-139-2



H: 360FD

P: 201, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Bulk density:	approx 400 - 600 kg/m ³
Colour:	white	Solubility:	
Odor:	odorless	in water:	approx 50 g/l (21°C), approx 275 g/l (100°C)
pH:	approx 5,1 (1,8 g/l H ₂ O, 20°C)	in organic solvents:	alcohol, glycerol, acetone
Melting point:	171°C	log P _{OW} :	0,757
Boiling point:	no data		
Vapour pressure:	2,6 hPa (20°C)		
Density:	1,51 g/cm ³ (20°C)		

Boric acid pure

CHEM*425313603

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Substances insoluble in C ₂ H ₅ OH	passes test
5 kg	10 kg	Substances non-volatile with methanol	max. 0,2 %
15 kg	20 kg	Chlorides (Cl)	max. 0,002 %
25 kg	40 kg	Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,0001 %

Boric acid pure p. a.

CHEM*115313604

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Substances insoluble in C ₂ H ₅ OH	passes test
1 kg	5 kg	Substances non-volatile with methanol	max. 0,05 %
10 kg	25 kg	Chlorides (Cl)	max. 0,0003 %
40 kg		Phosphates (PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0001 %

BORIC ACID SOLUTION*Kwas borowy roztwory*

M = 61,83 g/mol

CAS: 10043-35-3

WE: 233-139-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Boric acid solution 2%**CHEM*115313600**

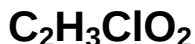
1 l	2.5 l	Assay	2,0 ± 0,1 %
3 l	5 l		

Boric acid solution 3%**CHEM*115313601**

1 l	2.5 l	Assay	3,0 ± 0,1 %
3 l			

CHLORACETIC ACID

Kwas chlorooctowy



M = 94,50 g/mol

CAS: 79-11-8

WE: 201-178-4



H: 301, 311, 314, 331, 400

P: 273, 280, 301+330+331, 302+352, 304+340, 309, 310

RID/ADR: 6.1, II

UN: 1751



Physical and chemical properties:

Character:	solid	top:	no data
Colour:	colourless	Vapour pressure:	0,22 hPa (20°C)
Odor:	sharp	Density:	1,37 g/cm ³ (65°C)
pH:	1 (800g/l H ₂ O (20°C))	Bulk density:	approx 800 kg/m ³
Melting point:	61-63°C	Solubility:	
Boiling point:	189°C	in water:	soluble
Auto-ignition temperature:	446°C	in organic solvents:	methanol, ethanol, acetone, DMSO
Ignition temperature:	127°C		
Explosion limits:			
bottom:	8,0% v/v		

Chloroacetic acid pure

CHEM*425360000

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Melting point	61-63 °C
500 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	Residue on roasting (as SO ₄)	max. 0,2 %
		Total nitrogen (N)	max. 0,01 %
		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,01 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead(Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

Chloroacetic acid pure p. a.**CHEM*115360001**

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Melting point	61-63 °C
500 g	1 kg	Substances insoluble in water	max. 0,003 %
2 kg	5 kg	Acetone (GC)	max. 0,02 %
10 kg		Carbonyl compounds (as C ₂ H ₄ O)	max. 0,01 %
		Residue on roasting (as SO ₄)	max. 0,02 %
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Copper(Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead(Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

CITRIC ACID MONOHYDRATE

Kwas cytrynowy 1 hydrat



M = 210,14 g/mol

CAS: 5949-29-1

WE: 201-069-1



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	<0,1 hPa (20°C)
Odor:	odorless	Density:	1,54 g/cm ³ (20°C)
pH:	approx 1,8 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 800 - 1000 kg/m ³
Melting point:	135 - 153°C	Solubility:	
Boiling point:	175°C	in water:	approx 1630 g/l (20°C)
Auto-ignition temperature:	345°C	in organic solvents:	no data
Ignition temperature:	no data		

Citric acid monohydrate pure

CHEM*425382100

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,07 %
1 kg	2 kg	Phosphates (PO ₄)	max. 0,005 %
5 kg	10 kg	Total sulphur(SO ₄)	max. 0,02 %
15 kg	20 kg	Heavy metals (as Pb)	max. 0,001 %
25 kg		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Citric acid monohydrate pure p. a.

CHEM*115382101

25 g	50 g	Assay	99,5 – 100,5 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,03 %
1 kg	2 kg	Substances darkening under the influence of H ₂ SO ₄	passes test
5 kg	10 kg	Chlorides (Cl)	max. 0,001 %
20 kg	25 kg	Phosphates (PO ₄)	max. 0,001 %
		Total sulphur (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

CITRIC ACID SOLUTION 10%

Kwas cytrynowy roztwór 10%



M = 192,12 g/mol

CAS: 77-92-9

WE: 201-069-1



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	
pH:	acid	Solubility:	
Melting point:	not applicable	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Citric acid solution 10%

CHEM*115382102

500 ml

1l

Assay

10,0 ± 0,5 %

2.5 l

3 l

CITRIC ACID SOLUTION $c \geq 20\%$

Kwas cytrynowy roztwory



M = 192,12 g/mol

CAS: 77-92-9

WE: 201-069-1



H: 319

P: 305+351+338

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	
pH:	acid	Solubility:	
Melting point:	not applicable	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Citric acid solution 20%

CHEM*115382107

500 ml	1l	Assay	20,0 ± 0,5 %
2.5 l	3 l		

Citric acid solution 30%

CHEM*115382104

500 ml	1l	Assay	30,0 ± 1,0 %
2.5 l	3 l		

Citric acid solution 40%

CHEM*115382103

500 ml	1l	Assay	40,0 ± 1,0 %
2.5 l	3 l		

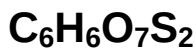
Citric acid solution 50%

CHEM*115382106

500 ml	1l	Assay	50,0 ± 1,0 %
2.5 l	3 l		
5 l	10 l		
20 l			

PHENOL DISULFONIC ACID SOLUTION 25% IN SULFURIC ACID

Kwas fenolodisulfonowy r-r 25% w H₂SO₄



M = not applicable

CAS: 96-77-5

WE: 202-533-6



H: 314
P: 280, 305+351+338
RID/ADR: 8, II

UN: 2584



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	yellow - brown	Density:	~1,8g/cm ³
Odor:	phenol	Bulk density:	not applicable
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phenol disulfonic acid solution 25% in sulfuric acid pure

CHEM*425481033

50 ml	100 ml	Density	~1,8 g/cm ³
250 ml	500 ml	Nitrogen sensitivity	passes test
1l			

HYDROFLUORIC ACID 0,1 MOL/L STANDARD SOLUTION

Kwas fluorowodorowy roztwór mianowany 0,1M

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	approx 1,00 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	no data	in organic solvents:	alcohol, benzene, toluene, m-xylene
Boiling point:	no data		

Hydrofluoric acid standard solution 0,1 mol/l

CHEM*805504602

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

HYDROFLUORIC ACID

STANDARD SOLUTION ($0,5M \leq C < 3,5M$)

Kwas fluorowodorowy roztwory mianowane

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 271, 302, 319, 332
P: 280, 301+312, 305+351+338
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	1,005 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	silnie acid	in water:	soluble
Melting point:	no data	in organic solvents:	alcohol, benzene, toluene, m-xylene
Boiling point:	no data		

Hydrofluoric acid standard solution 0,5 mol/l

CHEM*805504601

500 ml

1 l

Titer

0,498 – 0,502 mol/l

Hydrofluoric acid standard solution 1 mol/l

CHEM*805504600

500 ml

1 l

Titer

0,996 – 1,004 mol/l

HYDROFLUORIC ACID SOLUTION 10%

Kwas fluorowodorowy roztwór 10%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	1,035 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	no data	in organic solvents: alcohol, benzene, toluene,	
Boiling point:	no data	m-xylene	

Hydrofluoric acid solution 10% pure

CHEM*425504631

1 l	2.5 l	Assay	10,0 ± 0,5 %
3 l	5 l	Density (20°C)	1,035 g/cm ³
		Silicon (Si)	max. 0,1 %
		Sulphates (SO ₄)	max. 0,005%
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 10% pure p. a.

CHEM*115504643

1 l	2.5 l	Assay	10,0 ± 0,5 %
3 l	5 l	Density (20°C)	1,035 g/cm ³
		Silicon (Si)	max. 0,05 %
		Sulphates (SO ₄)	max. 0,002%
		Sulphites (SO ₃)	max. 0,004%
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 20%

Kwas fluorowodorowy roztwór 20%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	1,07 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	silnie acid	in water:	soluble
Melting point:	no data	in organic solvents: alcohol, benzene, toluene,	
Boiling point:	no data	m-xylene	

Hydrofluoric acid solution 20% pure

CHEM*425504632

1 l	2.5 l	Assay	20,0 ± 1,0 %
3 l	5 l	Density (20°C)	1,07 g/cm ³
		Silicon (Si)	max. 0,1 %
		Sulphates (SO ₄)	max. 0,005%
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 20% pure p. a.

CHEM*115504631

1 l	2.5 l	Assay	20,0 ± 1,0 %
3 l	5 l	Density (20°C)	1,07 g/cm ³
		Silicon (Si)	max. 0,05 %
		Sulphates (SO ₄)	max. 0,002%
		Sulphites (SO ₃)	max. 0,004%
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 30%

Kwas fluorowodorowy roztwór 30%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	approx 1,1015 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	silnie acid	in water:	soluble
Melting point:	no data	in organic solvents:	alcohol, benzene, toluene, m-xylene
Boiling point:	no data		

Hydrofluoric acid solution 30% pure

CHEM*425504643

1 l	2.5 l	Assay	30,0 ± 1,0 %
3 l	5 l	Density (20°C)	approx 1,1015 g/cm ³
		Silicon (Si)	max. 0,1 %
		Sulphates (SO ₄)	max. 0,005%
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 30% pure p. a.

CHEM*115504645

1 l	2.5 l	Assay	30,0 ± 1,0 %
3 l	5 l	Density (20°C)	approx 1,1015 g/cm ³
		Silicon (Si)	max. 0,05 %
		Sulphates (SO ₄)	max. 0,002%
		Sulphites (SO ₃)	max. 0,004%
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 40%

Kwas fluorowodorowy roztwór 40%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Viscosity:	0,256 mPa·s
Colour:	colourless	Density:	1,128 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	-44°C	in organic solvents: alcohol, benzene, toluene,	m-xylene
Boiling point:	112°C		
Explosion limits:	not applicable		

Hydrofluoric acid solution 40% pure

CHEM*425504639

100 ml	500 l	Assay	40,0 ± 1,0 %
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,01 %
3 l	5 l	Substances reducing KMnO ₄	max. 0,002 %
10 l	20 l	Chlorides (Cl)	max. 0,005 %
30 l	60 l	Sulphates (SO ₄)	max. 0,005 %
		Silicon (Si)	max. 0,1 %
		Magnesium + calcium (Mg + Ca)	max. 0,01 %
		Copper + lead (Cu + Pb)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 40% pure p. a.

CHEM*115504630

500 ml	1 l	Assay	40,0 ± 1,0 %
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,005 %
5 l	10 l	Substances reducing KMnO ₄	max. 0,001 %
20 l	30 l	Chlorides (Cl)	max. 0,003 %
60 l		Phosphates (as PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulphites (SO ₃)	max. 0,004 %
		Silicon (Si)	max. 0,05 %
		Magnesium + calcium (Mg + Ca)	max. 0,005 %
		Copper + lead (Cu + Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 50%

Kwas fluorowodorowy roztwór 50%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Viscosity:	0,256 mPa·s
Colour:	colourless	Density:	1,155 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	-44°C	in organic solvents: alcohol, benzene, toluene,	m-xylene
Boiling point:	112°C		
Explosion limits:	not applicable		

Hydrofluoric acid solution 50% pure

CHEM*425504640

100 ml	500 l	Assay	50,0 ± 1,0 %
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,01 %
3 l	5 l	Substances reducing KMnO ₄	max. 0,002 %
10 l	20 l	Chlorides (Cl)	max. 0,003 %
30 l	60 l	Sulphates (SO ₄)	max. 0,005 %
		Silicon (Si)	max. 0,1 %
		Magnesium + calcium (Mg + Ca)	max. 0,01 %
		Copper + lead (Cu + Pb)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 50% pure p. a.

CHEM*115504643

500 ml	1 l	Assay	50,0 ± 1,0 %
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,005 %
5 l	10 l	Substances reducing KMnO ₄	max. 0,001 %
20 l	30 l	Chlorides (Cl)	max. 0,003 %
60 l		Phosphates (as PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulphites (SO ₃)	max. 0,004 %
		Silicon (Si)	max. 0,05 %
		Magnesium + calcium (Mg + Ca)	max. 0,005 %
		Copper + lead (Cu + Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 60%

Kwas fluorowodorowy roztwór 60%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Viscosity:	0,256 mPa·s
Colour:	colourless	Density:	no data
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	-44°C	in organic solvents: alcohol, benzene, toluene,	m-xylene
Boiling point:	112°C		
Explosion limits:	not applicable		

Hydrofluoric acid solution 60% pure

CHEM*425504642

100 ml	500 l	Assay	60,0 ± 1,0 %
1 l	2.5 l	Residue on roasting (as SO ₄)	max. 0,01 %
3 l	5 l	Substances reducing KMnO ₄	max. 0,002 %
10 l	20 l	Chlorides (Cl)	max. 0,003 %
30 l	60 l	Sulphates (SO ₄)	max. 0,005 %
		Silicon (Si)	max. 0,1 %
		Magnesium + calcium (Mg + Ca)	max. 0,01 %
		Copper + lead (Cu + Pb)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 60% pure p. a.

CHEM*115504644

500 ml	1 l	Assay	60,0 ± 1,0 %
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,005 %
5 l	10 l	Substances reducing KMnO ₄	max. 0,001 %
20 l	30 l	Chlorides (Cl)	max. 0,003 %
60 l		Phosphates (as PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulphites (SO ₃)	max. 0,004 %
		Silicon (Si)	max. 0,05 %
		Magnesium + calcium (Mg + Ca)	max. 0,005 %
		Copper + lead (Cu + Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0003 %

HYDROFLUORIC ACID SOLUTION 70%

Kwas fluorowodorowy roztwór 70%

HF

M = 20,01 g/mol

CAS: 7664-39-3

WE: 231-634-8



H: 300, 310, 314, 350
P: 280, 301+330+33, 302+352, 304+340,
305+351+338, 309, 310
RID/ADR: 8 (6.1), II UN: 1790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Density:	1,17 g/cm ³ (20°C)
Odor:	sharp	Solubility:	
pH:	acid	in water:	soluble
Melting point:	no data	in organic solvents: alcohol, benzene, toluene,	
Boiling point:	no data	m-xylene	

Hydrofluoric acid solution 70% pure

CHEM*425504641

1 l	2.5 l	Assay	70,0 ± 1,0 %
3 l	5 l	Density (20°C)	1,17 g/cm ³
10 l	20 l	Silicon (Si)	max. 0,1 %
30 l		Sulphates (SO ₄)	max. 0,005%
		Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 70% pure p. a.

CHEM*115504642

1 l	2.5 l	Assay	70,0 ± 1,0 %
3 l	5 l	Density (20°C)	1,17 g/cm ³
10 l	20 l	Silicon (Si)	max. 0,05 %
30 l		Sulphates (SO ₄)	max. 0,002%
		Sulphites (SO ₃)	max. 0,004%
		Iron (Fe)	max. 0,0003 %

PHOSPHORIC ACID SOLUTION 5%

Kwas fosforowy roztwór 5%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,0254 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 5% pure

CHEM*425691510

1l	5 l	Assay	5,0 ± 0,1 %
		Heavy metals (as Pb)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Phosphoric acid solution 5% pure p. a.

CHEM*115691512

1l	5 l	Assay	5,0 ± 0,1 %
		Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Copper (Cu)	max. 0,00002 %
		Lead (Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

PHOSPHORIC ACID SOLUTION 10%

Kwas fosforowy roztwór 10%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 315, 319
P: 280, 305+351+338
RID/ADR: 8, III

UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,0532 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 10% pure

CHEM*425691502

1l	5 l	Assay	10,0 ± 0,5 %
		Heavy metals (as Pb)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Phosphoric acid solution 10% pure p. a.

CHEM*115691513

1l	5 l	Assay	10,0 ± 0,5 %
		Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Copper (Cu)	max. 0,00002 %
		Lead (Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

PHOSPHORIC ACID SOLUTION 25%

Kwas fosforowy roztwór 25%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,1462 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 25% pure

CHEM*425691511

1 l	5 l	Assay	25,0 ± 1,0 %
		Heavy metals (as Pb)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Phosphoric acid solution 25% pure p. a.

CHEM*115691510

1 l	5 l	Assay	25,0 ± 1,0 %
		Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Copper (Cu)	max. 0,00002 %
		Lead (Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

PHOSPHORIC ACID SOLUTION 30%

Kwas fosforowy roztwór 30%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,1805 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 30% pure

CHEM*425691506

5 l	10 l	Assay	30,0 ± 1,0 %
20 l	30 l	Heavy metals (as Pb)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Phosphoric acid solution 30% pure p. a.

CHEM*115691506

5 l	10 l	Assay	30,0 ± 1,0 %
20 l	30 l	Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Copper(Cu)	max. 0,00002 %
		Lead(Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

PHOSPHORIC ACID SOLUTION 50%

Kwas fosforowy roztwór 50%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,335 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 50% pure

CHEM*425691503

5 l	10 l	Assay	50,0 ± 1,0 %
20 l	30 l	Heavy metals (as Pb)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Phosphoric acid solution 50% pure p. a.

CHEM*115691503

5 l	10 l	Assay	50,0 ± 1,0 %
20 l	30 l	Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Copper(Cu)	max. 0,00002 %
		Lead(Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0001 %

PHOSPHORIC ACID SOLUTION 75%

Kwas fosforowy roztwór 75%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	2,2 mbar (20°C)
Odor:	odorless	Density:	approx 1,58 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	approx 21°C	in water:	soluble
Boiling point:	approx 158°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid solution 75% pure

CHEM*425691509

500 ml	1 l	Assay	75,0 ± 1,0 %
2.5 l	5 l	Density (20°C)	approx 1,58 g/cm ³
10 l	20 l	Residue on roasting	max. 0,3 %
30 l	60 l	Substances reducing (as H ₃ PO ₃)	max. 0,1 %
		Nitrates (NO ₃)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Magnesium + calcium (Mg+Ca)	max. 0,02 %
		Iron (Fe)	max. 0,005 %

Phosphoric acid solution 75% pure p. a.

CHEM*115691509

250 ml	500 ml	Assay	75,0 ± 1,0 %
1 l	5 l	Density (20°C)	approx 1,58 g/cm ³
10 l	20 l	Substances reducing (as H ₃ PO ₃)	max. 0,005 %
30 l		Nitrates (NO ₃)	max. 0,0006 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Arsenic (As)	max. 0,00005 %
		Copper(Cu)	max. 0,00002 %
		Lead(Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

PHOSPHORIC ACID SOLUTION 80%

Kwas fosforowy roztwór 80%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Viscosity (20°C):	no data
Odor:	odorless	Vapour pressure:	no data
pH:	<0,5 (20°C)	Density:	1,633 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Phosphoric acid solution 80% pure

CHEM*425691511

250 ml	500 ml	Assay	80,0 ± 1,0 %
1 l	2,5 l	Density (20°C)	approx 1,633 g/cm ³
5 l	6 l	Substances reducing (as H ₃ PO ₃)	max. 0,1 %
10 l	20 l	Nitrates (NO ₃)	max. 0,001 %
30 l	60 l	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Magnesium + calcium (Mg+Ca)	max. 0,02 %
		Iron (Fe)	max. 0,005 %

Phosphoric acid solution 80% pure p. a.

CHEM*115691514

100 ml	250 ml	Assay	80,0 ± 1,0 %
500 ml	1 l	Density (20°C)	approx 1,633 g/cm ³
2,5 l	5 l	Substances reducing (as H ₃ PO ₃)	max. 0,005 %
6 l	10 l	Nitrates (NO ₃)	max. 0,0006 %
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Arsenic (As)	max. 0,00005 %
		Copper (Cu)	max. 0,00002 %
		Lead (Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

PHOSPHORIC ACID SOLUTION 85%

Kwas fosforowy roztwór 85%



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Viscosity (20°C):	47 mPa·s
Odor:	odorless	Vapour pressure:	2,88 hPa (20°C)
pH:	<0,5 (20°C)	Density:	1,69 g/cm ³ (20°C)
Melting point:	21°C	Solubility:	
Boiling point:	158°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Phosphoric acid solution 85% pure

CHEM*425691507

250 ml	500 ml	Assay	min. 84,5 %
1 l	2.5 l	Density (20°C)	1,678 max. 1,721 g/cm ³
5 l	6 l	Substances reducing (as H ₃ PO ₃)	max. 0,1 %
10 l	20 l	Nitrates (NO ₃)	max. 0,001 %
30 l	60 l	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Magnesium i calcium (Mg+Ca)	max. 0,02 %
		Iron (Fe)	max. 0,005 %

Phosphoric acid solution 85% pure p. a.

CHEM*115691508

100 ml	250 ml	Assay	84,5 – 87%
500 ml	1 l	Density (20°C)	approx 1,69 g/cm ³
2.5 l	5 l	Substances reducing (as H ₃ PO ₃)	max. 0,005 %
6 l	10 l	Nitrates (NO ₃)	max. 0,0006 %
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,003 %
		Arsenic (As)	max. 0,00005 %
		Copper (Cu)	max. 0,00002 %
		Lead (Pb)	max. 0,00005 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

PHOSPHORIC ACID STANDARD SOLUTION 6 MOL/L

Kwas fosforowy roztwór mianowany 6M



M = 97,99 g/mol

CAS: 7664-38-2

WE: 231-633-2



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1805



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,296 g/cm ³ (20°C)
pH:	<0,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Phosphoric acid standard solution 6 mol/l

CHEM*815691509

100 ml

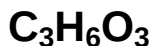
250 ml

Titer

5,976 – 6,024 mol/l

500 ml

1 l

DL-LACTIC ACID SOLUTION 5%*Kwas mlekowy roztwór 5%*

M = 90,08 g/mol

CAS: 598-82-3

WE: 209-954-4



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	acid	Density:	(20°C)
pH:	approx 2,8 (1%, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

DL-lactic acid solution 5%**CHEM*115642639**

1 l

3 l

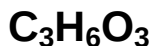
Assay

5,0 ± 0,1 %

5 l

DL-LACTIC ACID SOLUTION 10%

Kwas mlekowy roztwór 10%



M = 90,08 g/mol

CAS: 598-82-3

WE: 209-954-4



H: 318

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	acid	Density:	(20°C)
pH:	approx 2,8 (1%, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

DL-lactic acid solution 10%

CHEM*115642634

1 l

3 l

Assay

10,0 ± 0,5 %

5 l

DL-LACTIC ACID SOLUTIONS ($c \geq 20\%$)

Kwas mlekowy roztwór



M = 90,08 g/mol

CAS: 598-82-3

WE: 209-954-4



H: 315, 318

P: 280, 302+352, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	acid	Density:	(20°C)
pH:	approx 2,8 (1%, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

DL-lactic acid solution 20%

CHEM*115642633

1l	3 l	Assay	20,0 ± 0,5 %
5 l			

DL-lactic acid solution 30%

CHEM*115642637

1l	3 l	Assay	30,0 ± 1,0 %
5 l			

DL-lactic acid solution 40%

CHEM*115642632

1l	3 l	Assay	40,0 ± 1,0 %
5 l			

DL-lactic acid solution 50%

CHEM*325642635

1l	3 l	Assay	50,0 ± 1,0 %
5 l			

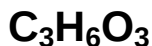
DL-lactic acid solution 60%

CHEM*115642636

1l	3 l	Assay	60,0 ± 1,0 %
5 l			

DL-LACTIC ACID SOLUTION 80%

DL-lactic acid solution 80%



M = 90,08 g/mol

CAS: 598-82-3

WE: 209-954-4



H: 315, 318

P: 280, 302+352, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	acid	Density:	approx 1,2 g/cm ³ (20°C)
pH:	approx 2,8 (10g/l, H ₂ O, 20°C)	Solubility:	
Melting point:	approx 18°C	in water:	soluble
Boiling point:	approx 122°C (20 hPa)	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

DL-lactic acid solution 80% pure

CHEM*425642331

100 ml	250 ml	Assay	min. 80 %
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,04 %
2.5 l	3 l	Chlorides (Cl)	max. 0,001 %
5 l	10 l	Sulphates (SO ₄)	max. 0,01 %
20 l	30 l	Arsenic (As)	max. 0,00005 %
60 l		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Reducing saccharides	passes test
		Easy carbonizable substances	passes test

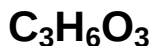
DL-lactic acid solution 80% pure p. a.

CHEM*115642638

100 ml	250 ml	Assay	min. 80%
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,02 %
2.5 l	3 l	Chlorides (Cl)	max. 0,0005 %
5 l	10 l	Sulphates (SO ₄)	max. 0,005 %
20 l	30 l	Arsenic (As)	max. 0,00002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0007 %
		Reducing saccharides	passes test
		Easy carbonizable substances	passes test

DL-LACTIC ACID SOLUTION 88%

Kwas mlekowy roztwór 88%



M = 90,08 g/mol

CAS: 598-82-3

WE: 209-954-4



H: 315, 318

P: 280, 302+352, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	0,1 hPa (20°C)
Odor:	acid	Density:	approx 1,21 g/cm ³ (20°C)
pH:	approx 2,8 (10g/l, H ₂ O, 20°C)	Solubility:	
Melting point:	approx 18°C	in water:	soluble
Boiling point:	approx 122°C (20 hPa)	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

DL-lactic acid solution 88% pure

CHEM*425642333

100 ml	250 ml	Assay	min. 88,0 %
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,03 %
2.5 l	3 l	Chlorides (Cl)	max. 0,001 %
5 l	10 l	Sulphates (SO ₄)	max. 0,005 %
20 l	30 l	Arsenic (As)	max. 0,0001 %
60 l		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Reducing saccharides	passes test
		Easy carbonizable substances	passes test

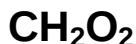
DL-lactic acid solution 88% pure p. a.

CHEM*115642640

100 ml	250 ml	Assay	88,0 – 92,0 %
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,02 %
2.5 l	3 l	Chlorides (Cl)	max. 0,0005 %
5 l	10 l	Sulphates (SO ₄)	max. 0,005 %
20 l	30 l	Arsenic (As)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %
		Reducing saccharides	passes test
		Easy carbonizable substances	passes test

FORMIC ACID SOLUTION 5%

Kwas mrówkowy roztwór 5%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 315, 319
P: 280, 302+352, 305+351+338
RID/ADR: 8, III UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,0117 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 5% pure

CHEM*425646406

500 ml	1 l	Assay	5,0 ± 0,1 %
2.5 l	5 l	Density (20°C)	1,0117 g/cm ³
		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

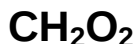
Formic acid solution 5% pure p. a.

CHEM*115646407

500 ml	1 l	Assay	5,0 ± 0,1 %
2.5 l	5 l	Density (20°C)	1,0117 g/cm ³
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 6%

Kwas mrówkowy roztwór 6%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 315, 319
P: 280, 302+352, 305+351+338
RID/ADR: 8, III UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,0142 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 6% pure

CHEM*425646403

500 ml	1l	Assay	6,0 ± 0,1 %
2.5 l	5 l	Density (20°C)	1,0142 g/cm ³
		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

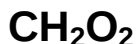
Formic acid solution 6% pure p. a.

CHEM*115646408

500 ml	1l	Assay	6,0 ± 0,1 %
2.5 l	5 l	Density (20°C)	1,0142 g/cm ³
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 25%

Kwas mrówkowy roztwór 25%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 314
P: 280, 305+351+338, 301+330+331
RID/ADR: 8, II UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,061 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 25% pure

CHEM*425646401

1 l	2.5 l	Assay	25,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,061 g/cm ³
20 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

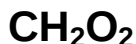
Formic acid solution 25% pure p. a.

CHEM*115646409

1 l	2.5 l	Assay	25,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,061 g/cm ³
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 50%

Kwas mrówkowy roztwór 50%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 314
P: 280, 305+351+338, 301+330+331
RID/ADR: 8, II UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,1208 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 50% pure

CHEM*425646402

1 l	2.5 l	Assay	50,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,1208 g/cm ³
20 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

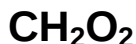
Formic acid solution 50% pure p. a.

CHEM*115646404

1 l	2.5 l	Assay	50,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,1208 g/cm ³
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 60%

Kwas mrówkowy roztwór 60%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 314
P: 280, 305+351+338, 301+330+331
RID/ADR: 8, II UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,1431 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 60% pure

CHEM*425646306

1 l	2.5 l	Assay	60,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,1431 g/cm ³
20 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

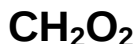
Formic acid solution 60% pure p. a.

CHEM*115646306

1 l	2.5 l	Assay	60,0 ± 1,0 %
5 l	10 l	Density (20°C)	1,1431 g/cm ³
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 80%

Kwas mrówkowy roztwór 80%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 314
P: 280, 305+351+338, 301+330+331
RID/ADR: 8, II UN: 3412



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,1861 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, glycerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 80% pure

CHEM*425646410

1 l	2.5 l	Assay	80,0 ± 1,0 %
5 l	10 l	Acetic acid (CH ₃ COOH)	max. 0,1 %
20 l	30 l	Oxalic acid (H ₂ C ₂ O ₄)	passes test
60 l		Residue on evaporation	max. 0,005 %
		Substances precipitated water	passes test
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Sulphites (SO ₃)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

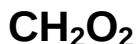
Formic acid solution 80% pure p. a.

CHEM*115646401

500 ml	1 l	Assay	80,0 ± 1,0 %
2.5 l	5 l	Acetic acid (CH ₃ COOH)	max. 0,05 %
10 l	20 l	Oxalic acid (H ₂ C ₂ O ₄)	passes test
30 l	60 l	Residue on evaporation	max. 0,002 %
		Substances precipitated water	passes test
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulphites (SO ₃)	max. 0,0015 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

FORMIC ACID SOLUTION 85%

Kwas mrówkowy roztwór 85%



M = 46,03 g/mol

CAS: 64-18-6

WE: 200-579-1



H: 314
P: 280, 305+351+338, 301+330+331
RID/ADR: 8 (3), II UN: 1779



Physical and chemical properties:

Character:	liquid	top:	45,5% v/v
Colour:	colourless	viscosity w temp. 25°C:	1,966 mPa·s
Odor:	sharp	Vapour pressure:	44,80 mbar (20°C)
pH:	acid	Density:	1,1953 g/cm ³ (20°C)
Melting point:	-9°C	Solubility:	
Boiling point:	107°C	in water:	soluble
Auto-ignition temperature:	485°C	in organic solvents:	ethanol, ethyl ether, glycerol
Ignition temperature:	71°C		
Explosion limits:			
bottom:	10% v/v		

Formic acid solution 85% pure

CHEM*425646409

250 ml	500 ml	Assay	84,0 – 87,0 %
1 l	2.5 l	Acetic acid (CH ₃ COOH)	max. 0,1 %
5 l	10 l	Oxalic acid (H ₂ C ₂ O ₄)	passes test
20 l	30 l	Residue on evaporation	max. 0,005 %
60 l		Substances precipitated water	passes test
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Sulphites (SO ₃)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

Formic acid solution 85% pure p. a.

CHEM*115646400

100 ml	250 ml	Assay	85,0 ± 1,0 %
500 ml	1 l	Acetic acid (CH ₃ COOH)	max. 0,05 %
2.5 l	5 l	Oxalic acid (H ₂ C ₂ O ₄)	passes test
10 l	20 l	Residue on evaporation	max. 0,002 %
30 l	60 l	Substances precipitated water	passes test
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Sulphites (SO ₃)	max. 0,0015 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

PERCHLORIC ACID SOLUTION 60%

Kwas nadchlorowy roztwór 60%

HClO₄

M = 100,46 g/mol

CAS: 7601-90-3

WE: 231-512-4



H: 271, 314
P: 210, 280, 301+330+331, 305+351+338,
309, 310
RID/ADR: 5.1 (8), I UN: 1873



Physical and chemical properties:

Character:	liquid	Auto-ignition temperature:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,54 g/cm ³ (20°C)
pH:	silnie acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	approx 160°C	in organic solvents:	chloroform, acetic acid
Ignition temperature:	no data		

perchloric acid solution 60% pure

CHEM*425649402

100 ml	250 ml	Assay	60,0 ± 1,0 %
500 ml	1l	Total nitrogen (N)	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

perchloric acid solution 60% pure p. a.

CHEM*115649402

100 ml	250 ml	Assay	60,0 ± 1,0 %
500 ml	1l	Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,005 %
		Barium (Ba)	max. 0,001 %
		Bismuth (Bi)	max. 0,0001 %
		Zinc (Zn)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0001 %
		Cobalt (Co)	max. 0,0001 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,00005 %
		Copper(Cu)	max. 0,0001 %
		Nickel (Ni)	max. 0,0001 %
		Lead(Pb)	max. 0,0005 %
		Strontium (Sr)	max. 0,000002 %
		Titanium (Ti)	max. 0,00001 %
		Calcium (Ca)	max. 0,0001 %
		Iron (Fe)	max. 0,0002 %

PERCHLORIC ACID SOLUTION 65%

Kwas nadchlorowy roztwór 65%

HClO₄

M = 100,46 g/mol

CAS: 7601-90-3

WE: 231-512-4



H: 271, 314
P: 210, 280, 301+330+331, 305+351+338,
309, 310
RID/ADR: 5.1 (8), I UN: 1873



Physical and chemical properties:

Character:	liquid	Auto-ignition temperature:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,5993 g/cm ³ (25°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	approx 189,2°C	in organic solvents:	
Ignition temperature:	no data		

perchloric acid solution 65% pure

CHEM*425649403

100 ml	250 ml	Assay	65,0 ± 1,0 %
500 ml	1l	Total nitrogen (N)	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

perchloric acid solution 65% pure p. a.

CHEM*115649403

100 ml	250 ml	Assay	65,0 ± 1,0 %
500 ml	1l	Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,005 %
		Barium (Ba)	max. 0,001 %
		Bismuth (Bi)	max. 0,0001 %
		Zinc (Zn)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0001 %
		Cobalt (Co)	max. 0,0001 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,00005 %
		Copper(Cu)	max. 0,0001 %
		Nickel (Ni)	max. 0,0001 %
		Lead(Pb)	max. 0,0005 %
		Strontium (Sr)	max. 0,000002 %
		Titanium (Ti)	max. 0,00001 %
		Calcium (Ca)	max. 0,0001 %
		Iron (Fe)	max. 0,0002 %

PERCHLORIC ACID SOLUTION 70%

Kwas nadchlorowy roztwór 70%

HClO₄

M = 100,46 g/mol

CAS: 7601-90-3

WE: 231-512-4



H: 271, 314
P: 210, 280, 301+330+331, 305+351+338,
309, 310
RID/ADR: 5.1 (8), I UN: 1873



Physical and chemical properties:

Character:	liquid	Auto-ignition temperature:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,67 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	-18°C	in water:	soluble
Boiling point:	approx 198,7°C	in organic solvents:	
Ignition temperature:	no data		

perchloric acid solution 70% pure

CHEM*425649707

100 ml	250 ml	Assay	min. 70,0 %
500 ml	1l	Total nitrogen (N)	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

perchloric acid solution 70% pure p. a.

CHEM*115649708

100 ml	250 ml	Assay	min. 70,0 %
500 ml	1l	Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0003 %
		Sulphates (SO ₄)	max. 0,005 %
		Barium (Ba)	max. 0,001 %
		Bismuth (Bi)	max. 0,0001 %
		Zinc (Zn)	max. 0,0001 %
		Cadmium (Cd)	max. 0,0001 %
		Cobalt (Co)	max. 0,0001 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,00005 %
		Copper (Cu)	max. 0,0001 %
		Nickel (Ni)	max. 0,0001 %
		Lead (Pb)	max. 0,0005 %
		Strontium (Sr)	max. 0,000002 %
		Titanium (Ti)	max. 0,00001 %
		Calcium (Ca)	max. 0,0001 %
		Iron (Fe)	max. 0,0002 %

PERCHLORIC ACID SOLUTION STANDARD SOLUTION ($C \leq 0,1 \text{ MOL/L}$)

Kwas nadchlorowy roztwory mianowane

HClO₄

M = 100,46 g/mol

CAS: 7601-90-3

WE: 231-512-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Auto-ignition temperature:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,001 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	
Ignition temperature:	no data		

perchloric acid standard solution 0,1 mol/l

CHEM*805649705

500 ml

1l

Titer

0,996 – 1,004 mol/l

PERCHLORIC ACID SOLUTION STANDARD SOLUTION (0,1 MOL/L < C < 1,1 MOL/L)

Kwas nadchlorowy roztwory mianowane

HClO₄

M = 100,46 g/mol

CAS: 7601-90-3

WE: 231-512-4



H: 272, 314
P: 210, 280, 301+330+331, 305+351+338,
309, 310
RID/ADR: 8, III UN: 3264



Physical and chemical properties:

Character:	liquid	Auto-ignition temperature:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	(20°C)
pH:	silnie acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	
Ignition temperature:	no data		

Perchloric acid standard solution 0,5 mol/l

CHEM*805649706

500 ml

1l

Titer

0,498 – 0,502 mol/l

Perchloric acid standard solution 1 mol/l

CHEM*805649707

500 ml

1l

Titer

0,996 – 1,004 mol/l

PERIODIC ACID

Kwas nadjodowy



M = 228,0 g/mol

CAS: 10450-60-9

WE 233-937-0



H: 271, 314
P: 210, 301+330+331, 305+351+338
RID/ADR: 5.1, I UN: 3085



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Bulk density:	approx 1400 kg/m ³
pH:	approx 1,2 (100 g/l H ₂ O, 25°C)	Solubility:	
Melting point:	124-127°C (decomposition)	in water:	3000 g/l (20°C), 470 g/l (80°C)
Boiling point:		in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Periodic acid pure

CHEM* 425652403

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
500 g	1 kg	Sulphates (SO ₄)	max. 0,1%
2 kg	5 kg	Iron (Fe)	max. 0,01 %

Periodic acid pure p. a.

CHEM* 115652404

25 g	50 g	Assay	99,3 - 100,3 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	1 kg	Residue on roasting	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,001 %
		Copper(Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead(Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

PERIODIC ACID SOLUTION 10%

Kwas nadjodowy roztwór 10%



M = 228,0 g/mol

CAS: 10450-60-9

WE 233-937-0



H: 271, 314
P: 210, 301+330+331, 305+351+338
RID/ADR: 5.1, I UN: 3085



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Periodic acid solution 10% pure

CHEM* 525652402

1 l

5 l

Assay

10,0 ± 0,5 %

30 l

ACETIC ACID ANALYTICAL WEIGHED AMOUNT

Kwas octowy odważka analityczna

CH₃COOH

M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,016 g/cm ³ (20°C)
pH:	approx 2,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid 0,1 mol/l analytical weighed amount
CHEM*165687031

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

ACETIC ACID SOLUTION 1%

Kwas octowy roztwór 1%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 0,9996 g/cm ³ (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 1% pure

CHEM*425687340

500 ml	1l	Assay	1,0 ± 0,1 %
5 l		Residue on evaporation	max. 0,005 %

Acetic acid solution 1% pure p. a.

CHEM*115687322

100 ml	250 ml	Assay	1,0 ± 0,1 %
500 ml	1l	Residue on evaporation	max. 0,002 %
5 l			

ACETIC ACID SOLUTION 3%*Kwas octowy roztwór 3%*

M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0026 g/cm ³ (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 3% pure**CHEM*425687332**

500 ml	1l	Assay	3,0 ± 0,1 %
5 l		Residue on evaporation	max. 0,005 %

Acetic acid solution 3% pure p. a.**CHEM*115687336**

100 ml	250 ml	Assay	3,0 ± 0,1 %
500 ml	1l	Residue on evaporation	max. 0,002 %
5 l			

ACETIC ACID SOLUTION 4%

Kwas octowy roztwór 4%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 1,004 g/cm ³ (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 4% pure

CHEM*425687328

1l	5 l	Assay	4,0 ± 0,1 %
		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 4% pure p. a.

CHEM*115687323

1l	5 l	Assay	4,0 ± 0,1 %
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 5%

Kwas octowy roztwór 5%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0055 g/cm ³ (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 5% pure

CHEM*425687334

1l	5 l	Assay	5,0 ± 0,1 %
		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 5% pure p. a.

CHEM*115687335

1l	5 l	Assay	5,0 ± 0,1 %
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 6%

Kwas octowy roztwór 6%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0069 g/cm ³ (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 6% pure

CHEM*425687329

500 ml	1l	Assay	6,0 ± 0,1 %
5 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 6% pure p. a.

CHEM*115687606

500 ml	1l	Assay	6,0 ± 0,1 %
5 l		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 10%

Kwas octowy roztwór 10%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0126 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 10% pure

CHEM*425687333

1l	5 l	Assay	10,0 ± 0,5 %
30 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 10% pure p. a.

CHEM*115687334

1l	5 l	Assay	10,0 ± 0,5 %
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 20%

Kwas octowy roztwór 20%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0261 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 20% pure

CHEM*425687335

1 l	5 l	Assay	20,0 ± 0,5 %
10 l	20 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 20% pure p. a.

CHEM*115687324

1 l	5 l	Assay	20,0 ± 0,5 %
		Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 25%

Acetic acid solution 25%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0324 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 25% pure

CHEM*425687342

1 l	5 l	Assay	25,0 ± 1,0 %
10 l	20 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 25% pure p. a.

CHEM*115687326

1 l	5 l	Assay	25,0 ± 1,0 %
		Aldehydes	max. 0,01%
		Formic acid solution	max. 0,03 %
		Residue on evaporation	max. 0,002 %
		Subst. reducing KMnO ₄	max. 0,01 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 30%

Kwas octowy roztwór 30%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,0383 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 30% pure

CHEM*425687329

1l	2.5 l	Assay	30,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 30% pure p. a.

CHEM*115687608

1l	2.5 l	Assay	30,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,002 %
20 l		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 35%

Kwas octowy roztwór 35%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 1,0438 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 35% pure

CHEM*425687344

1 l	2.5 l	Assay	35,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 35% pure p. a.

CHEM*115687319

1 l	2.5 l	Assay	35,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 40%

Kwas octowy roztwór 40%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 1,0488 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 40% pure

CHEM*425687331

1 l	2.5 l	Assay	40,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 40% pure p. a.

CHEM*115687320

1 l	2.5 l	Assay	40,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 45%

Kwas octowy roztwór 45%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 1,0534 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid solution 45% pure

CHEM*425687327

1 l	2.5 l	Assay	45,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 45% pure p. a.

CHEM*115687321

1 l	2.5 l	Assay	45,0 ± 1,0 %
5 l	10 l	Residue on evaporation	max. 0,002 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 50%

Kwas octowy roztwór 50%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	bottom:	4% v/v
Colour:	colourless	top:	19,9% v/v
Odor:	characteristic, sharp	Vapour pressure:	15,4 mbar (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Density:	approx 1,064 g/cm ³ (20°C)
Melting point:	approx -2,5°C	Solubility:	
Boiling point:	approx 104°C	in water:	soluble
Auto-ignition temperature:	427°C	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Ignition temperature:	40°C		
Explosion limits:			

Acetic acid solution 50% pure

CHEM*425687338

1 l	5 l	Assay	50,0 ± 1,0 %
10 l	20 l	Solubility in water	passes test
30 l		Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 50% pure p. a.

CHEM*115687332

1 l	5 l	Assay	50,0 ± 1,0 %
10 l	20 l	Aldehydes (as CH ₃ CHO)	max. 0,01 %
30 l		Formic acid solution (HCOOH)	max. 0,03 %
		Residue on evaporation	max. 0,002 %
		Substances reducing KMnO ₄ (as HCOOH)	max. 0,01 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 60%

Kwas octowy roztwór 60%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	bottom:	4% v/v
Colour:	colourless	top:	19,9% v/v
Odor:	characteristic, sharp	Vapour pressure:	15,4 mbar (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Density:	approx 1,0642 g/cm ³ (20°C)
Melting point:	approx -7,4°C	Solubility:	
Boiling point:	approx 118°C	in water:	soluble
Auto-ignition temperature:	approx 485°C	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Ignition temperature:	approx 40°C		
Explosion limits:			

Acetic acid solution 60% pure

CHEM*425687336

1 l	2.5 l	Assay	60,0 ± 1,0 %
3 l	5 l	Miscibility with water	passes test
10 l	20 l	Residue on evaporation	max. 0,005 %
30 l		Chlorides (Cl)	max. 0,0004 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 60% pure p. a.

CHEM*115687331

1 l	2.5 l	Assay	60,0 ± 1,0 %
3 l	5 l	Aldehydes (as CH ₃ CHO)	max. 0,01 %
10 l	20 l	Formic acid (HCOOH)	max. 0,03 %
30 l		Residue on evaporation	max. 0,002 %
		Substances reducing KMnO ₄ (as HCOOH)	max. 0,01 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 80%

Kwas octowy roztwór 80%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	bottom:	4% v/v
Colour:	colourless	top:	19,9% v/v
Odor:	characteristic, sharp	Vapour pressure:	15,4 mbar (20°C)
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Density:	approx 1,0699 g/cm ³ (20°C)
Melting point:	approx -7,4°C	Solubility:	
Boiling point:	approx 118°C	in water:	soluble
Auto-ignition temperature:	approx 485°C	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Ignition temperature:	approx 40°C		
Explosion limits:			

Acetic acid solution 80% pure

CHEM*425687339

500 ml	1 l	Assay	min. 80 %
2.5 l	3 l	Residue on evaporation	max. 0,005 %
5 l	10 l	Chlorides (Cl)	max. 0,0004 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0005 %
60 l		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 80% pure p. a.

CHEM*115687330

500 ml	1 l	Assay	min. 80 %
2.5 l	3 l	Aldehydes (as CH ₃ CHO)	max. 0,01 %
5 l	10 l	Formic acid solution (HCOOH)	max. 0,03 %
20 l	30 l	Residue on evaporation	max. 0,002 %
60 l		Substances reducing KMnO ₄ (as HCOOH)	max. 0,01 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

ACETIC ACID SOLUTION 90%

Kwas octowy roztwór 90%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8 (3), III UN: 2789



Physical and chemical properties:

Character:	liquid	Boiling point:	no data
Colour:	colourless	Auto-ignition temperature:	no data
Odor:	characteristic, sharp		
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)		
Melting point:	no data		

Acetic acid solution 90% pure

CHEM*425687328

500 ml	1 l	Assay	min. 90 %
2.5 l	3 l	Residue on evaporation	max. 0,005 %
5 l	10 l	Chlorides (Cl)	max. 0,0004 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0005 %
60 l		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic acid solution 90% pure p. a.

CHEM*115687329

500 ml	1 l	Assay	min. 90 %
2.5 l	3 l	Aldehydes (as CH ₃ CHO)	max. 0,01 %
5 l	10 l	Formic acid solution (HCOOH)	max. 0,03 %
20 l	30 l	Residue on evaporation	max. 0,002 %
60 l		Substances reducing KMnO ₄ (as HCOOH)	max. 0,01 %
		Chlorides (Cl)	max. 0,0002 %
		Sulphates (SO ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

GLACIAL ACETIC ACID

Kwas octowy roztwór min. 99,5%



M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8 (3), III UN: 2789



Physical and chemical properties:

Character:	liquid	bottom:	4% v/v
Colour:	colourless	top:	17% v/v
Odor:	characteristic, sharp	Viscosity (20°C):	1,183 mPa·s
pH:	approx 2,5 (10 g/l H ₂ O, 20°C)	Vapour pressure:	15,33 mbar (20°C)
Melting point:	16,7°C	Density:	approx 1,049 g/cm ³ (20°C)
Boiling point:	118°C	Solubility:	
Auto-ignition temperature:	485°C	in water:	soluble
Ignition temperature:	40°C	in other solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Explosion limits:			

Acetic acid min. 99,5% pure

CHEM*425687607

100 ml	250 ml	Assay	min. 99,5 %
500 ml	1 l	Residue on evaporation	max. 0,005 %
2.5 l	3 l	Chlorides (Cl)	max. 0,0002 %
5 l	10 l	Sulphates (SO ₄)	max. 0,0005 %
20 l	30 l	Heavy metals (as Pb)	max. 0,0002 %
60 l		Iron (Fe)	max. 0,0005 %

Acetic acid min 99,5% pure p. a.

CHEM*115687607

100 ml	250 ml	Assay	min. 99,5 %
500 ml	1 l	Density (20°C)	1,049 - 1,052 g/cm ³
2.5 l	3 l	Acetaldehyde (CH ₃ CHO)	max. 0,01 %
5 l	10 l	Residue on evaporation	max. 0,002 %
20 l	30 l	Substances reducing KMnO ₄ (as HCOOH)	max. 0,02 %
60 l		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,00006 %

ACETIC ACID STANDARD SOLUTION ($C \leq 1 \text{ MOL/L}$)

Kwas octowy roztwory mianowane

CH₃COOH

M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	(20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid standard solution 0,001 mol/l

CHEM*815687340

100 ml	250 ml	Titer	0,000996 – 0,001004 mol/l
500 ml	1l		

Acetic acid standard solution 0,002 mol/l

CHEM*815687339

100 ml	250 ml	Titer	0,001992 – 0,002008 mol/l
500 ml	1l		

Acetic acid standard solution 0,01 mol/l

CHEM*815687328

100 ml	250 ml	Titer	0,00996 – 0,01004 mol/l
500 ml	1l		

Acetic acid standard solution 0,02 mol/l

CHEM*815687338

100 ml	250 ml	Titer	0,01992 – 0,02008 mol/l
500 ml	1l		

Acetic acid standard solution 0,05 mol/l

CHEM*815687336

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1l		

Acetic acid standard solution 0,1 mol/l

CHEM*815687330

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

Acetic acid standard solution 0,2 mol/l **CHEM*815687334**

100 ml	250 ml	Titer	0,1992 – 0,2008 mol/l
500 ml	1l		

Acetic acid standard solution 0,3 mol/l **CHEM*815687337**

100 ml	250 ml	Titer	0,2988 – 0,3012 mol/l
500 ml	1l		

Acetic acid standard solution 0,5 mol/l **CHEM*815687335**

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1l		

Acetic acid standard solution 1 mol/l **CHEM*815687329**

100 ml	250 ml	Titer	0,996 - 1,004 mol/l
500 ml	1l		

ACETIC ACID STANDARD SOLUTION 2 MOL/L

Kwas octowy roztwór mianowany 2mol/l

CH₃COOH

M = 60,05 g/mol

CAS: 64-19-7

WE: 200-580-7



H: 226, 315, 319
P: 280, 303+352, 305+351+338
RID/ADR: 8, III UN: 2790



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 1,028 g/cm ³ (20°C)
pH:	(20°C) approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, ethyl ether, benzene; insoluble in CS ₂
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Acetic acid standard solution 2 mol/l

CHEM*815687333

100 ml	250 ml
500 ml	1l

Titer

1,992 – 2,008 mol/l

OLEIC ACID

Kwas oleinowy



M = 282,46 g/mol

CAS: 112-80-1

WE: 204-007-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless or yellow	Viscosity:	39 mPa.s (20°C)
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	0,889 – 0,895 g/cm ³ (20°C)
Melting point:	16°C	Solubility:	
Boiling point:	360°C (1013° hPa); 194 - 195°C (1,6 hPa)	in water:	insoluble
Auto-ignition temperature:	350°C	in organic solvents:	no data
Ignition temperature:	180°C		

oleic acid pure

CHEM*425689010

50 ml	100 ml	Appearance	passes test
250 ml	500 ml	Identity	passes test
		Density (20°C)	0,889 - 0,895 g/cm ³
1 l	2.5 l	Freezing temperature	max. 10 °C
3 l	5 l	Acid number	196 - 204
		Iodine number	85 - 95
10 l		Residue on roasting (as SO ₄)	max. 0,01 %
		Mineral cids soluble in water	passes test
		Organic volatile impurities	passes test

PALMITIC ACID

Kwas palmitynowy



M = 256,42 g/mol

CAS: 57-10-3

WE: 200-312-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	
Odor:	characteristic		no data
pH:	no data	Density:	0,852 g/l (20°C)
Melting point:	61 - 63°C	Bulk density:	415 kg/m ³
Boiling point:	271°C at 133 hPa	Solubility:	
Auto-ignition temperature:	no data	in water:	insoluble
Ignition temperature:	206°C	in organic solvents:	ethanol (20°C) 65 g/l

Palmitic acid pure

CHEM*425693000

50 g	100 g	Appearance	white crystals
250 g	500 g	Assay	min. 98,0 %
1 kg		Acid number	215 – 233 mg KOH/g
		Saponification number	216 – 224 mg KOH/g
		Iodine number	max. 1g l/100g
		Melting point	62-65°C

Palmitic acid pure p. a.

CHEM*115693000

25 g	50 g	Appearance	white crystals
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Acid number	216 – 232 mg KOH/g
		Saponification number	217 – 223 mg KOH/g
		Iodine number	max. 0,8g l/100g

SALICYLIC ACID

Kwas salicylowy



M = 138,12 g/mol

CAS: 69-72-7

WE: 200-712-3



H: 302, 318

P: 280, 305+35+338, 312

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	bottom:	1,1%
Colour:	white	Vapour pressure:	1,3 mbar (114°C), 27 mbar (211°C)
Odor:	odorless	Density:	1,44 g/cm ³ (20°C)
pH:	2,4 (20 g/l, H ₂ O, 20°C)	Bulk density:	800 kg/m ³
Melting point:	158-161°C	Solubility:	
Boiling point:	211°C	in water:	2 g/l (20°C), 70 g/l (100°C)
Auto-ignition temperature:	570°C	in organic solvents:	ethanol
Ignition temperature:	157°C	log P _{OW} :	2,21
Explosion limits:			

Salicylic acid pure

CHEM*425746009

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Melting point	158 - 161°C
750 g	1 kg		

Salicylic acid pure p. a.

CHEM*115746000

10 g	25 g	Assay	min. 99,5 %
50 g	100 g	Melting point	159 - 161°C
250 g	500 g	Solubility in ethanol	passes test
750 g	1 kg	Residue on roasting (as SO ₄)	max. 0,02 %
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

SULFURIC ACID

ANALYTICAL WEIGHED AMOUNT ($C \leq 0,25 \text{ MOL/L}$)

Kwas siarkowy odważka analityczna



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,06 g/cm ³ (20°C)
pH:	~1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	approx 135°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid 0,005 mol/l (0,01N) analytical weighed amount CHEM*165750640

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,005 mol/l $\pm$ 0,2 %

Sulfuric acid 0,05 mol/l (0,1N) analytical weighed amount CHEM*165750639

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l $\pm$ 0,2 %

Sulfuric acid 0,1 mol/l (0,2N) analytical weighed amount CHEM*165750641

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l $\pm$ 0,2 %

Sulfuric acid 0,2 mol/l (0,4N) analytical weighed amount CHEM*165750642

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,2 mol/l $\pm$ 0,2 %

Sulfuric acid 0,25 mol/l (0,5N) analytical weighed amount CHEM*165750643

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,25 mol/l $\pm$ 0,2 %

SULFURIC ACID

ANALYTICAL WEIGHED AMOUNT (C > 0,25 MOL/L)

Kwas siarkowy odważka analityczna



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,18 g/cm ³ (20°C)
pH:	~1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	approx 135°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid 0,5 mol/l (1N) analytical weighed amount

CHEM*165750644

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,5 mol/l ± 0,2 %

Sulfuric acid 1 mol/l (2N) analytical weighed amount

CHEM*165750645

1 szt.

Concentration after dilution to 1000 ml at 20°C

1 mol/l ± 0,2 %

SULFURIC ACID SOLUTION 5%

Kwas siarkowy roztwór 5%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,032 g/cm ³ (20 °C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 5% tech.

CHEM*325749510

1l	5l	Assay	5,0 ± 0,1%
10l	20l	Density	approx 1,032 g/cm ³ (20 °C)
30l	60l		

Sulfuric acid solution min. 5% pure

CHEM*425749509

1l	5l	Assay	min. 5,0 %
10l	20l	Density	approx 1,032 g/cm ³ (20 °C)
30l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 5% pure p. a.

CHEM*115750017

1l	5l	Assay	min. 5,0 %
10l	20l	Density	approx 1,032 g/cm ³ (20 °C)
30l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 10%

Kwas siarkowy roztwór 10%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,0661 g/cm ³ (20 °C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 10% tech.

CHEM*325749502

5 l	10 l	Assay	10,0 ± 0,5%
20 l	30 l	Density	approx 1,0661 g/cm ³ (20 °C)
1000 l (luz)			

Sulfuric acid solution min. 10% pure

CHEM*425749502

1 l	5 l	Assay	min. 10,0 %
10 l	20 l	Density	approx 1,0661 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 10% pure p. a.

CHEM*115750006

1 l	5 l	Assay	min. 10,0 %
10 l	20 l	Density	approx 1,0661 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 15%

Kwas siarkowy roztwór 15%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	1,1020 g/cm ³ (20°C)
pH:	0,3 (49 g/l H ₂ O, 25°C)	Solubility:	
Melting point:	approx -67°C	in water:	soluble
Boiling point:	approx 118°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		

Sulfuric acid solution 15% tech.

CHEM*325749504

5 l	10 l	Assay	15,0 ± 0,5%
20 l	30 l	Density	approx 1,102 g/cm ³ (20 °C)

SULFURIC ACID SOLUTION 20%

Kwas siarkowy roztwór 20%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	1,1394 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -67°C	in water:	soluble
Boiling point:	approx 118°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		

Sulfuric acid solution min. 20% pure

CHEM*425749501

1 l	5 l	Assay	min. 20,0 %
10 l	20 l	Density	approx 1,1394 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 20% pure p. a.

CHEM*115750004

1 l	5 l	Assay	min. 20,0 %
10 l	20 l	Density	approx 1,1394 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 25%

Kwas siarkowy roztwór 25%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	1,1783 g/cm ³ (20 °C)
pH:	acid	Solubility:	
Melting point:	approx -67 °C	in water:	soluble
Boiling point:	approx 118 °C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		

Sulfuric acid solution 25% tech.

CHEM*325749509

5 l	10 l	Assay	25,0 ± 1,0 %
20 l	30 l	Density	approx 1,1783 g/cm ³ (20 °C)

Sulfuric acid solution min. 25% pure

CHEM*425749506

1 l	5 l	Assay	min. 25,0 %
10 l	20 l	Density	approx 1,1783 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 25% pure p. a.

CHEM*115750003

1 l	5 l	Assay	min. 25,0 %
10 l	20 l	Density	approx 1,1783 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Subst. reducing KMnO ₄	max. 0,0003 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Selenium (Se)	max. 0,0003 %

SULFURIC ACID SOLUTION 30%

Kwas siarkowy roztwór 30%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	1,22 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -67°C	in water:	soluble
Boiling point:	approx 118°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		

Sulfuric acid solution 30% tech.

CHEM*325749508

5 l	10 l	Assay	30,0 ± 1,0 %
20 l	30 l	Density	approx 1,22 g/cm ³ (20 °C)

Sulfuric acid solution min. 30% pure

CHEM*425749511

1 l	5 l	Assay	min. 30,0 %
10 l	20 l	Density	approx 1,22 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 30% pure p. a.

CHEM*115750001

1 l	5 l	Assay	min. 30,0 %
10 l	20 l	Density	approx 1,22 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 32%

Kwas siarkowy roztwór 32%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	1,234 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -67°C	in water:	soluble
Boiling point:	approx 118°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		

Sulfuric acid solution 32% tech.

CHEM*325749503

5 l	10 l	Assay	32,0 ± 1,0 %
20 l	30 l	Density	approx 1,234 g/cm ³ (20 °C)

SULFURIC ACID SOLUTION 37,5% (Accumulator)

Kwas siarkowy roztwór 37,5% (akumulatorowy)



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,28 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -68°C	in water:	soluble
Boiling point:	approx 119°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 37,5% (accumulator)

CHEM*331628909

1 l	5 l	Assay	37,5 – 38,0 %
10 l	20 l	Density (20 °C)	1,28 - 1,285 g/cm ³
30 l		Residue on roasting	max. 0,01 %
		Substances reducing KMnO ₄ (as SO ₂)	max. 0,0012 %
		Chlorides (Cl)	max. 0,0005 %
		Iron (Fe)	max. 0,003 %

SULFURIC ACID SOLUTION 40%

Kwas siarkowy roztwór 40%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,3028 g/cm ³ (20 °C)
pH:	acid	Solubility:	
Melting point:	approx -68 °C	in water:	soluble
Boiling point:	approx 119 °C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 40% tech.

CHEM*325749511

5 l	10 l	Assay	40,0 ± 1,0 %
20 l	30 l	Density	approx 1,3028 g/cm ³ (20 °C)

Sulfuric acid solution min. 40% pure

CHEM*425749520

1 l	5 l	Assay	min. 40,0 %
10 l	20 l	Density	approx 1,3028 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 40% pure p. a.

CHEM*115750025

1 l	5 l	Assay	min. 40,0 %
10 l	20 l	Density	approx 1,3028 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 50%

Kwas siarkowy roztwór 50%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,395 g/cm ³ (20 °C)
pH:	acid	Solubility:	
Melting point:	approx -68 °C	in water:	soluble
Boiling point:	approx 119 °C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 50% tech.

CHEM*325749505

5 l	10 l	Assay	50,0 ± 1,0 %
20 l	30 l	Density	approx 1,395 g/cm ³ (20 °C)

Sulfuric acid solution min. 50% pure

CHEM*425749508

1 l	5 l	Assay	min. 50,0 %
10 l	20 l	Density	approx 1,395 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,005 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 50% pure p. a.

CHEM*115750005

1 l	5 l	Assay	min. 50,0 %
10 l	20 l	Density	approx 1,395 g/cm ³ (20 °C)
30 l		Residue on roasting	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 69%

Kwas siarkowy roztwór 69%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,598 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution min. 69% pure

CHEM*425749510

1l	5l	Assay	min. 69,0 %
10l	20l	Residue on roasting	max. 0,005 %
30l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Selenium (Se)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 69% pure p. a.

CHEM*115750007

1l	5l	Assay	min. 69,0 %
10l	20l	Residue on roasting	max. 0,001 %
30l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,0003 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,000005 %
		Selenium (Se)	max. 0,0003 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 70%

Kwas siarkowy roztwór 70%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,61 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 70% tech.

CHEM*325749506

5 l	10 l
20 l	30 l

Assay

70,0 ± 1,0 %

Density

approx 1,61 g/cm³ (20 °C)

SULFURIC ACID SOLUTION 75%

Kwas siarkowy roztwór 75%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,6692 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -15°C	in water:	soluble
Boiling point:	approx 300°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution min. 75% pure

CHEM*425749521

1 l	5 l	Assay	min. 75,0 %
10 l	20 l	Residue on roasting	max. 0,005 %
30 l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Selenium (Se)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 75% pure p. a.

CHEM*115750008

1 l	5 l	Assay	min. 75,0 %
10 l	20 l	Residue on roasting	max. 0,001 %
30 l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,0003 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,000005 %
		Selenium (Se)	max. 0,0003 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 91%

Kwas siarkowy roztwór 91%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,82 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -15°C	in water:	soluble
Boiling point:	approx 300°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution min. 91% pure

CHEM*425749503

1l	5l	Assay	min. 91,0 %
10l	20l	Residue on roasting	max. 0,005 %
30l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,001 %
		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Selenium (Se)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 91% pure p. a.

CHEM*115750000

1l	5l	Assay	min. 91,0 %
10l	20l	Residue on roasting	max. 0,001 %
30l		Substances reducing KMnO ₄ (as SO ₂)	max. 0,0003 %
		Nitrates (NO ₃)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0001 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,000005 %
		Selenium (Se)	max. 0,0003 %
		Iron (Fe)	max. 0,0001 %

SULFURIC ACID SOLUTION 95%

Kwas siarkowy roztwór 95%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	approx 0,0001 mbar (20°C)
Odor:	odorless	Density:	1,832 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -15°C	in water:	soluble
Boiling point:	approx 310°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 95% tech.

CHEM*325749501

5 l	10 l	Assay	95,0 ± 1,0 %
20 l	30 l	Density	approx 1,832 g/cm ³ (20 °C)

Sulfuric acid solution min. 95% pure

CHEM*425749500

100 ml	250 ml	Assay	min. 95,0 %
500 ml	1 l	Residue on roasting	max. 0,005 %
2.5 l	5 l	Substances reducing KMnO ₄ (as SO ₂)	max. 0,001 %
6 l	10 l	Nitrates (NO ₃)	max. 0,0005 %
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Selenium (Se)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid solution min. 95% pure p. a.**CHEM*115750002**

100 ml	250 ml	Assay	min. 95,0 %
500 ml	1 l	Residue on roasting	max. 0,001 %
2.5 l	5 l	Chlorides (Cl)	max. 0,001% %
6 l	10 l	Nitrates (NO ₃)	max. 0,0002 %
20 l	30 l	Substances reducing KMnO ₄	max. 0,0003 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Arsenic (As)	max. 0,000005 %
		Barium (Ba)	max. 0,00005 %
		Chromium (Cr)	max. 0,00005 %
		Zinc (Zn)	max. 0,00005 %
		Aluminium (Al)	max. 0,0001 %
		Cadmium (Cd)	max. 0,00005 %
		Cobalt (Co)	max. 0,00005 %
		Magnesium (Mg)	max. 0,00005 %
		Copper(Cu)	max. 0,00005 %
		Iron (Fe)	max. 0,0001 %
		Nickel (Ni)	max. 0,00005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Selenium (Se)	max. 0,0003 %
		Strontium (Sr)	max. 0,00005 %
		Lead(Pb)	max. 0,0002 %
		Manganese (Mn)	max. 0,00005 %
		Calcium (Ca)	max. 0,00005 %
		Density (20°C)	approx 1,832 g/cm ³

Sulfuric acid solution 95% (accumulator)**CHEM*331628908**

1 l	5 l	Assay	min. 95 %
10 l	20 l	Density (20 °C)	approx 1,832 g/cm ³
30 l	1000 l (luz)	Residue on roasting	max. 0,01 %
		Substances reducing KMnO ₄ (as SO ₂)	max. 0,0012 %
		Chlorides (Cl)	max. 0,0005 %
		Iron (Fe)	max. 0,003 %

SULFURIC ACID SOLUTION 98%

Kwas siarkowy roztwór 98%



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
P: 280, 301+330+331, 305+35+338, 309, 310
RID/ADR: 8, II UN: 1830



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	approx 0,0001 mbar (20°C)
Odor:	odorless	Density:	approx 1,8361 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	approx -15°C	in water:	soluble
Boiling point:	approx 310°C	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid solution 98% pure

CHEM*425749519

100 ml	250 ml	Assay	min. 98 %
500 ml	1 l	Residue on roasting	max. 0,005 %
2.5 l	5 l	Substances reducing KMnO ₄ (as SO ₂)	max. 0,001 %
6 l	10 l	Nitrates (NO ₃)	max. 0,0005 %
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Selenium (Se)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

Sulfuric acid 98% pure p. a.**CHEM*115750023**

100 ml	250 ml	Assay	98,0 ± 1 %
500 ml	1 l	Density (20°C)	approx 1,836 g/cm ³
2.5 l	5 l	Residue on roasting	max. 0,001 %
6 l	10 l	Chlorides (Cl)	max. 0,001% %
20 l	30 l	Nitrates (NO ₃)	max. 0,0002 %
		Subst. red. KMnO ₄	max. 0,0003 %
		Ammonia salt (NH ₄)	max. 0,0003 %
		Arsenic (As)	max. 0,000005 %
		Barium (Ba)	max. 0,00005 %
		Chromium (Cr)	max. 0,00005 %
		Zinc (Zn)	max. 0,00005 %
		Aluminium (Al)	max. 0,0001 %
		Cadmium (Cd)	max. 0,00005 %
		Magnesium (Mg)	max. 0,0002% %
		Iron (Fe)	max. 0,0001 %
		Nickel (Ni)	max. 0,00005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Lead(Pb)	max. 0,0002 %
		Manganese (Mn)	max. 0,00005 %
		Calcium (Ca)	max. 0,00005 %
		Appearance	colourless liquid

SULFURIC ACID STANDARD SOLUTION ($C \leq 0.5 \text{ MOL/L}$)

Kwas siarkowy roztwory mianowane



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid standard solution 0,0025 mol/l (0,005 N)

CHEM*815749514

500 ml	1 l	Titer	0,00249 – 0,00251 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,005 mol/l (0,01 N)

CHEM*815749510

500 ml	1 l	Titer	0,00498 – 0,00502 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,00625 mol/l (0,0125 N)

CHEM*815749611

500 ml	1 l	Titer	0,006225 – 0,006275 mol/l

Sulfuric acid standard solution 0,01 mol/l (0,02 N)

CHEM*815749505

500 ml	1 l	Titer	0,00996 – 0,01004 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,0125 mol/l (0,025 N) CHEM*815749512

500 ml	1 l	Titer	0,01245 – 0,01255 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,025 mol/l (0,05 N) CHEM*815749506

500 ml	1 l	Titer	0,0249 – 0,0251 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,05 mol/l (0,1 N) CHEM*815749501

500 ml	1 l	Titer	0,0498 – 0,0502 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,1 mol/l (0,2 N) CHEM*815749503

500 ml	1 l	Titer	0,0996 – 0,1004 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,125 mol/l (0,25 N) CHEM*815749513

500 ml	1 l	Titer	0,1245 – 0,1255 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,2 mol/l (0,4 N) CHEM*815749520

500 ml	1 l	Titer	0,1992 – 0,2008 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,25 mol/l (0,5 N) CHEM*815749507

500 ml	1 l	Titer	0,249 – 0,251 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,4 mol/l (0,8 N)**CHEM*815749610**

500 ml	1 l	Titer	0,3984 – 0,4016 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 0,5 mol/l (1 N)**CHEM*815749504**

500 ml	1 l	Titer	0,498 – 0,502 mol/l
2.5 l	3 l		
5 l			

SULFURIC ACID STANDARD SOLUTION (0,5 < C < 2 MOL/L)

Kwas siarkowy roztwory mianowane



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 315, 319
P: 280, 305+35+338
RID/ADR: 8, II

UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,063 g/cm ³ (20°C)
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid standard solution 1 mol/l (2 N)

CHEM*815749502

500 ml	1 l
2.5 l	3 l
5 l	

Titer

0,996 – 1,004 mol/l

SULFURIC ACID

STANDARD SOLUTION ($2 \leq C \leq 6 \text{ MOL/L}$)

Kwas siarkowy roztwory mianowane



M = 98,08 g/mol

CAS: 7664-93-9

WE: 231-639-5



H: 290, 314
 P: 280, 301+330+331, 305+35+338, 309, 310
 RID/ADR: 8, II UN: 2796



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sulfuric acid standard solution 2 mol/l (4 N)

CHEM*815749500

500 ml	1 l	Titer	1,992 – 2,008 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 2.5 mol/l (5 N)

CHEM*815749508

500 ml	1 l	Titer	2,49 – 2,51 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 3 mol/l (6 N)

CHEM*815749509

500 ml	1 l	Titer	2,988 – 3,012 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 4 mol/l (8 N)

CHEM*815749516

500 ml	1 l	Titer	3,984 – 4,016 mol/l
2.5 l	3 l		
5 l			

Sulfuric acid standard solution 5 mol/l (10 N)**CHEM*815749511**

500 ml

1 l

Titer

4,98 – 5,02 mol/l

2.5 l

3 l

5 l

Sulfuric acid standard solution 6 mol/l (12 N)**CHEM*815749612**

500 ml

1 l

Titer

5,976 – 6,024 mol/l

2.5 l

3 l

5 l

HYDROCHLORIC ACID ANALYTICAL WEIGHED AMOUNT

Kwas solny odważka analityczna

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable
P: not applicable
RID/ADR: not applicable

UN: not applicable



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	(20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid 0,01 mol/l (0,01N) analytical weighed amount CHEM*165753135

1 szt.	10 szt.	Concentration after dilution to 1000 ml at 20°C	0,01 mol/l ± 0,2 %

hydrochloric acid 0,02 mol/l (0,02N) analytical weighed amount CHEM*165753138

1 szt.	10 szt.	Concentration after dilution to 1000 ml at 20°C	0,02 mol/l ± 0,2 %

hydrochloric acid 0,05 mol/l (0,05N) analytical weighed amount CHEM*165753136

1 szt.	10 szt.	Concentration after dilution to 1000 ml at 20°C	0,05 mol/l ± 0,2 %

hydrochloric acid 0,1 mol/l (0,1N) analytical weighed amount CHEM*165753132

1 szt.	10 szt.	Concentration after dilution to 1000 ml at 20°C	0,1 mol/l ± 0,2 %

hydrochloric acid 0,2 mol/l (0,2N) analytical weighed amount CHEM*165753137

1 szt.	10 szt.	Concentration after dilution to 1000 ml at 20°C	0,2 mol/l ± 0,2 %

hydrochloric acid 0,5 mol/l (0,5N) analytical weighed amount CHEM*165753133

1 szt.		Concentration after dilution to 1000 ml at 20°C	0,5 mol/l ± 0,2 %

hydrochloric acid 1 mol/l (1N) analytical weighed amount CHEM*165753134

1 szt.		Concentration after dilution to 1000 ml at 20°C	1 mol/l ± 0,2 %

HYDROCHLORIC ACID SOLUTION 1%

Kwas solny roztwór 1%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,0032 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 1% pure

CHEM*425752840

1l	Assay	1,0 ± 0,1 %
	Residue on roasting (as SO ₄)	max. 0,002 %
	Sulphates (SO ₄)	max. 0,0005 %
	Sulphites (SO ₃)	max. 0,001 %
	Free chlorine (Cl ₂)	max. 0,0002 %
	Heavy metals (as Pb)	max. 0,0002 %
	Arsenic (As)	max. 0,00001 %
	Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 1% pure p. a.

CHEM*115752842

1l	Assay	1,0 ± 0,1 %
	Residue on roasting (as SO ₄)	max. 0,001 %
	Sulphates (SO ₄)	max. 0,0002 %
	Sulphites (SO ₃)	max. 0,0005 %
	Free chlorine (Cl ₂)	max. 0,0001 %
	Heavy metals (as Pb)	max. 0,0001 %
	Arsenic (As)	max. 0,000005 %
	Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 3%

Kwas solny roztwór 3%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,0132 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 3% pure

CHEM*425752831

2.5 l	3 l	Assay	3,0 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,002 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0005 %
60 l		Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 3% pure p. a.

CHEM*115750023

2.5 l	3 l	Assay	3,0 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,001 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0002 %
60 l		Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 5%

Kwas solny roztwór 5%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,023 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 5% tech.

CHEM*325752843

5 l	10 l	Assay	5,0 ± 0,1 %
20 l	30 l	Density	approx 1,023 g/cm ³ (20°C)
60 l			

hydrochloric acid solution 5% pure

CHEM*425752834

2.5 l	3 l	Assay	5,0 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,002 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0005 %
60 l		Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 5% pure p. a.

CHEM*115752830

2.5 l	3 l	Assay	5,0 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,001 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0002 %
60 l		Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 7,5%

Kwas solny roztwór 7,5%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,035 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 7,5% pure

CHEM*425752844

2.5 l	3 l	Assay	7,5 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,002 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0005 %
60 l		Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 7,5% pure p. a.

CHEM*115752845

2.5 l	3 l	Assay	7,5 ± 0,1 %
5 l	10 l	Residue on roasting (as SO ₄)	max. 0,001 %
20 l	30 l	Sulphates (SO ₄)	max. 0,0002 %
60 l		Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID 10%

Kwas solny roztwór 10%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 230, 315, 319, 335
P: 302+352, 304+340, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,048 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 10% tech.

CHEM*325752842

5 l	10 l	Assay	10,0 ± 0,5 %
20 l	30 l	Density	approx 1,048 g/cm ³ (20°C)
60 l			

hydrochloric acid solution 10% pure

CHEM*425752838

1 l	2.5 l	Assay	10,0 ± 0,5 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,002 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0005 %
30 l	60 l	Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 10% pure p. a.

CHEM*115752831

1 l	2.5 l	Assay	10,0 ± 0,5 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,001 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0002 %
30 l	60 l	Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID 15%*Kwas solny roztwór 15%***HCl**

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 230, 315, 319, 335
P: 302+352, 304+340, 305+35+338
RID/ADR: 8, III UN: 1789

**Physical and chemical properties:**

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,0726 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 15% tech.**CHEM*325752847**

5 l	10 l	Assay	15,0 ± 0,5 %
20 l	30 l	Density	approx 1,0726 g/cm ³ (20°C)
60 l			

HYDROCHLORIC ACID SOLUTION 18%

Kwas solny roztwór 18%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 230, 315, 319, 335
P: 302+352, 304+340, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,087 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 18% pure

CHEM*425752835

1l	2.5 l	Assay	18,0 ± 0,5 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,002 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0005 %
30 l	60 l	Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 18% pure p. a.

CHEM*115752838

1l	2.5 l	Assay	18,0 ± 0,5 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,001 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0002 %
30 l	60 l	Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 20%

Kwas solny roztwór 20%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 230, 315, 319, 335
P: 302+352, 304+340, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,098 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 20% tech.

CHEM*325752837

5 l	10 l	Assay	20,0 ± 1 %
20 l	30 l	Density	approx 1,098 g/cm ³ (20°C)
60 l			

hydrochloric acid solution 20% pure

CHEM*425752833

1 l	2.5 l	Assay	20,0 ± 1 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,002 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0005 %
30 l	60 l	Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 20% pure p. a.

CHEM*115752840

1 l	2.5 l	Assay	20,0 ± 1 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,001 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0002 %
30 l	60 l	Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 25%

Kwas solny roztwór 25%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 290, 314, 335
P: 280, 301+330+331, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,124 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 25% tech.

CHEM*325752835

5 l	10 l	Assay	25,0 ± 1,0 %
20 l	30 l	Density	approx 1,124 g/cm ³ (20°C)
60 l			

hydrochloric acid solution 25% pure

CHEM*425752839

1 l	2.5 l	Assay	25,0 ± 1,0 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,002 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0005 %
30 l	60 l	Sulphites (SO ₃)	max. 0,001 %
		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 25% pure p. a.

CHEM*115752836

1 l	2.5 l	Assay	25,0 ± 1,0 %
3 l	5 l	Residue on roasting (as SO ₄)	max. 0,001 %
10 l	20 l	Sulphates (SO ₄)	max. 0,0002 %
30 l	60 l	Sulphites (SO ₃)	max. 0,0005 %
		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 30%

Kwas solny roztwór 30%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 290, 314, 335
P: 280, 301+330+331, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	approx 1,149 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 30% pure

CHEM*425752837

500 ml	1 l	Assay	30,0 ± 1,0 %
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,002 %
5 l	10 l	Sulphates (SO ₄)	max. 0,0005 %
20 l	30 l	Sulphites (SO ₃)	max. 0,001 %
60 l		Free chlorine (Cl ₂)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %

hydrochloric acid solution 30% pure p. a.

CHEM*115752835

500 ml	1 l	Assay	30,0 ± 1,0 %
2.5 l	3 l	Residue on roasting (as SO ₄)	max. 0,001 %
5 l	10 l	Sulphates (SO ₄)	max. 0,0002 %
20 l	30 l	Sulphites (SO ₃)	max. 0,0005 %
60 l		Free chlorine (Cl ₂)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID SOLUTION 30-33%

Kwas solny roztwór 30-33%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 290, 314, 335
P: 280, 301+330+331, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	1,1494-1,1645 g/cm ³ (20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	approx -40°C - -25°C	in water:	soluble
Boiling point:	approx 85°C	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid solution 30-33% tech.

CHEM*325752839

1 l	5 l	Assay	30,0 -33,0 %
10 l	20 l	Density (20°C)	1,1494-1,1645 g/cm ³
30 l	60 l		

HYDROCHLORIC ACID SOLUTION 35-38%

Kwas solny roztwór 35-38%

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 290, 314, 335
P: 280, 301+330+331, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Vapour pressure:	no data
Colour:	colourless	Density:	approx 1,1655 g/cm ³ (20°C)
Odor:	sharp, duszący	Solubility:	
pH:	<1 (20°C)	in water:	soluble
Melting point:	approx -40°C do -25°C	in organic solvents:	no data
Boiling point:	approx 85°C		
Explosion limits:	not applicable		

hydrochloric acid solution 35-38% pure

CHEM*425752836

100 ml	250 ml	Assay	35,0 – 38,0 %
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,002 %
2.5 l	3 l	Sulphates (SO ₄)	max. 0,0005 %
5 l	10 l	Sulphites (SO ₃)	max. 0,001 %
20 l	30 l	Free chlorine (Cl ₂)	max. 0,0002 %
60 l		Arsenic (As)	max. 0,00001 %
		Iron (Fe)	max. 0,0003 %
		Heavy metals (as Pb)	max. 0,0002 %
		Density (20°C)	approx 1,1655 g/cm ³

hydrochloric acid solution 35-38% pure p. a.

CHEM*115752837

100 ml	250 ml	Assay	min. 35 max. 38 %
500 ml	1 l	Residue on roasting (as SO ₄)	max. 0,001 %
2.5 l	3 l	Sulphates (SO ₄)	max. 0,0002 %
5 l	10 l	Sulphites (SO ₃)	max. 0,0005 %
20 l	30 l	Free chlorine (Cl ₂)	max. 0,0001 %
60 l		Heavy metals (as Pb)	max. 0,0001 %
		Arsenic (As)	max. 0,000005 %
		Zinc (Zn)	max. 0,00005 %
		Aluminium (Al)	max. 0,0001 %
		Magnesium (Mg)	max. 0,00005 %
		Manganese (Mn)	max. 0,00005 %
		Copper (Cu)	max. 0,00005 %
		Nickel (Ni)	max. 0,00005 %
		Lead (Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,0001 %

HYDROCHLORIC ACID STANDARD SOLUTION (C < 3 MOL/L)

Kwas solny roztwory mianowane

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	no data
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid standard solution 0,001 mol/l (0,001 N)

CHEM*805313158

100 ml	500 ml	Titer	0,000996 – 0,001004 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,01 mol/l (0,01 N)

CHEM*805313163

100 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,02 mol/l (0,02 N)

CHEM*805313162

100 ml	500 ml	Titer	0,01992 – 0,02008 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,0357 mol/l (0,0357 N)

CHEM*805313170

1 l	Titer	0,03556 – 0,03584 mol/l

hydrochloric acid standard solution 0,05 mol/l (0,05 N) CHEM*805313177

100 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,1 mol/l (0,1 N) CHEM*805313160

100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,2 mol/l (0,2 N) CHEM*805313166

100 ml	500 ml	Titer	0,1992 – 0,2008 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,25 mol/l (0,2 N) CHEM*805313180

100 ml	500 ml	Titer	0,249 – 0,251 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,5 mol/l (0,5 N) CHEM*805313165

100 ml	500 ml	Titer	0,498 – 0,502 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 1 mol/l (1 N) CHEM*805313164

100 ml	500 ml	Titer	0,996 – 1,004 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 2 mol/l (2 N) CHEM*805313161

100 ml	500 ml	Titer	1,992 – 2,008 mol/l
1 l	2.5 l		
3 l	5 l		

HYDROCHLORIC ACID IN ETHANOL STANDARD SOLUTION (C < 3 MOL/L)

Kwas solny roztwory mianowane w etanolu

HCl/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,3% obj (ethanol)
Colour:	colourless	top:	19% obj (ethanol)
Odor:	odorless	viscosity dynamiczna:	1,078 mPa*s (ethanol)
pH:	approx 13,0 (20°C)	Vapour pressure:	60 hPa (ethanol)
Melting point:	-117°C (ethanol)	Density:	no data
Boiling point:	78°C (ethanol)	Solubility:	
Auto-ignition temperature:	425°C (ethanol)	in water:	soluble
Ignition temperature:	12°C (ethanol)	in organic solvents:	soluble
Explosion limits:			

hydrochloric acid standard solution 0,1 mol/l in ethanol

CHEM*805313176

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

Hydrochloric acid standard solution 1 mol/l in ethanol

CHEM*805313183

250 ml

500 ml

Titer

0,996 – 1,004 mol/l

1l

HYDROCHLORIC ACID STANDARD SOLUTION ($3 \leq C < 7$ MOL/L)

Kwas solny roztwory mianowane

HCl

M = 36,46 g/mol

CAS: 7647-01-0

WE: 231-595-7



H: 230, 315, 319, 335
P: 302+352, 304+340, 305+35+338
RID/ADR: 8, III UN: 1789



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	(20°C)
pH:	<1 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

hydrochloric acid standard solution 3 mol/l (3 N)

CHEM*805313167

100 ml	500 ml	Titer	2,988 – 3,012 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 3,5714 mol/l (3,5714 N)

CHEM*805313100

1 l	Titer	3,557 – 3,586 mol/l

hydrochloric acid standard solution 4 mol/l (4 N)

CHEM*805313168

100 ml	500 ml	Titer	3,984 – 4,016 mol/l
1 l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 5 mol/l (5 N)

CHEM*805313171

100 ml	500 ml	Titer	4,98 – 5,02 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

hydrochloric acid standard solution 6 mol/l (6 N)**CHEM*805313169**

100 ml	500 ml
1 l	2.5 l
3 l	5 l

Titer

5,976 – 6,024 mol/l

hydrochloric acid standard solution approx 11 mol/l**CHEM*805313186**

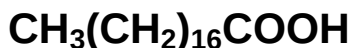
100 ml	250 ml
500 ml	1 l
2.5 l	3 l
5 l	10 l

Titer

approx 11 mol/l

STEARIC ACID

Kwas stearynowy



M = 284,48 g/mol

CAS: 57-11-4

WE: 200-313-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	rancid	Density:	0,94 g/cm ³ (20°C)
pH:	no data	Bulk density:	approx 400 - 500 kg/m ³
Melting point:	67-72 °C (lit.)	Solubility:	
Boiling point:	361 °C (lit.)	in water:	insoluble
Auto-ignition temperature:	395°C	in organic solvents:	ethanol approx 50 g/l
Ignition temperature:	196°C	(20°C)	

Stearic acid pure

CHEM*425754402

25 g	50 g	Iodine number	max. 1,5 g I/100g
100 g	250 g	Acid number	194,0 - 199,0 mg KOH/g
500 g	1 kg	Saponification number	194 – 201 mg KOH/g
		Water	max. 0,2%

Stearic acid pure p. a.

CHEM*115754402

5 g	10 g	Iodine number	max. 1 g I/100g
25 g	50 g	Acid number	186 - 191 mg KOH/g
100 g	250 g	Saponification number	186 – 193 mg KOH/g
500 g	1 kg	Water	max. 0,15 %

SULFANILIC ACID

Kwas sulfanilowy



M = 173,19 g/mol

CAS: 121-57-3

WE: 204-482-5



H: 315, 317, 319

P: 280, 302+352, 305+35+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	colourless	Density:	1,48 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 620 kg/m ³
pH:	2,5 (10 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	288°C z decompositionem	in water:	10 g/l (20°C)
Boiling point:	not applicable	in organic solvents:	insoluble
Auto-ignition temperature:	>400°C	log P _{OW} :	-2,16
Ignition temperature:	no data		
Explosion limits:	no data		

Sulfanilic acid pure

CHEM*425756007

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Substances insoluble in Na ₂ CO ₃	max. 0,02 %
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,02 %
1 kg		Nitrites (NO ₂)	max. 0,0005 %
		Chlorides (Cl)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,005 %

Sulfanilic acid pure p. a.

CHEM*115756008

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Substances insoluble in Na ₂ CO ₃	max. 0,01 %
250 g	500 g	Residue on roasting (as SO ₄)	max. 0,01 %
750 g	1 kg	Nitrites (NO ₂)	max. 0,0002 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %

5-SULFOSALICYLIC ACID DIHYDRATE

Kwas 5-sulfosalicylowy 2 hydrat



M = 254,22 g/mol

CAS: 5965-83-3

WE: 202-555-6



H: 302, 315, 319, 335

P: 260, 305+352, 305+35+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	0,89 g/cm ³ (20°C)
Odor:	sharp	Bulk density:	approx 310 kg/m ³
pH:	<0,5 (200 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	105-110°C	in water:	soluble (20°C)
Boiling point:	approx 225°C	in organic solvents:	no data
Auto-ignition temperature:	no data	log P _{ow} :	-0,91
Ignition temperature:	approx 150°C		
Explosion limits:	no data		

5-Sulfosalicylic acid dihydrate pure

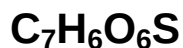
CHEM*425756404

25 g	50 g	Assay	min. 96,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Salicylic acid (C ₇ H ₆ O ₃)	max. 0,1 %
1 kg		Residue on roasting (as SO ₄)	max. 0,2 %
		Chlorides (Cl)	max. 0,004 %
		Sulphates (SO ₄)	max. 0,2 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,002 %
		Appearance	white crystals or white powder

5-Sulfosalicylic acid dihydrate pure p. a.

CHEM*115756405

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Salicylic acid (C ₇ H ₆ O ₃)	max. 0,05 %
1 kg		Residue on roasting (as SO ₄)	max. 0,1 %
		Chlorides (Cl)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,5 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Appearance	white crystals or white powder

5-SULFOSALICYLIC ACID SOLUTION 5%*Kwas 5-sulfosalicylowy roztwór 5%*

M = 254,22 g/mol

CAS: 97-05-2

WE: 202-555-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	acid	Solubility:	
Melting point:	no data	in water:	soluble (20°C)
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

5-sulfosalicylic acid solution 5%**CHEM*525756405**

500 ml

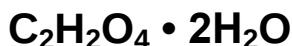
1l

Assay

5,0 ± 0,1 %

OXALIC ACID DIHYDRATE

Kwas szczawiowy 2 hydrat



M = 126,07 g/mol

CAS: 6153-56-6

WE: 205-634-3



H: 301, 312
P: 302+352
RID/ADR: 8, III

UN: 3261



Physical and chemical properties:

Character:	solid	Vapour pressure:	0,01hPa (18°C)
Colour:	white	Density:	1,65 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 900 kg/m ³
pH:	approx 1 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	189,5°C	in water:	87 g/l (10°C)
Boiling point:	157°C	in organic solvents:	ethanol, ethyl ether, acetone, THF
Auto-ignition temperature:	no data		
Ignition temperature:	no data	log P _{OW} :	-0,81
Explosion limits:	no data		

Oxalic acid dihydrate pure

CHEM*425758600

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Residue on roasting	max. 0,05 %
5 kg	10 kg	Total nitrogen (N)	max. 0,005 %
15 kg	25 kg	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,02 %
		Copper(Cu)	max. 0,005 %
		Lead(Pb)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

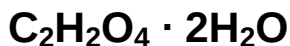
Oxalic acid dihydrate pure p. a.

CHEM*115758600

25 g	50 g	Assay	min. 99,5 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Residue on roasting	max. 0,01 %
1 kg	5 kg	Substances darkening under the influence of H ₂ SO ₄	passes test
10 kg	15 kg	Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Magnesium (Mg)	max. 0,002 %
		Copper(Cu)	max. 0,0005 %
		Lead(Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0002 %

OXALIC ACID ANALYTICAL WEIGHED AMOUNT

Kwas szczawiowy odważka analityczna



M = 126,07 g/mol

CAS: 6153-56-6

WE: 205-634-3



H: 301, 312
P: 302+352
RID/ADR: 8, III

UN: 3261



Physical and chemical properties:

Character:	solid	Vapour pressure:	0,01hPa (18°C)
Colour:	white	Density:	1,65 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 900 kg/m ³
pH:	approx 1 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	189,5°C	in water:	87 g/l (10°C)
Boiling point:	157°C (sublimuje)	in organic solvents:	ethanol, thyl ether, acetone, THF
Auto-ignition temperature:	no data		
Ignition temperature:	no data	log P _{OW} :	-0,81
Explosion limits:	no data		

Oxalic acid 0,05 mol/l analytical weighed amount

CHEM*165758801

1 szt.

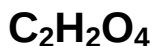
10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

OXALIC ACID STANDARD SOLUTION ($C \leq 0,5 \text{ MOL/L}$)

Kwas szczawiowy roztwory mianowane



M = 90,04 g/mol

CAS: 144-62-7

WE: 205-634-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	< 0,01 mmHg (20°C)
Odor:	odorless	Density:	(25°C)
pH:	approx 1	Solubility:	
Melting point:	not applicable	in water:	soluble
Boiling point:	not applicable	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Oxalic acid standard solution 0,00625 mol/l (0,0125 N) CHEM*815758602

500 ml	1l	Titer	0,006225 – 0,006275 mol/l

Oxalic acid standard solution 0,0125 mol/l (0,025 N) CHEM*815758604

500 ml	1l	Titer	0,01245 – 0,01255 mol/l

Oxalic acid standard solution 0,025 mol/l (0,05 N) CHEM*815758605

500 ml	1l	Titer	0,0249 – 0,0251 mol/l

Oxalic acid standard solution 0,05 mol/l (0,1 N) CHEM*815758607

500 ml	1l	Titer	0,0498 – 0,0502 mol/l

Oxalic acid standard solution 0,1 mol/l (0,2 N) CHEM*815758600

500 ml	1l	Titer	0,0996 – 0,1004 mol/l

Oxalic acid standard solution 0,25 mol/l (0,5 N) CHEM*

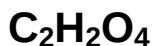
500 ml	1l	Titer	0,249 – 0,251 mol/l

Oxalic acid standard solution 0,5 mol/l (1 N) CHEM*815758603

500 ml	1l	Titer	0,498 – 0,502 mol/l

OXALIC ACID STANDARD SOLUTION (C > 0,5 MOL/L)

Kwas szczawiowy roztwory mianowane



M = 90,04 g/mol

CAS: 144-62-7

WE: 205-634-3



H: 302, 312
P: 302+352
RID/ADR: 8, III

UN: 3261



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	< 0,01 mmHg (20°C)
Odor:	odorless	Density:	approx 1,01 g/cm ³ (25°C)
pH:	approx 1	Solubility:	
Melting point:	not applicable	in water:	soluble
Boiling point:	not applicable	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Oxalic acid standard solution 1 mol/l (2 N)

CHEM*815758601

500 ml

1l

Titer

0,996 – 1,004 mol/l

TRICHLOROACETIC ACID

Kwas trichlorooctowy



M = 163,39 g/mol

CAS: 76-03-9

WE: 200-927-2



H: 314, 335, 410

P: 273, 280, 301+330+331, 305+35+338, 309, 310

RID/ADR: 8, II

UN: 1839



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	1 hPa (51°C)
Odor:	sharp	Density:	1,62 g/cm ³ (20°C)
pH:	approx 1 (50 g/l H ₂ O, 20°C)	Bulk density:	900 kg/m ³
Melting point:	54 - 58°C	Solubility:	
Boiling point:	196°C (760 mmHg)	in water:	1600 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	113°C	log P _{OW} :	1,645

Trichloroacetic acid pure

CHEM*425779709

25 g	50 g	Assay	min. 97,0 %
100 g	250 g	Water	max. 1,0 %
500 g	750 g	Dichloroacetic acid	max. 2,4 %
1 kg		Sulfuric acid (H ₂ SO ₄)	max. 0,5 %
		Iron (Fe)	max. 0,002 %

Trichloroacetic acid pure p. a.

CHEM*115779700

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Water	max. 0,5 %
500 g	750 g	Dichloroacetic acid	max. 1,2 %
1 kg		Sulfuric acid (H ₂ SO ₄)	max. 0,3 %
		Iron (Fe)	max. 0,001 %

TRICHLOROACETIC ACID SOLUTION 10% $\leq C < 25\%$

Kwas trichlorooctowy roztwory



M = 163,39 g/mol

CAS: 76-03-9

WE: 200-927-2



H: 314, 335, 410

P: 273, 280, 301+330+331, 305+35+338, 309, 310

RID/ADR: 8, II

UN: 2564



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	no data
pH:	approx1	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Trichloroacetic acid solution 10%

CHEM*115779703

100 ml	250 ml	Assay	10,0 ± 0,5 %
500 ml	1l		

Trichloroacetic acid solution 20%

CHEM*115779704

100 ml	250 ml	Assay	20,0 ± 0,5 %
500 ml	1l		

TRICHLOROACETIC ACID SOLUTION C $\geq$ 25%

Kwas trichlorooctowy roztwory



M = 163,39 g/mol

CAS: 76-03-9

WE: 200-927-2



H: 314, 335, 410

P: 273, 280, 301+330+331, 305+35+338, 309, 310

RID/ADR: 8, II

UN: 2564



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	no data
pH:	approx1	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	no data		

Trichloroacetic acid solution 30%

CHEM*115779701

100 ml	250 ml	Assay	30,0 ± 1,0 %
500 ml	1l		

Trichloroacetic acid solution 50%

CHEM*115779702

100 ml	250 ml	Assay	50,0 ± 1,0 %
500 ml	1l		

ETHYLENEDIAMINETETRAACETIC ACID

Kwas wersenowy



M = 292,25 g/mol

CAS: 60-00-4

WE: 200-449-4



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	white	Density:	0,86 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	670 - 870 kg/m ³
pH:	approx 2,5 (10 g/l H ₂ O, 23°C)	Solubility:	
Melting point:	250°C	in water:	approx 0,5 g/l
Boiling point:	>250°C		approx 2,2 g/l (80°C)
Auto-ignition temperature:	>100°C	in organic solvents:	no data
Ignition temperature:	>200°C	log P _{OW} :	-3,34
Explosion limits:	no data		

Ethylenediaminetetraacetic acid pure

CHEM*425932806

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 98,5 %
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,3 %
1 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg	12.5 kg	Copper(Cu)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

Ethylenediaminetetraacetic acid pure p. a.

CHEM*115932805

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,1 %
1 kg		Chlorides (Cl)	max. 0,005 %
		Magnesium (Mg)	max. 0,0005 %
		Copper(Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead(Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

ETHYLENEDIAMINETETRAACETIC ACID STANDARD SOLUTION

Kwas wersenowy roztwory mianowane



M = 292,25 g/mol

CAS: 60-00-4

WE: 200-449-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	not applicable
Odor:	odorless	Density:	no data
pH:	approx 2,5	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

Ethylenediaminetetraacetic acid standard solution 0,001 mol/l

CHEM*815932807

500 ml

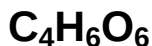
1l

Titer

0,000996 – 0,001004 mol/l

L-(+)-TARTARIC ACID

Kwas L (+) winowy



M = 150,09 g/mol

CAS: 87-69-4

WE: 201-766-0



H: 319

P: 305+35+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,76 g/cm ³ (20°C)
pH:	1-2 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 800 - 1000 kg/m ³
Melting point:	170-172°C	Solubility:	
Boiling point:	no data	in water:	approx 1390 g/l (20°C), 3430 g/l (100°C)
Auto-ignition temperature:	425°C	in organic solvents:	ethanol
Ignition temperature:	150°C		

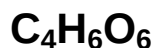
L-(+)-Tartaric acid pure

CHEM*425933603

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	1 kg	Residue on roasting (as SO ₄)	max. 0,05 %
5 kg	10 kg	Chlorides (Cl)	max. 0,005 %
		Phosphates (as PO ₄)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

L-(+)-Tartaric acid pure p. a.**CHEM*115933604**

25 g	50 g	Assay	min. 99,5 %
		Specific rotation (20°C, 10%, H ₂ O)	+12 ÷ +13 °
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	1 kg	Loss on drying (105°C)	max. 0,5 %
		Residue on roasting (as SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (as PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,002 %
		Oxalates	max. 0,03 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00002 %
		Magnesium (Mg)	max. 0,002 %
		Copper(Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead(Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

TARTARIC ACID SOLUTION 5%*Kwas winowy roztwór 5%*

M = 150,09 g/mol

CAS: 87-69-4

WE: 201-766-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	not applicable
Odor:	odorless	Density:	no data
pH:	1-2	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

Tartaric acid solution 5% pure p. a.**CHEM*525933604**

100 ml	250 ml	Assay	5,0 ± 0,1 %
500 ml	1 l		
5 l			

LITMUS*Lakmus***(C.I. 1242)**

M = not applicable

CAS: 1393-92-6

WE: 215-739-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	solid	Explosion limits:	no data
Colour:	blue-purple	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	approx 520 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	60 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol - 3 g/l (20°C)
Ignition temperature:	no data		

Litmus**CHEM*215950806**

5 g	10 g	Appearance	blue granules
20 g		Solubility (10 mg/ml, water)	passes test
		pH sensitivity	passes test

LACTOSE MONOHYDRATE

Laktoza 1 hydrat



M = 360,32 g/mol

CAS: 10039-26-6

WE: 200-559-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	0,5 g/cm ³
pH:	6-7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	225°C	Solubility:	
Boiling point:	not applicable	in water:	216 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Lactose monohydrate pure

CHEM*445955307

25 g	50 g	Specific rotation (20°C, 10%, H ₂ O)	+54,4 ÷ +55,9°
100 g	250 g	Water	4,5 - 5,5 %
500 g	750 g	Heavy metals (as Pb)	max. 0,0005 %
1 kg	5 kg		
10 kg	15 kg		
25 kg			

Lactose monohydrate pure p. a.

CHEM*115955307

25 g	50 g	Specific rotation (20°C, 10%, H ₂ O)	+54,4 ÷ +55,9°
100 g	250 g	Water	4,5 - 5,5 %
500 g	750 g	Acidity or alkalinity	max. 0,4 ml 0,1N NaOH
1 kg	5 kg	Absorbance UV	passes test
		Sulphates ash	max. 0,1 %
		Heavy metals (as Pb)	max. 0,0005 %

LITHIUM CHLORIDE MONOHYDRATE

Litu chlorek 1 hydrat



M = 60,42 g/mol

CAS: 16712-20-2

WE: 231-212-3



H: 302, 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	no data
pH:	approx 5,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	614°C	Solubility:	
Boiling point:	1360°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Lithium chloride monohydrate pure

CHEM*426026609

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	min. 96,5 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg		Free basic (as LiOH)	max. 0,02 %
		Free acids (as HCl)	max. 0,03 %
		Nitrates (NO ₃)	max. 0,004 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,02 %
		Barium (Ba)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Potassium (K)	max. 0,2 %
		Sodium (Na)	max. 0,2 %

Lithium chloride monohydrate pure p. a.**CHEM*116026600**

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	min.. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Free basic (as LiOH)	max. 0,01 %
		Free acids (as HCl)	max. 0,02 %
		Nitrates (NO ₃)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,01 %
		Barium (Ba)	max. 0,003 %
		Calcium (Ca)	max. 0,005 %
		Potassium (K)	max. 0,1 %
		Sodium (Na)	max. 0,1 %

LITHIUM CHLORIDE STANDARD SOLUTION (C < 4,5 MOL/L)

Litu chlorek roztwory mianowane

LiCl

M = 42,39 g/mol

CAS: 7447-41-8

WE: 231-212-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH: approx 5,5 (50 g subst. st. /l H ₂ O, 20°C)		Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol

Lithium chloride standard solution 0,1 mol/l

CHEM*816026601

100 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

Lithium chloride standard solution 0,5 mol/l

CHEM*816026602

100 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

Lithium chloride standard solution 1 mol/l

CHEM*816026603

100 ml

500 ml

Titer

0,996 – 1,004 mol/l

1l

LITHIUM CHLORIDE

STANDARD SOLUTION IN ETANOL (C < 4,5 MOL/L)

Litu chlorek roztwory mianowane w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Forma:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Melting point:	no data	Density:	no data
Boiling point:	no data	Solubility:	
Auto-ignition temperature:	approx 425°C	in water:	soluble
Ignition temperature:	approx 23°C	in organic solvents:	ethanol

Lithium chloride standard solution 0,1 mol/l in ethanol

CHEM* 816026605

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

Lithium chloride standard solution 0,5 mol/l in ethanol

CHEM* 816026606

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

Lithium chloride standard solution 1 mol/l in ethanol

CHEM* 816026604

250 ml

500 ml

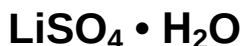
Titer

0,996 – 1,004 mol/l

1l

LITHIUM SULFATE MONOHYDRATE

Litu siarczan 1 hydrat



M = 127,95 g/mol

CAS: 10102-25-7

WE: 233-820-4



H: 302

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,22 g/cm ³ (20°C)
pH:	approx 8 (40 g/l H ₂ O, 20°C)	Bulk density:	~940 kg/m ³
Melting point:	845°C	Solubility:	
Boiling point:	no data	in water:	295,5 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Lithium sulfate monohydrate pure

CHEM*426044002

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	min. 96,0 %
500 g	750 g	Chlorides (Cl)	max. 0,004 %
1 kg		Heavy metals (as Pb)	max. 0,002 %
		Potassium (K)	max. 0,2 %
		Sodium (Na)	max. 0,2 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,004 %

Lithium sulfate monohydrate pure p. a.

CHEM*116044003

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Free acids (as H ₂ SO ₄)	max. 0,02 %
		Free basic (as LiOH)	max. 0,01 %
		Nitrates (NO ₃)	max. 0,003 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Potassium (K)	max. 0,1 %
		Sodium (Na)	max. 0,1 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

LITHIUM CARBONATE

Litu węglan



M = 73,89 g/mol

CAS: 554-13-2

WE: 209-062-5



H: 302, 319

P: 262, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Forma:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	0,75 mmHg (610°C)
Odor:	odorless	Density:	2,1 g/cm ³ (20°C)
pH:	9 -11 (1 g/l H ₂ O, 20°C)	Bulk density:	approx 200 kg/m ³
Melting point:	732°C	Solubility:	
Decomposition temperature:	600°C	in water:	10 g/l (20°C), 7 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Lithium carbonate pure

CHEM*426047005

25 g	50 g	Appearance	white crystals
100 g	250 g	Assay	min. 98,0%
500 g	750 g	Substances insoluble in HCl	max. 0,02 %
1 kg		Loss on drying (200°C)	max. 2,0 %
		Chlorides (Cl)	max. 0,02%
		Sulphates (SO ₄)	max. 0,2%
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,005%

Lithium carbonate pure p. a.

CHEM*116047006

25 g	50 g	Appearance	white crystals
100 g	250 g	Assay	min. 99,0%
500 g	750 g	Substances insoluble in HCl	max. 0,01 %
1 kg		Nitrates (NO ₃)	max. 0,0005 %
		Chlorides (Cl)	max. 0,005%
		Sulphates (SO ₄)	max. 0,2%
		Ammonia salt (NH ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,002 %
		Potassium (K)	max. 0,01%
		Sodium (Na)	max. 0,1 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002%

LITHIUM HYDROXIDE MONOHYDRATE

Litu wodorotlenek 1 hydrat



M = 41,96 g/mol

CAS: 1310-66-3

WE: 215-183-4



H: 301, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 2680



Physical and chemical properties:

Forma:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,83g/cm ³
pH:	12 (50 g/l H ₂ O, 50°C)	Bulk density:	approx 650 kg/m ³
Melting point:	426°C	Solubility:	
Boiling point:	924°C	in water:	124 g/dm ³ (20°C); 179 g/dm ³ (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Lithium hydroxide monohydrate pure

CHEM*426048709

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,01 %
500 g	750 g	Lithium carbonate (Li ₂ CO ₃)	max. 2,0 %
1 kg	5 kg	Chlorides (Cl)	max. 0,03 %
		Sulphates (SO ₄)	max. 0,02 %
10 kg	15 kg	Magnesium (Mg)	max. 0,01 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,03 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

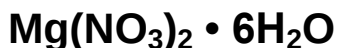
Lithium hydroxide monohydrate pure p. a.

CHEM*116048708

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,005 %
500 g	750 g	Lithium carbonate (Li ₂ CO ₃)	max. 1,0 %
1 kg	5 kg	Chlorides (Cl)	max. 0,015 %
		Sulphates (SO ₄)	max. 0,01 %
15 kg		Magnesium (Mg)	max. 0,005 %
		Lead (Pb)	max. 0,0001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,015 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,0001 %

MAGNESIUM NITRATE HEXAHYDRATE

Magnezu azotan 6 hydrat



M = 256,41 g/mol

CAS: 13446-18-9

WE: 233-826-7



H: 315, 319, 335

P: 262

RID/ADR: 5.1, III

UN: 1474



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,636 g/cm ³ (20°C)
pH:	5,0 - 7,0 (25°C, 5%, H ₂ O)	Bulk density:	700-800 kg/m ³
Melting point:	89°C	Solubility:	
Boiling point:	no data	in water:	420 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium nitrate hexahydrate pure

CHEM*426117700

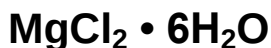
25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg	2 kg	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Barium (Ba)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,001 %

Magnesium nitrate hexahydrate pure p. a.**CHEM*116117701**

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	pH (5%, 20°C)	4,0 – 7,0
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
		Ammonia salt (NH ₄)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,002 %
		Manganese (Mn)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Strontium (Sr)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

MAGNESIUM CHLORIDE HEXAHYDRATE

Magnezu chlorek 6 hydrat



M = 203,30 g/mol

CAS: 7791-18-6

WE: 232-094-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	approx 1,57 g/cm ³ (20°C)
pH:	5,0 - 6,5 (50 g/l H ₂ O)	Bulk density:	no data
Melting point:	116°C	Solubility:	
Boiling point:	not applicable	in water:	1670 g/l (20°C), 3670 g/l (100°C)
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable	in organic solvents:	no data

Magnesium chloride hexahydrate pure

CHEM*426120509

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Free acids(as HCl)	max. 0,0045 %
1 kg	2 kg	Total nitrogen (N)	max. 0,005 %
5 kg	10 kg	Phosphates (as PO ₄)	max. 0,002 %
15 kg	20 kg	Sulphates (SO ₄)	max. 0,005 %
25 kg		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Magnesium chloride hexahydrate pure p. a.**CHEM*116120500**

25 g	50 g	Assay	min 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Free acids(as HCl)	max. 0,0009 %
1 kg	2 kg	Total nitrogen (N)	max. 0,001 %
5 kg	10 kg	Phosphates (as PO ₄)	max. 0,0005 %
15 kg	25 kg	Sulphates (SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Barium (Ba)	max. 0,002 %
		Zinc (Zn)	max. 0,003 %
		Potassium (K)	max. 0,008 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

MAGNESIUM CHLORIDE ANALYTICAL WEIGHED AMOUNT

Magnezu chlorek odważka analityczna

MgCl₂

M = 203,30 g/mol

CAS: 7786-30-3

WE: 232-094-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	approx 1,57 g/cm ³ (20°C)
pH:	5,0 - 6,5 (50 g/l H ₂ O)	Bulk density:	no data
Melting point:	116°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	1670 g/l (20°C), 3670 g/l (100°C)
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable	in organic solvents:	no data

magnesium chloride 0,01 mol/l analytical weighed amount

CHEM*166120500

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

MAGNESIUM CHLORIDE STANDARD SOLUTION

Magnezu chlorek roztwór mianowany



M = 95,21 g/mol

CAS: 7786-30-3

WE: 232-094-6

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

magnesium chloride standard solution 0,02 mol/l

CHEM*816120502

500 ml	1l	Titer	0,01992 – 0,02008 mol/l

magnesium chloride standard solution 0,05 mol/l

CHEM*816120500

500 ml	1l	Titer	0,0498 – 0,0502 mol/l

magnesium chloride standard solution 0,1 mol/l

CHEM*816120503

500 ml	1l	Titer	0,0996 – 0,1004 mol/l

magnesium chloride standard solution 0,5 mol/l

CHEM*816120501

500 ml	1l	Titer	0,498 – 0,502 mol/l

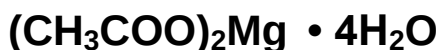
magnesium chloride standard solution 1 mol/l

CHEM*816120504

500 ml	1l	Titer	0,996 – 1,004 mol/l

MAGNESIUM ACETATE TETRAHYDRATE

Magnezu octan 4 hydrat



M = 214,46 g/mol

CAS: 16674-78-5

WE: 205-554-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,45 g/cm ³ (20°C)
pH:	5,0 - 8,0 (50 g/l H ₂ O, 20°C)	Bulk density:	510 kg/m ³
Melting point:	80°C	Solubility:	
Boiling point:	>131°C	in water:	1200 g/l (15°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium acetate tetrahydrate pure

CHEM*426134001

25 g	50 g	Appearance	colourless, crystalline powder
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Barium (Ba)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

Magnesium acetate tetrahydrate pure p. a.

CHEM*116134002

25 g	50 g	Appearance	colourless, crystalline powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Barium (Ba)	max. 0,0015 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

MAGNESIUM SULFATE

Magnezu siarczan bezwodny



M = 120,36 g/mol

CAS: 7487-88-9

WE: 231-298-2

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	< 0,1 mmHg (20°C)
Odor:	odorless	Density:	2,07 g/cm ³ (20°C)
pH:	9 (340 g/l H ₂ O, 20°C)	Bulk density:	approx 1300 kg/m ³
Melting point:	>1120-1150°C	Solubility:	
Boiling point:	no data	in water:	340 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium sulfate pure

CHEM*426137606

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 98,0 %
500 g	1 kg	Substances insoluble in water	max. 0,02 %
3 kg	5 kg	Residue on roasting	max. 2,5 %
10 kg	25 kg	Chlorides (Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Manganese (Mn)	max. 0,005 %
		Calcium (Ca)	max. 0,1 %
		Iron (Fe)	max. 0,002 %

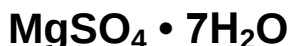
Magnesium sulfate pure p. a.

CHEM*116137606

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 98,5 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		Residue on roasting	max. 1,5 %
		Nitrates (NO ₃)	max. 0,004 %
		Chlorides (Cl)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Manganese (Mn)	max. 0,002 %
		Calcium (Ca)	max. 0,04 %
		Iron (Fe)	max. 0,001 %

MAGNESIUM SULFATE HEPTAHYDRATE

Magnezu siarczan 7 hydrat



M = 246,48 g/mol

CAS: 10034-99-8

WE: 231-298-2

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	< 0,1 mmHg (20°C)
Odor:	odorless	Density:	1,67 g/cm ³ (20°C)
pH:	5,0 - 8,0 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	decomposition >150°C	Solubility:	
Boiling point:	not applicable	in water:	710 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium sulfate heptahydrate pure

CHEM*426137605

100 g	250 g	Appearance	colourless crystals
500 g	750 g	Assay	98,5 – 102,0 %
1 kg	5 kg	pH (5%, 20°C)	5,5 – 8,0
10 kg	15 kg	Substances insoluble in water	max. 0,01 %
20 kg	25 kg	Chlorides (Cl)	max. 0,0035 %
		Phosphates (PO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0002 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,002 %

Magnesium sulfate heptahydrate pure p. a.

CHEM*116137800

15 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	99,0 - 100,5 %
500 g	750 g	pH (5%, 20°C)	5,5 – 8,0
1 kg	5 kg	Substances insoluble in water	max. 0,005 %
10 kg	15 kg	Chlorides (Cl)	max. 0,002 %
25 kg		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Manganese (Mn)	max. 0,002 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,0005 %

MAGNESIUM SULFATE ANALYTICAL WEIGHED AMOUNT

Magnezu siarczan odważka analityczna

MgSO₄

M = 120,36 g/mol

CAS: 7487-88-9

WE: 231-298-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	< 0,1 mmHg (20°C)
Odor:	odorless	Density:	2,07 g/cm ³ (20°C)
pH:	9 (340 g/l H ₂ O, 20°C)	Bulk density:	approx 1300 kg/m ³
Melting point:	>1120-1150°C	Solubility:	
Boiling point:	no data	in water:	340 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium sulfate 0,01 mol/l analytical weighed amount

CHEM*166137803

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

Magnesium sulfate 0,05 mol/l analytical weighed amount

CHEM*166137802

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

MAGNESIUM SULFATE STANDARD SOLUTION

Magnezu siarczan roztwory mianowane

MgSO₄

M = 120,36 g/mol

CAS: 7487-88-9

WE: 231-298-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	no data	Density:	
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Magnesium sulfate standard solution 0,005 mol/l

CHEM*816137804

500 ml	1l	Titer	0,00498 – 0,00502 mol/l

Magnesium sulfate standard solution 0,01 mol/l

CHEM*816137801

500 ml	1l	Titer	0,00996 – 0,01004 mol/l

Magnesium sulfate standard solution 0,05 mol/l

CHEM*816137802

500 ml	1l	Titer	0,0498 – 0,0502 mol/l

Magnesium sulfate standard solution 0,1 mol/l

CHEM*816137800

500 ml	1l	Titer	0,0996 – 0,1004 mol/l

Magnesium sulfate standard solution 0,5 mol/l

CHEM*816137803

500 ml	1l	Titer	0,498 – 0,502 mol/l

MAGNESIUM OXIDE

Magnezu tlenek

MgO

M = 40,3 g/mol

CAS: 1309-48-4

WE: 215-171-9

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	colourless	Density:	approx 3,58 g/cm ³ (25°C)
Odor:	odorless	Bulk density:	approx 200 kg/m ³
Melting point:	2800°C	Solubility:	
Boiling point:	3600°C	in water:	insoluble
Auto-ignition temperature:	not applicable	in other solvents:	soluble in acids, ammonia slat,
Ignition temperature:	not applicable		insoluble in ethanol
Explosion limits:	not applicable		

Magnesium oxide pure

CHEM*426140200

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 95,0 %
500 g	750 g	Substances insoluble in HCl	max. 0,1 %
1 kg		Residue on roasting (800°C)	max. 8 %
		Calcium oxide (CaO)	max. 1,5 %
		Lead (Pb)	max. 0,005 %

Magnesium oxide pure p. a.

CHEM*116140200

25 g	50 g	Assay	min. 97,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,02 %
500 g	750 g	Chlorides (Cl)	max. 0,01 %
1 kg		Sulphates (SO ₄)	max. 0,02 %
		Barium (Ba)	max. 0,005 %
		Lead (Pb)	max. 0,003 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,005 %
		Appearance	white powder

MAGNESIUM CARBONATE HYDROXIDE PENTAHYDRATE

Magnezu węglan zasadowy



M = 485,65 g/mol

CAS: 56378-72-4

WE: 235-192-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,16 g/cm ³ (20°C)
pH:	approx 10,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 290 kg/m ³
Melting point:	700°C	Solubility:	
Boiling point:	>700°C	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Magnesium carbonate hydroxide pentahydrate pure

CHEM*426143009

25 g	50 g	Appearance	white powder
100 g	250 g	Magnesium (Mg)	min. 24,0 %
500 g	750 g	Substances insoluble in water	max. 1,0 %
1 kg		Chlorides (Cl)	max. 0,05 %
		Sulphates (SO ₄)	max. 0,3 %
		Heavy metals (as Pb)	max. 0,005 %
		Calcium (Ca)	max. 1,0 %
		Iron (Fe)	max. 0,04 %

Magnesium carbonate hydroxide pentahydrate pure p. a.

CHEM*116142000

25 g	50 g	Appearance	white powder
100 g	250 g	Magnesium (Mg)	min. 24,0 %
500 g	750 g	Substances insoluble in water	max. 1,0 %
1 kg		Chlorides (Cl)	max. 0,03 %
		Sulphates (SO ₄)	max. 0,2 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Calcium (Ca)	max. 0,4 %
		Iron (Fe)	max. 0,02 %

D-(+)-MALTOSE MONOHYDRATE

Maltoza 1 hydrat



M = 360,32 g/mol

CAS: 6363-53-7

WE: 200-716-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,54 g/cm ³ (20°C)
pH:	7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 320 kg/m ³
Melting point:	160 - 165°C	Solubility:	
Boiling point:	no data	in water:	1080 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	insoluble
Ignition temperature:	no data		in ethanol

D-(+)-Maltose monohydrate pure

CHEM*446153008

25 g	50 g	Assay	~ 97%
100 g	250 g	Specific rotation(20°C,4%, H ₂ O, NH ₃)	+128 ÷ + 132°
500 g	1 kg	Loss on drying	max. 6%
		Residue on roasting (as SO ₄)	max. 0,1%
		Chlorides (Cl)	max. 0,005%
		Sulphates (SO ₄)	max. 0,005%
		Arsenic (As)	max. 0,00005%
		Copper(Cu)	max. 0,001%
		Lead (Pb)	max. 0,0005%
		Iron (Fe)	max. 0,0005%
		Solubility	passes test

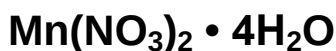
D-(+)-Maltose monohydrate pure p. a.

CHEM*116153008

25 g	50 g	Assay	~ 98%
100 g	250 g	Specific rotation (20°C,4%, H ₂ O, NH ₃)	+128 ÷ + 132°
500 g	1 kg	Loss on drying	max. 5%
		Residue on roasting (as SO ₄)	max. 0,05%
		Chlorides (Cl)	max. 0,005%
		Sulphates (SO ₄)	max. 0,005%
		Arsenic (As)	max. 0,00005%
		Copper(Cu)	max. 0,001%
		Lead (Pb)	max. 0,0005%
		Iron (Fe)	max. 0,0005%
		Solubility (10%, H ₂ O)	passes test

MANGANESE (II) NITRATE TETRAHYDRATE

Manganu azotan 4 hydrat



M = 251,01 g/mol

CAS: 20694-39-7

WE: 233-828-8



H: 272

P: 210

RID/ADR: 5.1, III

UN: 2724



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	pink-red	Vapour pressure:	not applicable
Odor:	characteristic	Density:	2,12 g/cm ³ (20°C)
pH:	approx 3 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 750 - 950 kg/m ³
Melting point:	37,1°C	Solubility:	
Boiling point:	no data, approx 100°C	in water:	3800 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Manganese (II) nitrate tetrahydrate pure

CHEM*426158409

25 g	50 g	Assay	min. 97,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	1 kg	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Ammonia salt (NH ₄)	max. 0,1 %
		Zinc (Zn)	max. 0,05 %
		Cadmium (Cd)	max. 0,002 %
		Magnesium (Mg)	max. 0,01 %
		Copper (Cu)	max. 0,002 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

Manganese (II) nitrate tetrahydrate pure p. a.**CHEM*116158400**

25 g	50 g	Assay	min. 98,5 %
		Substances insoluble in water	max. 0,005 %
100 g	250 g	Chlorides (Cl)	max. 0,001 %
500 g	1 kg	Sulphates (SO ₄)	max. 0,002 %
		Ammonia salt (NH ₄)	max. 0,05 %
5 kg	10 kg	Zinc (Zn)	max. 0,005 %
		Cadmium (Cd)	max. 0,0005 %
		Magnesium (Mg)	max. 0,002 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,002 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Calcium (Ca)	max. 0,0005 %
		Iron (Fe)	max. 0,001 %

MANGANESE (II) NITRATE STANDARD SOLUTION (C < 1,5 MOL/L)

Manganu (II) azotan roztwory mianowane



M = 178,95 g/mol

CAS: 10377-66-9

WE: 233-828-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	not applicable
pH:	approx 3	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Manganese (II) nitrate standard solution 0,01 mol/l

CHEM*816158400

500 ml

1l

Titer

0,00996 – 0,01004 mol/l

Manganese (II) nitrate standard solution 0,05 mol/l

CHEM*816158401

500 ml

1l

Titer

0,0498 – 0,0502 mol/l

Manganese (II) nitrate standard solution 0,1 mol/l

CHEM*816158402

500 ml

1l

Titer

0,0996 – 0,1004 mol/l

MANGANESE (II) CHLORIDE TETRAHYDRATE

Manganu (II) chlorek 4 hydrat



M = 197,91 g/mol

CAS: 13446-34-9

WE: 231-869-6



H: 302, 411

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	pink-red	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,01 g/cm ³ (20°C)
pH:	approx 3,5 – 6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1150 kg/m ³
Melting point:	58°C	Solubility:	
Boiling point:	>100°C	in water:	1980 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Manganese (II) chloride tetrahydrate pure

CHEM*426159603

25 g	50 g	Appearance	pink crystalline powder
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg	5 kg	Substances reducing KMnO ₄ (as O)	max. 0,001 %
10 kg	20 kg	Sulphates (SO ₄)	max. 0,02 %
		Zinc (Zn)	max. 0,02 %
		Copper(Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Sodium, potassium, calcium, magnesium (Na+K+Ca+Mg)	max. 0,06 %
		Iron (Fe)	max. 0,002 %

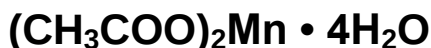
Manganese (II) chloride tetrahydrate pure p. a.

CHEM*116159604

25 g	50 g	Appearance	pink crystalline powder
100 g	250 g	Assay	min. 99,0%
500 g	750 g	pH (5%, 20°C)	3.5 - 6.0 (20°C)
1 kg	5 kg	Substances reducing KMnO ₄ (as O)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Copper(Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,002 %
		Lead (Pb)	max. 0,0005 %
		Sodium, potassium, calcium, magnesium (Na+K+Ca+Mg)	max. 0,02 %
		Iron (Fe)	max. 0,0005 %

MANGANESE (II) ACETATE TETRAHYDRATE

Manganu octan 4 hydrat



M = 245,09 g/mol

CAS: 6156-78-1

WE: 211-334-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red	Vapour pressure:	not applicable
Odor:	no data	Density:	1,589 g/cm ³ (25°C)
pH:	no data	Bulk density:	approx 730 kg/m ³
Melting point:	80°C	Solubility:	
Boiling point:	no data	in water:	340 g/l
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Manganese (II) acetate tetrahydrate pure

CHEM*426167508

25 g	50 g	Assay	min. 98,0%
100 g	250 g	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,004 %
500 g	750 g	Calcium (Ca)	max. 0,001 %
		Cadmium (Cd)	max. 0,001 %
1 kg	5 kg	Cobalt (Co)	max. 0,001 %
10 kg	25 kg	Copper(Cu)	max. 0,001 %
		Potassium (K)	max. 0,002 %
		Sodium (Na)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Manganese (II) acetate tetrahydrate pure p. a.

CHEM*116167509

25 g	50 g	Assay	min. 99,0%
100 g	250 g	Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,002 %
500 g	750 g	Calcium (Ca)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
1 kg	5 kg	Cobalt (Co)	max. 0,0005 %
		Copper(Cu)	max. 0,0005 %
		Potassium (K)	max. 0,001 %
		Sodium (Na)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

MANGANESE (II) SULFATE

Manganu siarczan bezwodny



M = 151,00 g/mol

CAS: 7785-87-7

WE: 232-089-9



H: 273, 411
P: 273, 314
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	pink	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,25 g/cm ³ (20°C)
pH:	3,0-3,5 (50g/l, 20°C)	Bulk density:	no data
Melting point:	700°C	Solubility:	
Boiling point:	850°C	in water:	762 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	soluble in alcohols, insoluble in ether
Ignition temperature:	not applicable		

Manganese (II) sulfate pure

CHEM*426169409

25 g	50 g	Assay	min. 98%
100 g	250 g	Substances insoluble in water	max. 0,01%
500 g	750 g	Subst. reducing KMnO ₄	max. 0,001%
1 kg		Iron (Fe)	max. 0,002%
		Heavy metals (as Pb)	max. 0,003%
		Sodium, potassium, calcium, magnesium (Na+K+Ca+Mg)	max. 0,5%
		Zinc (Zn)	max. 0,02%
		Chlorides (Cl)	max. 0,005%
		Nickel (Ni)	max. 0,01%
		Appearance	white or pink powder

Manganese (II) sulfate pure p. a.

CHEM*116169408

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Subst. reducing KMnO ₄	max. 0,0005 %
1 kg		Iron (Fe)	max. 0,001 %
		Chlorides (Cl)	max. 0,002 %
		Lead (Pb)	max. 0,001 %
		Nickel (Ni)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Sodium, potassium, calcium, magnesium (Na+K+Ca+Mg)	max. 0,1 %

MANGANESE (II) SULFATE MONOHYDRATE

Manganu siarczan 1 hydrat



M = 169,01 g/mol

CAS: 10034-96-5

WE: 232-089-9



H: 273, 411
P: 273, 314
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	pink	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,95 g/cm ³ (20°C)
pH:	3-3,5 (50g/l, 20°C)	Bulk density:	~ 1000 - 1200 kg/m ³
Melting point:	117°C (decomposition)	Solubility:	
Boiling point:	no data	in water:	762 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	soluble in alcohols, insoluble in ether
Ignition temperature:	not applicable		

Manganese (II) sulfate monohydrate pure

CHEM*426169408

25 g	50 g	Appearance	pink crystals or crystalline powder
100 g	250 g	Assay	min. 98,0 %
		Substances insoluble in water	max. 0,02 %
500 g	750 g	Chlorides (Cl)	max. 0,005 %
		Zinc (Zn)	max. 0,02 %
1 kg	5 kg	Nickel (Ni)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
10 kg	15 kg	Iron (Fe)	max. 0,002 %

Manganese (II) sulfate monohydrate pure p. a.

CHEM*116169409

25 g	50 g	Appearance	pink crystals or crystalline powder
100 g	250 g	Assay	99,0 - 101 %
		Residue on roasting	10,0 – 12,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
		Subst. reducing KMnO ₄ (as O ₂)	passes test
1 kg	2 kg	Chlorides (Cl)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
5 kg	10 kg	Zinc (Zn)	max. 0,005 %
		Magnesium (Mg)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

MANGANESE (II) CARBONATE

Manganu węglan bezwodny



M = 114,95 g/mol

CAS: 598-62-9

WE: 209-942-9

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white - pink	Vapour pressure:	not applicable
Odor:	no data	Density:	3,7 g/cm ³ (25°C)
pH:	no data	Bulk density:	no data
Melting point:	>200°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in alcohol
Ignition temperature:	not applicable		

Manganese (II) carbonate pure

CHEM*426172002

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in HNO ₃	max. 0,01 %
500 g	750 g	Iron (Fe)	max. 0,001 %
1 kg		Zinc (Zn)	max. 0,04 %
		Sulphates (SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %

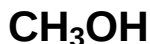
Manganese (II) carbonate pure p. a.

CHEM*116142000

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in HNO ₃	max. 0,005 %
500 g	750 g	Iron (Fe)	max. 0,0005 %
1 kg		Zinc (Zn)	max. 0,02 %
		Sulphates (SO ₄)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

METHANOL

Metanol



M = 32,04 g/mol

CAS: 67-56-1

WE: 200-659-6



H: 225, 301, 311, 331, 370
P: 210, 233, 280, 302+352, 309, 310
RID/ADR: 3 (6.1), II UN: 1230



Physical and chemical properties:

Character:	liquid	top:	44% v/v
Colour:	colourless	Viscosity w temp. 20°C:	0,599 mPa·s
Odor:	aromatic	Vapour pressure:	128 mbar (20°C)
Melting point:	-98°C	Density:	0,792 g/cm ³ (20°C)
Boiling point:	65°C	Solubility:	
Auto-ignition temperature:	455°C	in water:	soluble
Ignition temperature:	11°C	in organic solvents:	ethanol, ethyl ether
Explosion limits:		log P _(w/o) :	-0,74
bottom:	5,5% v/v		

Methanol purified

CHEM*326219903

5 l	10 l	Appearance	colourless, clearliquid
20 l	30 l	Assay (GC)	min 99,5 %
60 l		Water	max. 0,15 %
		Free acids (as HCOOH)	max. 0,003 %
		Residue on evaporation	max. 0,003 %

Methanol pure

CHEM*426219903

100 ml	250 ml	Appearance	colourless, clearliquid
500 ml	1 l	Assay (GC)	min 99,8 %
2.5 l	3 l	Water	max. 0,1 %
5 l	10 l	Free acids (as HCOOH)	max. 0,002 %
20 l	30 l	Free base (as NH ₃)	max. 0,0005 %
60 l	200 l	Aldehydes and ketones(as HCHO)	max. 0,007 %
		Residue on evaporation	max. 0,002 %
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Substances reducing KMnO ₄ (as O)	max. 0,0005 %
		Iron (Fe)	max. 0,00002 %

Methanol pure p. a. CHEM*116219904

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (GC)	min 99,8 %
2.5 l	3 l	Water	max. 0,05 %
5 l	10 l	Free acids (as HCOOH)	max. 0,0015 %
20 l	30 l	Free base (as NH ₃)	max. 0,0001 %
60 l		Aldehydes and ketones (as HCHO)	max. 0,005 %
		Residue on evaporation	max. 0,001 %
		Substances darkening under the influence of H ₂ SO ₄	passes test
		Substances reducing KMnO ₄ (as O)	max. 0,0005 %
		Iron (Fe)	max. 0,00002 %

Methanol HPLC CHEM*616219904

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		230 nm	min. 80,0 %
		240 nm	min. 98,0 %
		250 nm	min. 99,0 %
		Fluorescence (as quinine):	
		365 nm	max. 1 ppb

Methanol HPLC GR CHEM*616219905

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		210 nm	min. 65,0 %
		220 nm	min. 75,0 %
		230 nm	min. 90,0 %
		240 nm	min. 98,0 %
		250 nm	min. 99,0 %
		Gradient test (235 nm):	
		Highest peak	max. 2 mAU
		Baseline drift	max. 15 mAU
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

Methanol with a reduced content of trihalomethanes **CHEM*616219908**

500 ml	1 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,1 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		Trihalometany	max. 1 ppb

Methanol GC for pesticides analysis **CHEM*616219907**

500 ml	1 l	Assay (GC)	min 99,9 %
		Water (KF)	max. 0,1 %
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

Methanol GC **CHEM*616219909**

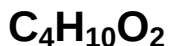
1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,1 %
		Colour	max. 10 as Hz
		Signal (GC) in the range 1,2,4-trichlorobenzene to dekalchlorobiphenyl	max. 3 pg/ml

Methanol GC standard **CHEM*616219906**

25 ml	50 ml	Purity	min 99,9 %
75 ml	100 ml		

1-METHOXY-2-PROPANOL

Metoksypropanol



M = 90,12 g/mol

CAS: 107-98-2

WE: 203-539-1



H: 226, 336

P: 210

RID/ADR: 3, III

UN: 3092



Physical and chemical properties:

Character:	liquid	bottom:	1,7% v/v
Colour:	colourless	top:	11,5% v/v
Odor:	etheric	Vapour pressure:	11,5 hPa (20°C)
pH:	4-7 (200g/l H ₂ O, 20°C)	Density:	0,922 g/cm ³ (25°C)
Melting point:	-97°C	Solubility:	
Boiling point:	120°C (760 mmHg)	in water:	soluble
Auto-ignition temperature:	287°C	in organic solvents:	no data
Ignition temperature:	31°C	log P _{OW} :	0,437 (obl.)
Explosion limits:			

1-Methoxy-2-propanol

CHEM*757651428

500 ml	1l	Assay	min. 99,5 %
2.5 l	3 l	Water	max. 0,1%
5 l	10 l	Colour (Pt-Co)	max.10 Hazen
20 l	30 l	Acidity (as CH ₃ COOH)	max. 0,01%
60 l		Assay	max. 0,5%
		Density (20/20°C)	0,920 - 0,927 g/cm ³

METHYLAMINE HYDROCHLORIDE

Metyloaminy chlorowodorek



M = 67,52 g/mol

CAS: 593-51-1

WE: 209-795-0



H: 302, 315, 319, 335

P: 280, 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	not applicable
Odor:	characteristic	Density:	no data
pH:	5,0 - 7,0 (20°C, 10 g/l)	Bulk density:	1100 kg/m ³
Melting point:	228-233°C	Solubility:	
Boiling point:	225-230°C (15 mmHg)	in water:	soluble (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data	log P _{OW} :	-3,82

Methylamine hydrochloride pure

CHEM*426292301

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Melting point	229-233 °C
500 g	750 g		
1 kg			

Methylamine hydrochloride pure p. a.

CHEM*116292300

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Melting point	228-231 °C
500 g	750 g		
1 kg			

1-METHYL-2-PYRROLIDINONE

1-Methylo-2-pirolidon

C₅H₉NO

M = 99,13 g/mol

CAS: 872-50-4

WE: 212-828-1



H: 315, 319, 335, 360D

P: 201, 302+352, 305+351+338, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	top:	9,5% v/v
Colour:	colourless - yellow	Viscosity:	1,80 mPa·s (20°C); 0,97 mPa·s (100°C)
Odor:	characteristic	Vapour pressure:	1,33 hPa (20°C), 0,33 hPa (40°C)
pH:	8,5 - 10,0 (100 g/l H ₂ O, 20°C)	Density:	1,03 g/cm ³ (20°C)
Melting point:	-24°C	Solubility:	
Boiling point:	202°C	in water:	1000 g/l (20°C)
Auto-ignition temperature:	245°C	in organic solvents:	no data
Ignition temperature:	91°C		
Explosion limits:			
bottom:	1,3% v/v		

1-Methyl-2-pyrrolidinone pure

CHEM*426418805

100 ml	250 ml	Assay (GC)	min. 99,5 %
500 ml	1 l	Acidity / alkalinity	max. 0,0002 meq/g
2.5 l	3 l	Insoluble substances	max. 0,005 %
5 l	10 l	Water (KF)	max. 0,05 %
20 l	30 l	Lead (Pb)	max. 0,0005 %
60 l	200 l	Iron (Fe)	max. 0,0005 %

METHYL ACETATE

Metylu octan

C₅H₉NO

M = 74,08 g/mol

CAS: 79-20-9

WE: 201-185-2



H: 225, 319, 336, EUH066

P: 210, 233, 305+351+338

RID/ADR: 3, II

UN: 1231



Physical and chemical properties:

Character:	liquid	bottom:	3,1% v/v
Colour:	colourless	top:	16% v/v
Odor:	aromatic	Viscosity dynamic:	0,381 mPa·s (20°C)
pH:	7	Vapour pressure:	220 hPa (20°C), 789 hPa (50°C)
Melting point:	-98°C	Density:	0,93 g/cm ³ (20°C)
Boiling point:	55 - 57°C	Solubility:	
Auto-ignition temperature:	455°C	in water:	250 g/l (20°C)
Ignition temperature:	-13°C	in organic solvents:	ethanol, ether
Explosion limits:			

Methyl acetate pure

CHEM*426539005

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	min. 98,5 %
5 l	10 l	Colour	max. 10 Hazen
		Density	~0,932 g/cm ³
		Refractive index (20°C)	1,36 - 1,362
		Water (KF)	max. 0,03 %
		Acidity	max. 0,05 mg KOH/g
		Methanol (GC)	max. 0,1 %

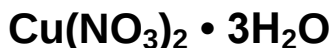
Methyl acetate pure p. a.

CHEM*116539005

50 ml	100 ml	Assay (GC)	min. 99,5 %
250 ml	500 ml	Free acids(as CH ₃ COOH)	max. 0,005%
1 l	2.5 l	Etylu octan (GC)	max. 0,1 %
3 l	5 l	Water	max. 0,03 %
		Methanol (GC)	max. 0,1 %
		Residue on evaporation	max. 0,001 %
		Lead (Pb)	max. 0,00001 %
		Potassium (K)	max. 0,00005 %
		Sodium (Na)	max. 0,00005 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

COPPER (II) NITRATE TRIHYDRATE

Miedzi (II) azotan 3 hydrat



M = 241,6 g/mol

CAS: 10031-43-3

WE: 221-838-5



H: 272, 302, 315, 319, 410
 P: 210, 273, 302+352, 305+351+338
 RID/ADR: 5.1, II UN: 1477



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	not applicable
Odor:	nitric acid	Density:	2,05 g/cm ³ (20°C)
pH:	approx 3,0 – 4,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1050 kg/m ³
Melting point:	approx 114°C	Solubility:	
Boiling point:	>170°C	in water:	2670 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Copper (II) nitrate trihydrate pure

CHEM*426570600

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
500 g	750 g	Sodium, potassium, calcium (Na+K+Ca)	max. 0,15 %
1 kg	5 kg	Iron (Fe)	max. 0,02 %
		Substances insoluble in water	max. 0,01 %
10 kg	15 kg		
25 kg			

Copper (II) nitrate trihydrate pure p. a.

CHEM*116570600

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
500 g	750 g	Sodium, potassium, calcium (Na+K+Ca)	max. 0,07 %
1 kg	5 kg	Iron (Fe)	max. 0,005 %
		Substances insoluble in water	max. 0,005 %
10 kg			

COPPER (II) CHLORIDE DIHYDRATE

Miedzi (II) chlorek 2 hydrat



M = 170,48 g/mol

CAS: 10125-13-0

WE: 231-210-2



H: 302, 315, 319, 410
P: 260, 273, 302+352, 305+351+338
RID/ADR: 8, III UN: 2802



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	no data
Odor:	odorless	Density:	2,54 g/cm ³ (20°C)
pH:	3,0 - 3,8 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 950 kg/m ³
Melting point:	approx 100°C	Solubility:	
Boiling point:	70 - 200°C	in water:	1150 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	methanol, ethanol, diethyl ether, acetone
Ignition temperature:	not applicable		

Copper (II) chloride dihydrate pure

CHEM*426565403

25 g	50 g	Assay	min 98,0 %
100 g	250 g	Sulphates (SO ₄)	max. 0,01 %
500 g	750 g	Arsenic (As)	max. 0,0002 %
1 kg	5 kg	Potassium (K)	max. 0,004 %
10 kg	15 kg	Calcium (Ca)	max. 0,004 %
25 kg		Iron (Fe)	max. 0,005 %

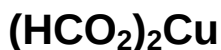
Copper (II) chloride dihydrate pure p. a.

CHEM*116565404

25 g	50 g	Assay	min 99,0 %
100 g	250 g	pH (5 %, 20°C)	3,0 - 3,8
500 g	750 g	Total nitrogen (N)	max. 0,004 %
1 kg	5 kg	Sulphates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0001 %
		Magnesium (Mg)	max. 0,002 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,004 %
		Potassium (K)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

COPPER (II) FORMATE (VI)

Miedzi (II) mrówczan (VI)



M = 153,58 g/mol

CAS: 544-19-4

WE: 208-865-8



H: 315, 319

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	1,831 g/cm ³ (15°C)
pH:	no data	Bulk density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Copper (II) formate (VI) pure

CHEM*426577902

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Iron (Fe)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
500 g	750 g	Magnesium (Mg)	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Substances insoluble in water	max. 0,025 %
		Acidity (as HCOOH)	max. 0,1 %
		Appearance	blue crystals

Copper (II) formate (VI) pure p. a.

CHEM*116577902

10 g	25 g	Assay	min 99,0 %
50 g	100 g	Iron (Fe)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
250 g	500 g	Magnesium (Mg)	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Substances insoluble in water	max. 0,02 %
		Acidity (as HCOOH)	max. 0,1 %
		Appearance	blue crystals

COPPER (II) ACETATE MONOHYDRATE

Miedzi (II) octan 1 hydrat



M = 199,65 g/mol

CAS: 6046-93-1

WE: 205-553-3



H: 302, 318, 410
P: 273, 280, 305+351+338
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue - green	Vapour pressure:	no data
Odor:	odorless	Density:	1,88 g/cm ³ (20°C)
pH:	5,2 - 5,5 (20 g/l H ₂ O, 20°C)	Bulk density:	ok1100 kg/m ³
Melting point:	115°C	Solubility:	
Boiling point:	240°C	in water:	72 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol 7g/l (20°C)
Ignition temperature:	not applicable		

Copper (II) acetate monohydrate pure

CHEM*426579303

25 g	50 g	Assay	min 98,0 %
100 g	250 g	Substances insoluble in water	max. 0,05 %
500 g	750 g	Total nitrogen (N)	max. 0,05 %
1 kg		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,01 %
		Lead (Pb)	max. 0,01 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,15 %
		Iron (Fe)	max. 0,005 %

Copper (II) acetate monohydrate pure p. a.

CHEM*116579304

25 g	50 g	Assay	min 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,01 %
500 g	750 g	Total nitrogen (N)	max. 0,03 %
1 kg		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,005 %
		Lead (Pb)	max. 0,004 %
		Sodium, potassium, calcium (Na+K+Ca)	max. 0,07 %
		Iron (Fe)	max. 0,003 %

COPPER (II) SULFATE

Miedzi (II) siarczan



M = 159,62 g/mol

CAS: 7758-98-7

WE: 231-847-6



H: 273, 315, 319, 410
P: 273, 302+352, 305+351+338
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	white –grey	Explosion limits:	not applicable
Odor:	odorless	Density:	3,60 g/cm ³ (20°C)
pH:	3,5 - 4,5 (50g/l H ₂ O, 20°C)	Bulk density:	approx 800 kg/m ³
Melting point:	no data.	Solubility:	
Boiling point:	340 - 650°C	in water:	203 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	Methanol 11 g/l (20°C)

Copper (II) sulfate pure

CHEM*426582804

10 g	25 g	Assay	min. 97,5 %
50 g	100 g	Substances insoluble in water	max. 0,02 %
250 g	500 g	Substances non-precipitated with H ₂ S (as SO ₄)	max. 0,3 %
1 kg		Iron (Fe)	max. 0,02 %
		Appearance	grey-white amorphous powder

Copper (II) sulfatepure p. a.

CHEM*116582805

10 g	25 g	Appearance	grey-white amorphous powder
50 g	100 g	Assay	min. 98,0 %
250 g	500 g	pH (5 %, 20°C)	3,5 - 4,5
1 kg		Substances insoluble in water	max. 0,01 %
		Loss on drying(250°C)	max. 0,5 %
		Substances non-precipitated H ₂ S (as SO ₄)	max. 0,15 %
		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,002 %
		Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,05 %
		Magnesium (Mg)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,01 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,01 %

COPPER (II) SULFATE PENTAHYDRATE

Miedzi (II) siarczan 5 hydrat



M = 249,68 g/mol

CAS: 7758-99-8

WE: 231-847-6



H: 273, 315, 319, 410
P: 273, 302+352, 305+351+338
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,29 g/cm ³ (20°C)
pH:	3,5 - 4,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 900-1200 kg/m ³
Melting point:	110°C	Solubility:	
Boiling point:	150°C	in water:	approx 317 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	glycerol, methanol,
Ignition temperature:	not applicable		insoluble in ethanol

Copper (II) sulfate 5 hydrat pure

CHEM*426583102

50 g	100 g	Assay	98,5 – 101,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Chlorides (Cl)	max. 0,001 %
5 kg	10 kg	Total nitrogen (N)	max. 0,005 %
15 kg	25 kg	Sodium, potassium, calcium (Na + K + Ca)	max. 0,15 %
30 kg		Iron (Fe)	max. 0,02 %

Copper (II) sulfate 5 hydrat pure p. a.

CHEM*116583101

25 g	50 g	Assay	99,0 – 101,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Chlorides (Cl)	max. 0,0005 %
1 kg	5 kg	Total nitrogen (N)	max. 0,004 %
10 kg	15 kg	Nickel (Ni)	max. 0,005 %
20 kg	25 kg	Sodium, potassium, calcium (Na + K + Ca)	max. 0,07 %
		Iron (Fe)	max. 0,01 %

COPPER (II) SULFATE STANDARD SOLUTION ($C \leq 0,015 \text{ MOL/L}$)

Miedzi siarczan roztwory mianowane

CuSO₄

M = 159,62 g/mol

CAS: 7758-98-7

WE: 231-847-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Character:	liquid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	not applicable
Odor:	odorless	Density:	(20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

copper sulfate standard solution 0,01 mol/l

CHEM*816583102

500 ml

1l

Titer

0,00996 – 0,01004 mol/l

COPPER (II) SULFATE STANDARD SOLUTION (0,015 < C < 0,15 MOL/L)

Miedzi siarczan roztwory mianowane

CuSO₄

M = 159,62 g/mol

CAS: 7758-98-7

WE: 231-847-6

H: 412

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Character:	liquid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	not applicable
Odor:	odorless	Density:	(20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

copper sulfate standard solution 0,05 mol/l

CHEM*816583106

500 ml

1l

Titer

0,0498 – 0,0502 mol/l

copper sulfate standard solution 0,1 mol/l

CHEM*816583104

500 ml

1l

Titer

0,0996 – 0,1004 mol/l

COPPER (II) SULFATE STANDARD SOLUTION (0,15 < C < 1,3 MOL/L)

Miedzi siarczan roztwory mianowane

CuSO₄

M = 159,62 g/mol

CAS: 7758-98-7

WE: 231-847-6

H: 412

P: 273

RID/ADR: 9, III

UN: 3082



Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Character:	liquid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	not applicable
Odor:	odorless	Density:	(20°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

copper sulfate standard solution 0,2 mol/l

CHEM*816583103

500 ml

1l

Titer

0,1992 – 0,2008 mol/l

copper sulfate standard solution 0,5 mol/l

CHEM*816583107

500 ml

1l

Titer

0,498 – 0,502 mol/l

COPPER (II) OXIDE*Miedzi (II) tlenek***CuO**

M = 79,55 g/mol

CAS: 1317-38-0

WE: 215-269-1



H: 302, 410

P: 260, 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	black	Explosion limits:	not applicable
Odor:	odorless	Density:	6,48 g/cm ³ (20°C)
pH:	approx 7 (50 g/l H ₂ O w 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	1336°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Copper (II) oxide pure**CHEM*426585761**

25 g	50 g	Appearance	black powder
100 g	250 g	Assay	min. 99,0 %
		Residue on roasting	max. 1,0 %
500 g	1 kg	Lead (Pb)	max. 0,05 %
		Iron (Fe)	max. 0,05 %

Copper (II) oxide pure p. a.**CHEM*116585762**

25 g	50 g	Appearance	czarny powder
100 g	250 g	Assay (iodometric)	min. 99,0 %
		Substances insoluble in HNO ₃	max. 0,02 %
500 g	1 kg	Free base	passes test
		Substances non-precipitated with H ₂ S	max. 0,2 %
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,005 %
		Total sulphur (as SO ₄)	max. 0,01 %
		Carbon (C)	max. 0,05 %
		Iron (Fe)	max. 0,05 %

COPPER (II) CARBONATE BASE

Miedzi (II) węglan zasadowy



M = 221,2 g/mol

CAS: 12069-69-1

WE: 235-113-6



H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	not applicable
Odor:	odorless	Density:	approx 4 g/cm ³ (20°C)
pH:	7 (50 g/l H ₂ O; 20°C)	Bulk density:	1200-1500 kg/m ³
Melting point:	>200°C	Solubility:	
Boiling point:	not applicable	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Copper (II) carbonate base pure

CHEM*426586309

25 g	50 g	Appearance	szarozielony powder
100 g	250 g	Assay (Cu)	52,0 – 56,0 %
500 g	750 g	Substances insoluble in H ₂ SO ₄	max. 0,02 %
1 kg		Total nitrogen (N)	max. 0,15 %
		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,02 %
		Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,3 %
		Calcium (Ca)	max. 0,08 %
		Iron (Fe)	max. 0,04 %

Copper (II) carbonate base pure p. a.

CHEM*116586300

25 g	50 g	Appearance	szarozielony powder
100 g	250 g	Assay (Cu)	54,0 – 56,0 %
500 g	750 g	Substances insoluble in H ₂ SO ₄	max. 0,01 %
1 kg		Total nitrogen (N)	max. 0,02 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Nickel (Ni)	max. 0,03 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,15 %
		Calcium (Ca)	max. 0,04 %
		Iron (Fe)	max. 0,02 %

ESCHKA MIXTURE

Mieszanina Eschki

M = not applicable

CAS: not applicable

WE: not applicable



H: 319

P: 262, 305+351+338

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	white	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	approx 12 (50 g/l H ₂ O; 20°C)	Bulk density:	approx 300 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	approx 80 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Eschka mixture

CHEM*757640001

50 g	100 g	Chlorides (Cl)	max. 0,01 %
250 g	500 g	Total sulphur (S)	max. 0,01 %
1 kg		Sieve analysis: particle size:	
		< 0,2 mm	min. 95,0 %

UREA

Mocznik



M = 60,06 g/mol

CAS: 57-13-6

WE: 200-315-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	approx 0,002 mbar (75°C)
Colour:	white	Density:	1,335 g/cm ³ (20°C)
Odor:	weak amonniacal	Bulk density:	700-800 kg/m ³
pH:	7,5- 9,5 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	132-135°C	in water:	1000 g/l (20°C)
Boiling point:	not applicable	in organic solvents:	benzene, ethyl acetate, ethanol
Auto-ignition temperature:	no data	log P _(w/o) :	-1,59
Ignition temperature:	no data		
Explosion limits:	no data		

urea pure

CHEM*426615308

50 g	100 g	Appearance	small, colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Melting point	131 - 133 °C
2 kg	5 kg	Substances insoluble in water	max. 0,02 %
10 kg	15 kg	Biuret	max. 0,3 %
20 kg	25 kg	Ash	max. 0,05 %
		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

urea pure p. a.

CHEM*116615309

50 g	100 g	Appearance	small, colourless crystals
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Melting point	132 - 133 °C
2 kg	5 kg	Substances insoluble in water	max. 0,01 %
10 kg	15 kg	Biuret	max. 0,1 %
20 kg	25 kg	Ash	max. 0,01 %
		Chlorides (Cl)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,0005 %

MUREXIDE

Mureksyd



M = 284,19g/mol

CAS: 3051-09-0

WE: 221-266-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	red-brown	Explosion limits:	no data
Odor: b	odorless	Density:	no data
pH:	approx 5 (1 g/l H ₂ O, 20°C)	Bulk density:	approx 330 kg/m ³
Melting point:	no data >250°C	Solubility:	
		in water:	approx 1 g/l (20°C)
Boiling point:	not applicable	in organic solvents:	no data
Auto-ignition temperature:	no data		

Murexide

CHEM*236646208

1 g	5 g	Appearance	red-brown powder
10 g	25 g	Assay	min. 65,0 %
50 g		Solubility in water	passes test
		TLC test	passes test
		Molar coefficient of absorption	
		E (pH 11÷12; 500÷506 nm)	min. 10500
		Ca sensitivity	passes test

HYDROTREATED HEAVY NAPHTHA

Nafta kosmetyczna

M = not applicable

CAS: 64742-48-9

WE: 265-150-3



H: 304, 350

P: 301+310, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	colourless	Top:	7%
Odor:	characteristic	Bottom:	0,6%
pH:	no data	Vapour pressure:	0,5hPa (20 °C)
Melting point:	< -20 °C	Density:	0,790 g/cm ³ (15 °C)
Boiling point:	180-217 °C	Solubility:	
Auto-ignition temperature:	>200 °C	in water:	<0,10%
Ignition temperature:	62 °C	in organic solvents:	no data

Hydrotreated heavy naphtha

CHEM*757640000

500 ml	1 l	Density (15 °C)	0,77 – 0,79 g/cm ³
2.5 l	3 l	Colour (Saybolt scale)	min. 25
5 l	10 l	Ignition temperature	62 °C
20 l	30 l	Assay	max. 1000 mg/kg
60 l	200 l	Distillation:	
		start	185 °C
		90%	209 °C
		Bromine number (Br, mg/100g)	max. 50,0
		Non-volatile residue (mg/100 ml)	max. 5,0
		Sulphur (mg/kg)	max. 2,0

2-NAPHTHOL

2-naftol

C₁₀H₇OH

M = 144,17 g/mol

CAS: 135-19-3

WE: 205-182-7



H: 302, 332, 400
P: 273, 304+340
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	<0,1 hPa (30°C), 13,3 hPa (146°C)
Odor:	phenol	Density:	1,27 g/cm ³ (20°C)
pH:	no data	Bulk density:	approx 300 kg/m ³
Melting point:	121,6°C	Solubility:	
Boiling point:	285°C	in water:	1 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol, ether (20°C)
Ignition temperature:	153°C		

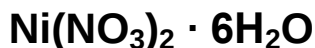
2-naphthol pure p. a.

CHEM*116675400

5 g	10 g	Assay	min. 99,0 %
25 g	50 g	Melting point	121 -123°C
75 g	100 g		
250 g			

NICKEL (II) NITRATE HEXAHYDRATE

Niklu (II) azotan 6 hydrat



M = 290,81 g/mol

CAS: 13478-00-7

WE: 236-068-5



H: 272, 302, 315, 317, 318, 332, 334, 341, 350, 360D, 410

P: 201, 221, 281, 302+352, 304+341, 305+351+338, 308+313

RID/ADR: 5.1, III UN: 2725



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	not applicable
Odor:	nitric acid	Density:	2,05 g/cm ³ (20°C)
pH:	approx 5 (50 g/l, H ₂ O, 20°C)	Bulk density:	approx 800 kg/m ³
Melting point:	56-57°C	Solubility:	
Boiling point:	no data	in water:	approx 2380 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Nickel (II) nitrate hexahydrate pure

CHEM*426743603

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Chlorides (Cl)	max. 0,003 %
500 g	750 g	Sulphates (SO ₄)	max. 0,01 %
1 kg		Zinc (Zn)	max. 0,05 %
		Cobalt (Co)	max. 0,02 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,005 %
		Appearance	green crystals

Nickel (II) nitrate hexahydrate pure p. a.

CHEM*116743604

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	pH (5%, 20°C)	3,5 ÷ 5
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,005 %
		Alkaline metals and alkaline earths	max. 0,2 %
		Heavy metals (as Pb)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,01 %
		Cobalt (Co)	max. 0,1 %
		Iron (Fe)	max. 0,001 %
		Appearance	green crystals

NICKEL (II) NITRATE STANDARD SOLUTION (0,005 < C < 0,015 MOL/L)

Niklu (II) azotan roztwory mianowane



M = 182,72 g/mol

CAS: 13138-45-9

WE: 236-068-5



H: 350

P: 261, 306+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	green	Explosion limits:	not applicable
Odor:	nitric acid	Vapour pressure:	no data
pH:	no data	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

nickel (II) nitrate standard solution 0,01 mol/l

CHEM*816743604

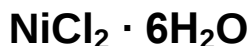
250 ml

500 ml

Titer

0,00996 – 0,01004 mol/l

1 l

NICKEL (II) CHLORIDE HEXAHYDRATE*Niklu (II) chlorek 6 hydrat*

M = 237,7g/mol

CAS: 7791-20-0

WE: 231-743-0



H: 301, 315, 317, 331, 334, 341, 350i, 360D, 372, 410
 P: 273, 281, 302+352, 304+340
 RID/ADR: 6.1, III UN: 3288

**Physical and chemical properties:**

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	1,3 hPa
Odor:	odorless	Density:	1,92 g/cm ³
pH:	approx 4,9 (100 g/l H ₂ O, 25°C)	Bulk density:	approx 640 kg/m ³
Melting point:	140°C	Solubility:	
Boiling point:	no data	in water:	2540 g/l (20°C), 5990 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Nickel (II) chloride hexahydrate pure**CHEM*426745300**

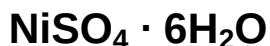
25 g	50 g	Assay	min. 97,0 %
100 g	250 g	Zinc (Zn)	max. 0,002 %
500 g	750 g	Cobalt (Co)	max. 0,02 %
1 kg	5 kg	Copper(Cu)	max. 0,002 %
10 kg		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %
		Appearance	green crystalline powder

Nickel (II) chloride hexahydrate pure p. a.**CHEM*116745300**

25 g	50 g	Assay	min. 98,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Zinc (Zn)	max. 0,001 %
1 kg		Cobalt (Co)	max. 0,005 %
		Cadmium (Cd)	max. 0,005 %
		Copper(Cu)	max. 0,001 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,002 %
		Appearance	green crystalline powder

NICKEL (II) SULFATE HEXAHYDRATE

Niklu (II) siarczan 6 hydrat



M = 262,86 g/mol

CAS: 10101-97-0

WE: 232-104-9



H: 302, 315, 317, 334, 341, 350i, 360D, 372, 410
P: 201, 273, 280, 302+352, 308+313, 342+311
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	no data
Odor:	odorless	Density:	2,07 g/cm ³ (20°C)
pH:	4,0-6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	>700°C	Solubility:	
		in water:	625 g/l (20°C), 3407 g/l (100°C)
Boiling point:	not applicable	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Nickel (II) sulfate hexahydrate pure

CHEM*426751600

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Substances insoluble in water	max. 0,05 %
500 g	750 g	Zinc (Zn)	max. 0,002 %
1 kg	5 kg	Cobalt (Co)	max. 0,15 %
		Copper(Cu)	max. 0,002 %
		Iron (Fe)	max. 0,004 %
10 kg	15 kg		
25 kg			

Nickel (II) sulfate hexahydrate pure p. a.

CHEM*116751600

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	750 g	Chlorides (Cl)	max. 0,001%
		Zinc (Zn)	max. 0,001 %
1 kg	5 kg	Cobalt (Co)	max. 0,05 %
		Copper(Cu)	max. 0,001 %
10 kg	15 kg	Iron (Fe)	max. 0,002 %

NICKEL (II) SULFATE HEPTAHYDRATE

Niklu siarczan 7 hydrat



M = 280,87 g/mol

CAS: 10101-98-1

WE: 232-104-9



H: 302, 315, 317, 334, 341, 350i, 360D, 372, 410
P: 201, 273, 280, 302+352, 308+313, 342+311
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,948 g/cm ³ (20°C)
pH:	4,0-6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	756 g/l (15,5°C), 4 758 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Nickel (II) sulfate heptahydrate pure

CHEM*426751508

25 g	50 g	Assay (Ni)	20,8 - 22,4 %
100 g	250 g	Substances insoluble in water	max. 0,02 %
500 g	750 g	pH (5%, 20°C)	min. 3,5
1 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg	15 kg	Zinc (Zn)	max. 0,01 %
		Cobalt (Co)	max. 0,2 %
		Copper(Cu)	max. 0,01 %
		Lead (Pb)	max. 0,005 %
		Sodium (Na)	max. 0,1 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,005 %
		Appearance	green crystals

Nickel (II) sulfate heptahydrate pure p. a.

CHEM*116751602

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
500 g	750 g	Zinc (Zn)	max. 0,005 %
1 kg	5 kg	Cobalt (Co)	max. 0,05 %
10 kg		Copper(Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,005 %
		Appearance	green crystals

NICKEL (II) HYDROXIDE

Niklu (II) wodorotlenek



M = 92,71 g/mol

CAS: 12054-48-7

WE: 235-008-5



H: 302, 317, 332, 351, 410
P: 201, 273, 281, 304+340, 308+313
RID/ADR: 9, III UN: 3077



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	no data
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

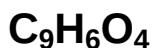
Nickel (II) hydroxide pure

CHEM*426755400

25 g	50 g	Assay (Ni)	min. 60,0 %
100 g	250 g	Substances insoluble in HCl	max. 0,2 %
500 g	750 g	Sulphates (SO ₄)	max. 0,02 %
1 kg		Total nitrogen (N)	max. 0,03 %
		Iron (Fe)	max. 0,005 %

NINHYDRIN

Ninhydryna



M = 178,15 g/mol

CAS: 485-47-2

WE: 207-618-1



H: 302, 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white – yellow	Vapour pressure:	no data
Odor:	weak characteristic	Density:	no data
pH:	4,6 - 5,0 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 680 kg/m ³
Melting point:	250 - 258°C	Solubility:	
Boiling point:	not applicable	in water:	20 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Ninhydrin pure p. a.

CHEM*116765001

10 g	25 g	Assay	min. 99,0%
50 g	100 g	pH (1%, 20°C)	4,6 - 5,0
250 g	500 g	Substances insoluble in water	passes test
		Residue on roasting (as SO ₄)	max. 0,1 %
		Amino acids sensitivity	passes test

NINHYDRIN IN ETHANOL

Ninhydryna w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Explosion limits:	no data
Odor:	ethanol	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	approx 425°C (ethanol)	in organic solvents:	no data

Ninhydrin 0,1% in ethanol

CHEM*116765002

50 ml	100 ml	Assay	approx 1 g/l
250 ml	500 ml		
1l			

Ninhydrin 0,5% in ethanol

CHEM*116765005

50 ml	100 ml	Assay	approx 5 g/l
250 ml	500 ml		
1l			

Ninhydrin 1% in ethanol

CHEM*116765003

50 ml	100 ml	Assay	approx 10 g/l
250 ml	500 ml		
1l			

NINHYDRIN IN ETHANOL 50%

Ninhydryna w etanolu 50%



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	no data	Explosion limits:	no data
Odor:	ethanol	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

Ninhydrin 0,1% in ethanol 50%

CHEM*116765004

50 ml

100 ml

Assay

approx 1 g/l

250 ml

500 ml

1l

ACETIC ANHYDRIDE

Bezwodnik octowy



M = 102,09 g/mol

CAS: 108-24-7

WE: 203-564-8



H: 226, 302, 314, 332, 335
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8 (3), II UN: 1715



Physical and chemical properties:

Character:	liquid	bottom:	2% V/V
Colour:	colourless	top:	10,2% V/V
Odor:	sharp of vinegar	Vapour pressure:	4,7 hPa (20°C)
pH:	approx 3 (10 g/l H ₂ O, 20°C)	Density:	1,08 g/cm ³ (20°C)
Melting point:	-73°C	Solubility:	
Boiling point:	140°C	in water:	10,7% (25°C)
Auto-ignition temperature:	330°C	in organic solvents:	ethanol, ethyl ether, CCl ₄ , chloroform
Ignition temperature:	49°C	log P _{OW} :	-0,2
Explosion limits:			

Acetic anhydride pure

CHEM*426938706

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	min. 98,0 %
5 l	10 l	Density (20°C)	approx 1,08 g/cm ³
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Iron (Fe)	max. 0,0005 %

Acetic anhydride pure p. a.

CHEM*116938707

100 ml	250 ml	Appearance	colourless liquid
500 ml	1 l	Assay	min. 98,0 %
2.5 l	3 l	Density (20°C)	1,079 - 1,082 g/cm ³
5 l	10 l	Residue on evaporation	max. 0,003 %
20 l	30 l	Substances reducing KMnO ₄ (as O)	max. 0,015 %
		Chlorides (Cl)	max. 0,0001 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,00005 %

ADLER'S REAGENT I*Odczynnik Adlera I*

M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993

**Physical and chemical properties:**

Character:	liquid	bottom:	3,3% V/V (ethanol)
Colour:	colourless	top:	19% V/V (ethanol)
Odor:	characteristic	Vapour pressure:	no data
pH:	neutral	Density:	no data
Melting point:	-117°C (ethanol)	Solubility:	
Boiling point:	78°C (ethanol)	in water:	no data
Auto-ignition temperature:	425°C (ethanol)	in organic solvents:	no data
Ignition temperature:	12°C (ethanol)	log P _(w/o) :	no data
Explosion limits:			

Adler's Reagent I**CHEM*116947604**

100 ml	250 ml
500 ml	1l

ADLER'S REAGENT II*Odczynnik Adlera II*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 318, 335, 410
P: 273, 280, 304+340, 305+351+338
RID/ADR: 8, III UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	yellow - brown	Explosion limits:	not applicable
Odor:	HCl	Vapour pressure:	no data
pH:	<1 (20°C)	Density:	1,2 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Adler's Reagent II**CHEM*116947603**

100 ml	250 ml
500 ml	1l

ARNOV'S REAGENT*Odczynnik Arnova*

M = not applicable

CAS: not applicable

WE: not applicable



H: 301

P: 301+310

RID/ADR: 6.1, III

UN: 3287

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Arnov's reagent**CHEM*116950801**

100 ml

250 ml

500 ml

BACH'S REAGENT*Odczynnik Bacha*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Bach reagent**CHEM*116942205**

100 ml

250 ml

500 ml

BARFOED'S REAGENT*Barfoeda odczynnik*

M = not applicable

CAS: not applicable

WE: not applicable

H: 411
P: 273
RID/ADR: 9, III

UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	blue-green	Explosion limits:	not applicable
Odor:	acetic acid	Vapour pressure:	14 mmHg (water)
pH:	no data	Density:	approx 1,00 g/cm ³
Melting point:	approx 0°C	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Barfoed's reagent**CHEM*116942206**

100 ml

250 ml

500 ml

BECKMANN'S REAGENT

Odczynnik Beckmanna

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 314, 317, 330, 334, 340, 350,
360FD, 372, 411
P: 273, 280, 302+352, 305+351+338,
308+313, 309, 310
RID/ADR: 6.1, II UN: 3289



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Beckmann's reagent

CHEM*116942207

100 ml

250 ml

500 ml

BENEDICT'S REAGENT*Odczynnik Benedicta*

M = not applicable

CAS: not applicable

WE: not applicable

H: 412

P: not applicable

RID/ADR: 9, III

UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Benedict's reagent**CHEM*116950802**

100 ml

250 ml

500 ml

BETTENDORFF'S SOLUTION (WINKLER)*Odczynnik Bettendorffa-Winklera*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 335
P: 280, 305+351+338
RID/ADR: 8, II

UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Bettendorff's solution (Winkler)**CHEM*116942208**

100 ml

250 ml

500 ml

BIURET REAGENT*Odczynnik biuretowy*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

biuret reagent**CHEM*116950803**

100 ml

250 ml

500 ml

BÖTTGER'S REAGENT

Odczynnik Bottgera

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 332, 340, 350, 373
P: 201, 281, 304+340, 309, 310
RID/ADR: 6.1, III UN: 2570



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Böttger's reagent

CHEM*116942209

100 ml

250 ml

500 ml

BRADFORD'S REAGENT*Odczynnik Bradforda*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Bradford's reagent**CHEM*116950804**

100 ml

250 ml

500 ml

CARREZ REAGENT I*Odczynnik Carreza I*

M = not applicable

CAS: not applicable

WE: not applicable



H: 319, 411
P: 273, 280, 305+351+338
RID/ADR: 9, III UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Carrez reagent I**CHEM*522255606**

100 ml

250 ml

500 ml

CARREZ REAGENT II*Odczynnik Carreza II*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	yellow	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 9,5	Density:	approx 1,12 g/cm ³ (w 20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Carrez reagent II**CHEM*522255607**

100 ml

250 ml

500 ml

CZUGAJEW'S REAGENT*Odczynnik Czugajewa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210, 280, 303+330+331
RID/ADR: 3, III UN: 1993

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Czugajew's reagent**CHEM*116950805**

100 ml

250 ml

500 ml

DENIGES'S REAGENT*Odczynnik Deniges*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 317, 351
P: 280, 302+352, 305+351+338
RID/ADR: 8, II UN: 1760

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Deniges reagent**CHEM*116942210**

100 ml

250 ml

500 ml

DRAGENDORFF's REAGENT A*Odczynnik Dragendorffa A*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Dragendorff's reagent A**CHEM*116950806**

100 ml

250 ml

500 ml

DRAGENDORFF's REAGENT B*Odczynnik Dragendorffa B*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Dragendorff's reagent B**CHEM*116950806**

100 ml

250 ml

500 ml

EHRlich's REAGENT*Odczynnik Ehrlicha*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Ehrlich's reagent**CHEM*116950807**

100 ml

250 ml

500 ml

EXTON's REAGENT*Odczynnik Extona*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Exton's reagent**CHEM*116950810**

50 ml	100 ml
250 ml	500 ml
1l	

FEHLING'S REAGENT A*Odczynnik Fehlinga A*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 411
P: 273, 280, 302+352, 305+351+338
RID/ADR: 9, III UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	blue	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (20°C)	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Fehling's reagent A**CHEM*116942211**

250 ml

500 ml

FEHLING's REAGENT B*Odczynnik Fehlinga B*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1719

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Fehling's reagent B**CHEM*116942221**

250 ml

500 ml

FOLIN and CIOCALTEU' PHENOL REAGENT*Odczynnik Folina i Ciocalteu*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, III UN: 3264

**Physical and chemical properties:**

Character:	liquid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odor:	sharp	Density:	1,24 g/cm ³ (20°C)
pH:	< 0,5 (20°C)	Solubility:	
Melting point:	17,5 – 21,1°C	in water:	soluble
Boiling point:	81,5 - 110°C	in organic solvents:	methanol, acetone
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Folin and Ciocalteu reagent**CHEM*116943507**

250 ml

500 ml

FOLIN – DENIS's REAGENT*Odczynnik Folina – Denisa*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Folin – Denisa reagent**CHEM*116950808**

50 ml

100 ml

250 ml

500 ml

1 l

FROEHDE's REAGENT*Odczynnik Froehdego*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Froehde's reagent**CHEM*116950809**

100 ml

250 ml

500 ml

GRAMM's SOLUTION I*Odczynnik Gramma I*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Gramm's solution I**CHEM*116950751**

500 ml

1l

GRAMM's SOLUTION II*Odczynnik Gramma II*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Gram's solution II**CHEM*524912408**

500 ml

1l

GRIESS REAGENT*Odczynnik Griessa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335

P: 280, 305+351+338

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Griess reagent**CHEM*116950811**

100 ml

250 ml

500 ml

HAYNES REAGENT*Odczynnik Haynesa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 412
P: 273, 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Haynes reagent**CHEM*116950812**

100 ml

250 ml

500 ml

HERLES' REAGENT A

Odczynnik Herlesa A

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 332, 360Df, 373, 410
P: 201, 273, 281, 301+312, 308+313
RID/ADR: 6.1, II UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Herles' reagent A

CHEM*116950813

100 ml

250 ml

500 ml

HERLES' REAGENT B*Odczynnik Herlesa B*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1824

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,05 g/cm ³ (20°C)
pH:	approx 13,7 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

Herles' reagent B**CHEM*116950814**

500 ml

1l

HERZBERG's REAGENT*Odczynnik Herzberga*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 332, 410
P: 273, 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Herzberg's reagent**CHEM*116950815**

100 ml

250 ml

500 ml

HOSKINS' REAGENT*Odczynnik Hoskinsa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 371
P: 280, 301+330+331, 305+351+338, 309+310
RID/ADR: 8, II UN: 1760

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Hoskins' reagent**CHEM*116950816**

100 ml

250 ml

500 ml

JONES REAGENT

Odczynnik Jonesa

M = not applicable

CAS: not applicable

WE: not applicable



H: 301, 311, 314, 317, 330, 334, 340,
350, 361f, 410

P: 201, 273, 280, 301+330+331,
305+351+338, 309+310

RID/ADR: 6.1, II

UN: 3289



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Jones reagent

CHEM*116950817

100 ml

250 ml

500 ml

1l

LIEBERMANN's REAGENT*Odczynnik Liebermanna*

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 314, 332
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1760

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Liebermann's reagent**CHEM*116950818**

100 ml	250 ml
500 ml	1l

LUCAS's REAGENT*Odczynnik Lucasa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 314, 335, 410
P: 273, 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Lucas's reagent**CHEM*116950819**

100 ml	250 ml
500 ml	1l

LUFF-SCHOORL REAGENT*Odczynnik Luffa-Schoorla*

M = not applicable

CAS: not applicable

WE: not applicable



H: 319, 411
P: 273, 280, 305+351+338
RID/ADR: 9, III UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Luff-Schoorl reagent**CHEM*116950754**

100 ml

250 ml

500 ml

MARQUIS REAGENT*Odczynnik Marquisa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 317, 351
P: 201, 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1760

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Marquis reagent**CHEM*116950820**

100 ml

250 ml

500 ml

MAY-GRUNWALD REAGENT*Odczynnik May-Grünwalda*

M = not applicable

CAS: not applicable

WE: not applicable



H: 301, 311, 331, 370

P: 280, 304+340

RID/ADR: 6.1 (3), II UN: 2929

**Physical and chemical properties:**

Character:	liquid	bottom:	6% V/V (methanol)
Colour:	no data	top:	36,5% V/V (methanol)
Odor:	methanol	Vapour pressure:	no data
Melting point:	-97,8°C (methanol)	Density:	no data
Boiling point:	64,8°C (methanol)	Solubility:	
Auto-ignition temperature:	approx 455°C (methanol)	in water:	soluble
Ignition temperature:	approx 12°C (methanol)	in organic solvents:	no data
Explosion limits:			

May-Grunwald reagent**CHEM*116950821**

100 ml

250 ml

500 ml

ODCZYNNIK MAYER's REAGENT*Odczynnik Mayera*

M = not applicable

CAS: not applicable

WE: not applicable

H: 412

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Mayer's reagent**CHEM*116950822**

100 ml

250 ml

500 ml

NESSLER's REAGENT*Odczynnik Nesslera*

M = not applicable

CAS: 7783-33-7

WE: not applicable



H: 300, 310, 314, 330, 373, 411
P: 273, 280, 301+330+331, 304+340, 305+351+338,
RID/ADR: 8, II UN: 2922

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Nessler's reagent**CHEM*116947602**

100 ml	250 ml
500 ml	1l

OBERMAYER's SOLUTION A*Odczynnik Obermayera A*

M = not applicable

CAS: not applicable

WE: not applicable



H: 360D, 361f, 373, 411
P: 201, 273, 281, 308+313
RID/ADR: 6.1, III UN: 1616

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Obermayer's solution A**CHEM*116947603**

100 ml

250 ml

500 ml

OBERMAYER's SOLUTION B*Odczynnik Obermayera B*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 335
P: 280, 301+330+331, 305351+338
RID/ADR: 8, II UN: 3264

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Obermayer's solution B**CHEM*116947603**

100 ml

250 ml

500 ml

PANDY'S REAGENT

Odczynnik Pandy'ego

M = not applicable

CAS: not applicable

WE: not applicable



H: 302, 312, 314, 332, 341
P: 201, 280, 301+330+331, 305+351+338, 308+313
RID/ADR: 8, II UN: 3265



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	sharp	Vapour pressure:	no data
pH:	approx 5	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Pandy's reagent

CHEM*116950753

500 ml

1l

ROMIJN REAGENT*Odczynnik Romijna*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless to yellow	Vapour pressure:	no data
Odor:	odorless	Density:	1,16 g/cm ³ (20°C)
pH:	alkaline	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Romijn reagent**CHEM*116947604**

100 ml

250 ml

500 ml

SCHIFF's REAGENT*Odczynnik Schiffa*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	sharp	Vapour pressure:	no data
pH:	approx 1,5 (20°C)	Density:	1,01 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	methanol

Schiff's reagent**CHEM*116949207**

100 ml	250 ml
500 ml	1l

SELIVANOV's REAGENT*Odczynnik Selivanova*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335

P: 280, 305+351+338

RID/ADR: not applicable

UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Selivanov's reagent**CHEM*116950823**

100 ml

250 ml

500 ml

TASHIRO REAGENT

Odczynnik Tashiro

M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, II

UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	blue	Bottom:	3,5%
Odor:	alcoholic	Top:	15%
pH:	neutral	Vapour pressure:	approx 59 mBar (20°C)
Melting point:	-117°C	Density:	0,81 g/cm ³ (20°C)
Boiling point:	78°C	Solubility:	
Auto-ignition temperature:	425°C	in water:	soluble
Ignition temperature:	17°C	in organic solvents:	soluble

Tashiro reagent

CHEM*116950753

100 ml

250 ml

500 ml

1l

Application	acidity/alkalinity test
Appearance	brown, clear liquid
Percentage coefficient of absorption:	
(1%; 1cm; pH 4,2; 530 nm)	900 - 1200
(1%; 1cm; pH 5,4; 555 nm)	250 - 350
(1%; 1cm; pH 6,2; 668 nm)	700 - 800
TLC test	passes test
Absorption test	passes test
Suitability for titration	passes test
pH:	
red-violet	min 4,4
green	min 5,8

TOLLENS' REAGENT*Odczynnik Tollensa*

M = not applicable

CAS: not applicable

WE: not applicable



H: 314, 411
P: 273, 280, 301+330+331, 305+351+338,
RID/ADR: 8, II UN: 3266

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	sharp	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Tollens' reagent**CHEM*116950751**

100 ml

250 ml

500 ml

WAGNER's REAGENT*Odczynnik Wagnera*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Wagner's reagent**CHEM*116950752**

100 ml

250 ml

500 ml

WEICHBRODT's REAGENT*Odczynnik Weichbrodta*

M = not applicable

CAS: not applicable

WE: not applicable



H: 302

P: 301+312

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Weichbrodt's reagent**CHEM*116950824**

100 ml

250 ml

500 ml

ZIMMERMANN-REINHARDT REAGENT*Odczynnik Zimmermanna-Reinhardt*

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 412

P: 273, 280, 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	no data	Vapour pressure:	no data
Odor:	no data	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Zimmermanna-Reinhardt reagent**CHEM*116950800**

100 ml

OCTANE

Oktan



M = 114,23 g/mol

CAS: 111-65-9

WE: 203-892-1



H: 38-50/53-65-67

P: 9-16-29-33-60-61-62

RID/ADR: 3, II

UN: 1262



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	colourless	bottom:	0,8% V/V
Odor:	characteristic	top:	6,5% V/V
pH:	no data	Vapour pressure:	14 mBar (20°C)
Melting point:	-57°C	Density:	0,70 g/cm ³ (20°C)
Boiling point:	125 - 126°C	Solubility:	
Auto-ignition temperature:	210°C	in water: (20°C):	0,0007 g/l
Ignition temperature:	13°C	in organic solvents:	no data

octane pure p. a.

CHEM*116974308

25 ml	50 ml	Assay	min 99,5%
100 ml	250 ml	Water	max. 0,000002%
500 ml	1l	Residue on evaporation	max. 0,002%
		Barium (Ba)	max. 0,00001 %
		Bismuth (Bi)	max. 0,00001 %
		Chromium (Cr)	max. 0,000002 %
		Zinc(Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Lithium (Li)	max. 0,00001 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Molybdenum (Mo)	max. 0,00001 %
		Nickel (Ni)	max. 0,000002 %
		Lead (Pb)	max. 0,00001 %
		Potassium (K)	max. 0,00005 %
		Sodium (Na)	max. 0,00005 %
		Strontium (Sr)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

LEAD (II) NITRATE

Ołowiu (II) azotan



M = 331,21 g/mol

CAS: 10099-74-8

WE: 233-245-9



H: 272, 302, 318, 332, 360Df, 373, 410

P: 201, 273, 280, 305+351+338, 308+313

RID/ADR: 5.1, II

UN: 1469



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	weak	Density:	4,53 g/cm ³ (20°C)
pH:	3 - 4 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1850 kg/m ³
Melting point:	470°C	Solubility:	
Boiling point:	no data	in water:	approx 525 g/l (w 20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

lead nitrate pure

CHEM*427010408

25 g	50 g	Appearance	white crystals or white powder
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in HNO ₃	max. 0,01 %
1 kg	5 kg	Chlorides (Cl)	max. 0,002 %
10 kg	20 kg	Copper (Cu)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,04 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

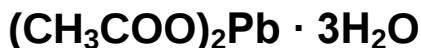
lead nitrate pure p. a.

CHEM*117010409

25 g	50 g	Appearance	white crystals or white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in HNO ₃	max. 0,005 %
1 kg	5 kg	Chlorides (Cl)	max. 0,001 %
10 kg	15 kg	Copper (Cu)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

LEAD (II) ACETATE TRIHYDRATE

Ołowiu octan 3 hydrat



M = 379,34 g/mol

CAS: 6080-56-4

WE: 206-104-4



H: 351, 360Df, 373, 410

P: 273, 281, 308+313, 314

RID/ADR: 6.1, III

UN: 1616



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapour pressure:	no data
Odor:	weak acetic	Density:	3,3 g/cm ³ (20°C)
pH:	5,5 - 6,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1200 kg/m ³
Melting point:	75°C	Solubility:	
Boiling point:	>75°C	in water:	443 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	33 g/l ethanol (20°C)
Ignition temperature:	not applicable		

lead (II) acetate 3 hydrate pure CHEM*427030608

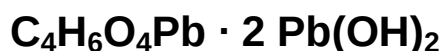
50 g	100 g	Appearance	colourless or white crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	Chlorides (Cl)	max. 0,002 %
10 kg		Copper (Cu)	max. 0,003 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

lead (II) acetate 3 hydrate pure p. a. CHEM*117030607

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	99,5 - 103,0 %
500 g	750 g	Substances insoluble in CH ₃ COOH	max. 0,005 %
1 kg	2 kg	Nitrates and nitrites (as NO ₃)	max. 0,002 %
5 kg		Chlorides (Cl)	max. 0,0005 %
		Zinc (Zn)	max. 0,001 %
		Cadmium (Cd)	max. 0,001 %
		Cobalt (Co)	max. 0,001 %
		Magnesium (Mg)	max. 0,005 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

LEAD SUBACETATE SOLUTIONS 10%

Ołowiu octan zasadowy 10%



M = 566,48 g/mol

CAS: 1335-32-6

WE: 215-630-3



H: 351, 360Df, 373, 410

P: 273, 281, 308+313, 314

RID/ADR: 6.1, III

UN: 2810



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	
pH:	7,2 (r-r 5%, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

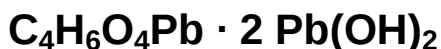
Lead subacetate solutions 10%

CHEM*527030612

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (Pb)	6,8 ÷ 7,8%
		Assay (PbO)	90 ÷ 103,2 g/dm ³
2.5 l	3 l		
5 l	10 l		
20 l			

LEAD (II) ACETATE SOLUTIONS (C > 25%)

Ołowiu octan roztwory



M = 566,48 g/mol

CAS: 1335-32-6

WE: 215-630-3



H: 351, 360Df, 373, 410

P: 273, 281, 308+313, 314

RID/ADR: 6.1, III

UN: 2810



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,23 g/cm ³ (20 °C)
pH:	7,2 (5%, 20°C)	Solubility:	
Melting point:	no data	in water:	b.o.
Boiling point:	no data	in organic solvents:	ethanol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Lead (II) acetate solution 25%

CHEM*527030608

100 ml	250 ml	Appearance	colourless liquid
500 ml	1 l	Assay (Pb)	17,0 - 19,5 %
		Assay (PbO)	225 - 258 g/l
2.5 l	3 l	Density:	1,23 g/cm ³ (20 °C)
5 l	10 l		
20 l	30 l		
60 l			

Lead (II) acetate solution 33%

CHEM*527030610

100 ml	250 ml	Assay (Pb)	22,4 ÷ 25,7%
500 ml	1 l	Assay (PbO)	297 ÷ 340,6 g/l
		Appearance	colourless liquid,
2.5 l	3 l		
5 l	10 l		
20 l	30 l		

LEAD (II) OXIDE

Ołowiu (II) tlenek

PbO

M = 223,19 g/mol

CAS: 1317-36-8

WE: 215-267-0



H: 302, 332, 360Df, 373, 410

P: 201, 273, 308+313

RID/ADR: 6.1, III

UN: 2291



Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	yellow	Density:	9,6 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 3500 - 3700 kg/m ³
pH:	approx 8 - 9 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	890°C	in water:	0,017 g/l (20°C)
Boiling point:	1470°C	in organic solvents:	no data
Explosion limits:	not applicable		

lead oxide pure

CHEM*427031051

50 g	100 g	Appearance	red or żółty powder
250 g	500 g	Assay	99,0 – 100,5 %
750 g	1 kg	Substances insoluble in CH ₃ COOH	max. 0,2 %
2 kg	5 kg	Loss on roasting (700°C)	max. 0,2 %
10 kg		Nitrates (NO ₃)	max. 0,05 %
		Chlorides (Cl)	max. 0,05 %
		Copper (Cu)	max. 0,005 %
		Silwer (Ag)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

ołowiu (II) tlenek pure p. a.

CHEM*117031052

50 g	100 g	Appearance	red or żółty powder
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Bismuth (Bi)	max. 0,025 %
2 kg	5 kg	Copper (Cu)	max. 0,001 %
10 kg		Lead (Pb)	max. 0,01 %
		Silwer (Ag)	max. 0,002 %
		Iron (Fe)	max. 0,0025 %

XYLENOL ORANGE TETRASODIUM SALT

Oranż xlenolowy



M = 760,58 g/mol

CAS: 3618-43-7

WE: 222-805-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	violet	Vapour pressure:	no data
Odor:	characteristic	Density:	no data
pH:	approx 8,1 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 250 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	rak danych	in water:	approx 510 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

xlenol orange

CHEM*237045902

5 g	10 g	Assay	min. 35,0 %
		Moisture	max. 10,0 %
25 g	50 g	Th sensitivity	min. 0,000001 g/ml
		Xlenol red	max. 3,0 %
		Semixlenol orange	max. 15,0 %
		Residue on roasting (as SO ₄)	max. 38,0 %
		Suitability for titration	passes test

METHYL ORANGE

Oranż metylowy

C₁₄H₁₅N₃SO₃Na

(C.I. 13025)

M = 327,34 g/mol

CAS: 547-58-0

WE: 208-925-3



H: 301

P: 309, 310

RID/ADR: 6.1, III

UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	orange	Vapour pressure:	no data
Odor:	weak characteristic	Density:	no data
pH:	approx 6,5 (5 g/l H ₂ O, 20°C)	Bulk density:	approx 200-400 kg/m ³
Melting point:	> 300°C	Solubility:	
Boiling point:	no data	in water:	5 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol 1g/l (20°C)
Ignition temperature:	no data		

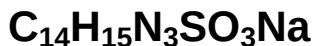
methyl orange

CHEM*217046301

5 g	10 g	Appearance	orange powder
25 g	50 g	Solubility in water	passes test
100 g	250 g	pH sensitivity	passes test
500 g		Molar absorptivity coefficient:	
		E (pH 3,0; 480÷520 nm)	min. 36000
		E (pH 4,4; 440÷480 nm)	min. 24000
		Loss on drying	max. 3 %
		TLC test	passes test

METHYL ORANGE SOLUTION IN WATER

Oranż metylowy roztwory



M = 327,34 g/mol

CAS: 547-58-0

WE: 208-925-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	orange	Viscosity 20°C:	no data
Odor:	-	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

methyl orange water solution 0,04%

CHEM*217046309

100 ml	250 ml	Appearance	orange liquid
500 ml	1l	pH range	
		red	3,2
		yellow	4,4

methyl orange water solution 0,1%

CHEM*217046307

100 ml	250 ml	Appearance	orange liquid
500 ml	1l	pH range	
		red	3,2
		yellow	4,4

methyl orange water solution 0,5%

CHEM*217046305

100 ml	250 ml	Appearance	orange liquid
500 ml	1l	pH range	
		red	3,2
		yellow	4,4

methyl orange water solution 0,7%

CHEM*217046306

100 ml	250 ml	Appearance	orange liquid
500 ml	1l	pH range	
		red	3,2
		yellow	4,4

METHYL ORANGE IN ETHANOL SOLUTION

Oranż metylowy roztwory etanolowe



M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	orange	Viscosity 20°C:	no data
Odor:	alcoholic	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	approx -117°C	Solubility:	
Boiling point:	approx 78°C	in water:	no data
Auto-ignition temperature:	approx 425°C	in organic solvents:	no data
Ignition temperature:	approx 12°C		

methyl orange ethanol solution 0,1%

CHEM*217046302

100 ml	250 ml	Appearance	orange liquid
500 ml	1l	Methyl orange	approx 1,0 g/l

SILICA GEL*Pakiet osuszający (żel silikonowy)*

M = 60,09 g/mol (anhydrous)

CAS: 7631-86-9

WE: 231-545-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or brown	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	400-550 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

silica gel**CHEM*159055000**

1 szt

Bulk density	500-650 g/l
Moisture (150°C, 3h)	max. 2,0 %
The ability of water adsorption (24h, 80% relative humidity)	min. 5,0 %
Granulation	2-7 mm

PARAFFIN LIQUID

Parafina ciekła

M = not applicable

CAS: 8012-95-1

WE: 232-384-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Bottom:	no data
Colour:	colourless	Viscosity (20°C):	110-230 mPa*s
Odor:	odorless	Vapour pressure:	0,0001 hPa w 20°C
pH:	5-7	Density:	0,827-0,890 g/cm ³ (20°C)
Boiling point:	> 350-500°C	Bulk density:	approx 460 kg/m ³
Auto-ignition temperature:		Solubility:	
Ignition temperature:	approx 230°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data
Top:	no data		

paraffin liquid

CHEM*597145492

50 g	100 g	Density (20°C)	0,827 – 0,890 g/cm ³
250 g	500 g	Dynamic viscosity	110 – 230 mPa*s
800 g	1 kg	pH	5,0 – 7,0
2 kg		Aromatic hydrocarbons	passes test
		Fats, resins	passes test
		Sulfur compounds	passes test
		Reducing substances	passes test

PARAFFIN WAX FOR HISTOPATHOLOGY, MP 50-52 °C

Paraffin wax for Histopathology T.T. 50-52°C

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Top:	0,35% v/v
Colour:	white	Bottom:	3,5% v/v
Odor:	odorless	Viscosity (100°C):	approx 3,2 mm ² /s
pH:	not applicable	Vapour pressure:	0,1 hPa w 20°C
Solidification temperature:	50-52°C	Density:	approx 0,9 g/cm ³ (20°C)
Boiling point:	> 350°C	Bulk density:	approx 460 kg/m ³
Auto-ignition temperature:	> 300°C	Solubility:	
Ignition temperature:	approx 220°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data

paraffin wax for histopathology tt. 50-52°C

CHEM*597144522

250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	12.5 kg
15 kg	17 kg
20 kg	25 kg

Melting point

50 - 52 °C

PARAFFIN WAX FOR HISTOPATHOLOGY mp 52-54°C

Parafina do histopatologii, TT 52-54 °C

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Top:	0,35% v/v
Colour:	white	Bottom:	3,5% v/v
Odor:	odorless	Viscosity (100°C):	approx 3,2 mm ² /s
pH:	not applicable	Vapour pressure:	0,1 hPa w 20°C
Solidification temperature:	52-54°C	Density:	approx 0,9 g/cm ³ (20°C)
Boiling point:	> 350°C	Bulk density:	approx 400-500 kg/m ³
Auto-ignition temperature:	> 300°C	Solubility:	
Ignition temperature:	approx 220°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data

Paraffin wax for Histopathology mp 52-54°C

CHEM*597144523

250 g	500 g	Melting point	52 - 54 °C
750 g	1 kg		
2 kg	5 kg		
10 kg	12.5 kg		
15 kg	17 kg		
20 kg	25 kg		

PARAFFIN WAX FOR HISTOPATHOLOGY T.T. 54-56°C

Parafina do histopatologii, TT 54-56 °C

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Top:	0,35% v/v
Colour:	white	Bottom:	3,5% v/v
Odor:	odorless	Viscosity (100°C):	approx 3,2 mm ² /s
pH:	not applicable	Vapour pressure:	0,1 hPa w 20°C
Solidification temperature:	54-56°C	Density:	approx 0,764 g/cm ³ (20°C)
Boiling point:	> 350°C	Bulk density:	approx 400-500 kg/m ³
Auto-ignition temperature:	> 300°C	Solubility:	
Ignition temperature:	approx 220°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data

Paraffin wax for Histopathology mp 54-56°C

CHEM*597144509

250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	12.5 kg
15 kg	17 kg
20 kg	25 kg

Melting point

54 - 56 °C

PARAFFIN WAX FOR HISTOPATHOLOGY mp. 56°C

Parafina do histopatologii, TT 56 °C

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Top:	0,35% v/v
Colour:	white	Bottom:	3,5% v/v
Odor:	odorless	Viscosity (100°C):	approx 4,2 mm ² /s
pH:	not applicable	Vapour pressure:	0,1 hPa w 20°C
Solidification temperature:	55-57°C	Density:	approx 0,764 g/cm ³ (20°C)
Boiling point:	> 350°C	Bulk density:	approx 400-500 kg/m ³
Auto-ignition temperature:	> 300°C	Solubility:	
Ignition temperature:	> 100°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data

Paraffin wax for Histopathology mp 56°C

CHEM*597144581

250 g	500 g	Melting point	55 - 57 °C
750 g	1 kg		
2 kg	5 kg		
10 kg	12.5 kg		
15 kg	17 kg		
20 kg	25 kg		

PARAFFIN WAX FOR HISTOPATHOLOGY mp. 56-58°C

Parafina do histopatologii, TT 56-58 °C

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Top:	0,35% v/v
Colour:	white	Bottom:	3,5% v/v
Odor:	prawie bezwonny	Viscosity (100°C):	approx 3,2 mm ² /s
pH:	not applicable	Vapour pressure:	0,1 hPa w 20°C
Solidification temperature:	56-58°C	Density:	approx 0,764 g/cm ³ (20°C)
Boiling point:	> 350°C	Bulk density:	approx 400-500 kg/m ³
Auto-ignition temperature:	> 300°C	Solubility:	
Ignition temperature:	> 100°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data

Paraffin wax for Histopathology mp 56-58°C

CHEM*597144580

250 g	500 g	Melting point	56 - 58 °C
750 g	1 kg		
2 kg	5 kg		
10 kg	12.5 kg		
15 kg	17 kg		
20 kg	25 kg		

PARAFFIN WAX mp 54 - 56°C*Parafina T.T. 54-56 °C*

M = not applicable

CAS: 8002-74-2

WE: 232-315-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Viscosity (100°C):	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 0,780 g/cm ³ (100°C)
pH:	not applicable	Bulk density:	no data
Melting point:	52 - 62°C	Solubility:	
Boiling point:	> 300°C	in water:	insoluble
Auto-ignition temperature:	> 250°C	in organic solvents:	.
Ignition temperature:	> 200°C		
Explosion limits:	no data		

paraffin wax mp. 54 - 56°C**CHEM*597144508**

1 kg	2 kg
5 kg	10 kg
12,5 kg	15 kg
17 kg	20 kg
25 kg	

Melting point

54 - 56 °C

n-PENTANE

Pentan

C₅H₁₂

M = 72,15 g/mol

CAS: 109-66-0

WE: 203-692-4



H: 225, 304, 336, 411, EUH066
 P: 273, 301+310, 331, 403+235
 RID/ADR: 3, II UN: 1265



Physical and chemical properties:

Character:	liquid	bottom:	1,3% v/v
Colour:	colourless	top:	7,8% v/v
Odor:	characteristic	Viscosity (20°C):	0,235 mPa·s
Melting point:	-129,7°C	Vapour pressure:	573 mbar (20°C)
Boiling point:	26-40°C	Density:	0,63 g/cm ³ (20°C)
Auto-ignition temperature:	> 200°C	Solubility:	
Ignition temperature:	<-50°C	in water:	insoluble
Explosion limits:		in organic solvents:	soluble

pentane pure

CHEM*427179209

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Water (KF)	max. 0,025 %
1 l	2.5 l	Acidity	max. 0,001 meq/g
3 l	5 l	Residue on evaporation	max. 0,05 %

pentane pure p. a.

CHEM*117179209

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Water (KF)	max. 0,02 %
1 l	2.5 l	Acidity	max. 0,0005 meq/g
3 l	5 l	Residue on evaporation	max. 0,001 %
		Bar (Ba)	max. 0,00005 %
		Chromium (Cr)	max. 0,00005 %
		Tin (Sn)	max. 0,00005 %
		Zinc (Zn)	max. 0,0001 %
		Aluminium (Al)	max. 0,0001 %
		Cadmium (Cd)	max. 0,00005 %
		Cobalt (Co)	max. 0,00001 %
		Manganese (Mn)	max. 0,00005 %
		Copper (Cu)	max. 0,00001 %
		Nickel (Ni)	max. 0,00005 %
		Lead (Pb)	max. 0,00001 %
		Sulfur (S)	max. 0,001 %
		Calcium (Ca)	max. 0,0001 %
		Iron (Fe)	max. 0,00001 %

pentane do chromatografii HPLC**CHEM*617179209**

1 l	2.5 l	Assay (GC)	min. 99,0 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		200 nm	min. 60 %
		210 nm	min. 80 %
		220 nm	min. 90 %
		230 nm	min. 98 %
		240 nm	min. 99 %
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

pentane GC for pesticide analysis**CHEM*617179211**

500 ml	1 l	Assay (GC)	min. 99,0 %
		Water (KF)	max. 0,02 %
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

pentane reduced content of trihalomethanes**CHEM*617179212**

500 ml	1 l	Assay (GC)	min. 99,0 %
		Water (KF)	max. 0,01 %
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		Trihalomethanes	max. 1 ppb

pentane GC**CHEM*617179210**

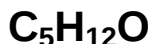
1 l	2.5 l	Assay	min. 99,0 %
		Density (20°C)	approx 0.63 g/cm ³
		Distillation range (95%)	35,0 ÷ 36,0°C
		Refractive index	1,357 - 1,359
		Water (KF)	max. 0,01 %
		Residue on evaporation	max. 0,0005 %
		Colour	max. 10 as Hz
		Signal GC FID in the range	
		n-undekane - n-tetrakontan	max. 2 ng/ml

pentane GC standard**CHEM*617179210**

25 ml	50 ml	purified	min. 99,9 %
75 ml	100 ml		

1- PENTANOL

1-Pentanol



M = 88,15 g/mol

CAS: 71-41-0

WE: 200-752-1



H: 226, 315, 332, 335, EUH066
P: 302+352
RID/ADR: 3, III UN: 1105



Physical and chemical properties:

Character:	liquid	Vapour pressure:	3,13 mbar (25°C)
Colour:	colourless	Density:	0,82 g/cm ³ (20°C)
Odor:	characteristic	Bulk density:	not applicable
pH:	neutral (25 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	-79°C	in water:	21,9 g/l H ₂ O (20°C)
Boiling point:	138°C	in organic solvents:	soluble
Auto-ignition temperature:	300°C	Log <i>P</i> _{OW} :	no data
Ignition temperature:	48°C	Density par względem powietrza:	3,04
Explosion limits:		Temperatura krytyczna:	312°C
bottom:	1,35% v/v	Ciśnienie krytyczne:	4,44 MPa
top:	10,5% v/v	Wsp. załamania światła w temp. 20°C:	1,41
Viscosity:	3,35 mPa·s (w temp. 25°C)		

1-pentanol pure

CHEM*117183406

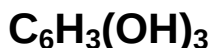
50 ml	100 ml	Appearance	colourless, clear liquid
250 ml	500 ml	Assay	min. 98,0 %
1l	2.5 l	Density (20°C)	0,814 - 0,816 g/cm ³
		Refractive index(20°C)	1,407 - 1,41
		Water	max. 0,4 %
		Acids i estry	max. 0,075 meq/g
		Aldehydy (as HCHO)	max. 0,005 %
		Residue on evaporation	max. 0,005 %
		Organic impurities	passes test

1-pentanol pure p. a.

CHEM*117183406

50 ml	100 ml	Appearance	colourless, clear liquid
250 ml	500 ml	Assay	min. 98,5 %
1l		Colour	max. 30 as Hz
		Density (20°C)	0,813 - 0,815 g/cm ³
		Refractive index(20°C)	1,407 - 1,41
		Water	max. 0,2 %
		Acids i estry	max. 0,075 meq/g
		Aldehydy (as HCHO)	max. 0,002 %
		Residue on evaporation	max. 0,002 %
		Organic impurities	passes test

PYROGALLOL

Pirogalol


M = 126,11 g/mol

CAS: 87-66-1

WE: 201-762-9



H: 302, 312, 332, 341, 412
 P: 201, 273, 280, 302+352, 308+313
 RID/ADR: 6.1, III UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	2 - 4 hPa (140°C)
Odor:	weak characteristic	Density:	1,45 g/cm ³ (20°C)
pH:	4 - 5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	131 - 134°C	Solubility:	
Boiling point:	309°C	in water:	400 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	soluble
Ignition temperature:	no data		

pyrogallol pure

CHEM*427258005

10 g	25 g	Assay	min. 97,0 %
50 g	75 g	Melting point	129-134°C
100 g	250 g		
500 g			

pyrogallol pure p. a.

CHEM*117259608

10 g	25 g	Assay	min. 99,5 %
50 g	75 g	Melting point	130-133°C
100 g	250 g	Free acids	max. 0,02 %
500 g		Residue on roasting (as SO ₄)	max. 0,05 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,02 %

PYRIDINE

Pirydyna
C₅H₅N

M = 79,1 g/mol

CAS: 110-86-1

WE: 203-809-9



H: 225, 302, 312, 332
P: 210, 233, 302+352
RID/ADR: 3, II

UN: 1282


Physical and chemical properties:

Character:	liquid	bottom:	1,7 % v/v
Colour:	colourless - yellow	top:	10,6% v/v
Odor:	sharp, characteristic	Viscosity w temp. 20°C:	0,968 mPa·s
pH:	9-10	Vapour pressure:	20 mbar (20°C)
Melting point:	-42°C	Density:	0,98 g/cm ³ (20°C)
Boiling point:	115°C	Solubility:	
Auto-ignition temperature:	482°C	in water:	soluble
Ignition temperature:	17°C	in organic solvents:	ethanol, DMSO, benzene
Explosion limits:			

pyridine pure
CHEM*427276101

50 ml	100 ml	Appearance	colourless or yellow, clear liquid
250 ml	500 ml	Assay	min. 99,0 %
1l		Water (KF)	max. 0,5 %

pyridine pure p. a.
CHEM*117276102

50 ml	100 ml	Appearance	colourless or yellow, clear liquid
250 ml	500 ml	Assay	min. 99,5 %
1l		Water (KF)	max. 0,1 %
		Residue on evaporation	max. 0,005 %
		Substances reducing KMnO ₄ (as O)	max. 0,005 %

pyridine HPLC
CHEM*617276102

1l	2.5 l	Assay (GC)	min. 99,5 %
		Water	max. 0,07 %
		Residue on evaporation	max. 0,0005 %
		UV - transsmision (1cm, water):	
		340 nm	min. 86 %
		350 nm	min. 95 %
		400 nm	min. 98 %
		Fluorescence (as quinine 365 nm)	max. 2 ppb

POTASSIUM NITRATE

Potasu azotan



M = 101,11 g/mol

CAS: 7757-79-1

WE: 231-818-8



H: 272

P: 210

RID/ADR: 5.1, III

UN: 1486



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,11 g/cm ³ (20°C)
pH (10%):	6,8-8,5	Bulk density:	1100 kg/m ³
Melting point:	334°C	Solubility:	
Boiling point:	approx 400 °C (decomposition)	in water:	316 g/l (20°C), 2450 g/l (100°C)
Auto-ignition temperature:	not applicable	in other solvents:	ammonia
Ignition temperature:	not applicable		

potassium nitrate pure

CHEM*427389100

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Water	max. 0,5 %
5 kg	10 kg	Substances insoluble in water	max. 0,005 %
25 kg		Nitrites (NO ₂)	max. 0,001 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,02 %
		Ammonia salts(NH ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Magnesium (Mg)	max. 0,002 %
		Sodium (Na)	max. 0,03 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

potassium nitrate pure p. a.**CHEM*117309100**

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Water	max. 0,2 %
1 kg	2 kg	pH (5%, 20°C)	5,5 - 8
5 kg	10 kg	Substances insoluble in water	max. 0,005 %
25 kg		Nitrites (NO ₂)	max. 0,0005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (as PO ₄)	max. 0,0003 %
		Iodates (JO ₃)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,003 %
		Ammonia salts(NH ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,001 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0002 %

POTASSIUM NITRATE ANALYTICAL WEIGHED AMOUNT

Potasu azotan odważka analityczna

KNO₃

M = 101,11 g/mol

CAS: 7757-79-1

WE: 231-818-8



H: 272

P: 210

RID/ADR: 5.1, III

UN: 1486



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,11 g/cm ³ (20°C)
pH 10%:	6,8-8,5	Bulk density:	1100 kg/m ³
Melting point:	334°C	Solubility:	
Boiling point:	approx 400 °C (decomposition)	in water:	316 g/l (20°C), 2450 g/l (100°C)
Auto-ignition temperature:	not applicable	in other solvents:	ammonia
Ignition temperature:	not applicable		

potassium nitrate 0,1 mol/l analytical weighed amount*

CHEM*167389100

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM NITRATE

STANDARD SOLUTIONS (C < 2,25 MOL/L)

Potasu azotan roztwory mianowane

KNO₃

M = 101,11 g/mol

CAS: 7757-79-1

WE: 231-818-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	no data	Density:	1,05 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in other solvents:	no data

potassium nitrate standard solution 0,05 mol/l

CHEM*817309103

250 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1l

potassium nitrate standard solution 0,1 mol/l

CHEM*817309102

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

potassium nitrate standard solution 0,5 mol/l

CHEM*817309104

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

potassium nitrate standard solution 1 mol/l

CHEM*817309101

250 ml

500 ml

Titer

0,996 – 1,004 mol/l

1l

potassium nitrate standard solution 2 mol/l

CHEM*817309100

250 ml

500 ml

Titer

1,992 – 2,008 mol/l

1l

POTASSIUM NITRITE

Potasu azotyn

KNO₂

M = 85,10 g/mol

CAS: 7758-09-0

WE: 231-832-4



H: 272, 301, 400
P: 210, 280, 301+312, 309+310
RID/ADR: 5.1, II UN: 1488



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white or yellow	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,92 g/cm ³ (w 20°C)
pH:	approx 7 - 10 (50 g/l H ₂ O 20°C)	Bulk density:	980 kg/m ³
Melting point:	407°C	Solubility:	
Boiling point:	decomposition	in water:	
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium nitrite pure

CHEM*427389507

50 g	100 g	Assay	min. 95,0 %
250 g	500 g	Chlorides (Cl)	max. 0,05 %
750 g	1 kg	Sulfates (SO ₄)	max. 0,05 %
5 kg	10 kg	Arsenic (As)	max. 0,0002 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,002 %
25 kg			

potassium nitrite pure p. a.

CHEM*117389508

50 g	100 g	Assay	min. 96,0 %
250 g	500 g	Chlorides (Cl)	max. 0,01 %
750 g	1 kg	Sulfates (SO ₄)	max. 0,02 %
5 kg	10 kg	Arsenic (As)	max. 0,0001 %
		Lead (Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,001 %
25 kg			

POTASSIUM BROMIDE

Potasu bromek

KBr

M = 119,01 g/mol

CAS: 7758-02-3

WE: 231-830-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapour pressure:	< 0,01 mmHg (20°C)
Odor:	odorless	Density:	2,75 g/cm ³ (20°C)
pH:	5,0 - 8,8 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 900 - 1000 kg/m ³
Melting point:	734°C	Solubility:	
Boiling point:	1435°C	in water:	650 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium bromide pure

CHEM*427392804

50 g	100 g	Appearance	white, powder
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Loss on drying	max. 0,5 %
		Substances insoluble in water	max. 0,02 %
		pH (5%, H ₂ O)	5,0 - 8,0
		Total nitrogen (N)	max. 0,001 %
		Bromates (BrO ₃)	max. 0,001 %
		Chlorides (Cl)	max. 0,5 %
		Iodides (I)	max. 0,1 %
		Sulfates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,001 %
		Barium (Ba)	max. 0,01 %
		Magnesium (Mg)	max. 0,002 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

potassium bromide pure p. a.**CHEM*117392805**

10 g	25 g	Appearance	white, powder
50 g	100 g	Assay	min. 99,5 %
250 g	500 g	Loss on drying	max. 0,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	5,5 - 8,5
		Total nitrogen (N)	max. 0,001 %
		Bromates (BrO ₃)	max. 0,001 %
		Chlorides (Cl)	max. 0,1 %
		Iodides (I)	max. 0,02 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Barium (Ba)	max. 0,002 %
		Magnesium (Mg)	max. 0,001 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM BROMIDE ANALYTICAL WEIGHED AMOUNT

Potasu bromek odważka analityczna

KBr

M = 119,01 g/mol

CAS: 7758-02-3

WE: 231-830-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	< 0,01 mmHg (20°C)
Odor:	odorless	Density:	2,75 g/cm ³ (20°C)
pH:	5,0 - 8,8 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 900 - 1000 kg/m ³
Melting point:	734°C	Solubility:	
Boiling point:	1435°C	in water:	650 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium bromide 0,1 mol/l analytical weighed amount

CHEM*167393009

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM BROMIDE STANDARD SOLUTIONS (C < 2 MOL/L)

Potasu bromek roztwory mianowane

KBr

M = 119,01 g/mol

CAS: 7758-02-3

WE: 231-830-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	5,0 - 8,8	Density:	1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in other solvents:	no data

potassium bromide standard solution 0,05 mol/l

CHEM*817392801

500 ml

1l

Titer

0,0498 – 0,0502 mol/l

potassium bromide standard solution 0,1 mol/l

CHEM*817392800

500 ml

1l

Titer

0,0996 – 0,1004 mol/l

potassium bromide standard solution 0,5 mol/l

CHEM*817392802

500 ml

1l

Titer

0,498 – 0,502 mol/l

potassium bromide standard solution 1 mol/l

CHEM*817392800

500 ml

1l

Titer

0,996 – 1,004 mol/l

POTASSIUM BROMIDE-BROMATE STANDARD SOLUTIONS

Potasu bromek – bromian roztwory mianowane

M = not applicable

CAS: not applicable

WE: not applicable



H: 350

P: 281, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	1,005 g/cm ³ (25°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium bromate-bromide standard solution 0,05 mol/l

CHEM*811923801

250 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1l

potassium bromate-bromide standard solution 0,1 mol/l

CHEM*811923802

250 ml

500 ml

Titer

0,0998 – 0,1004 mol/l

1l

POTASSIUM BROMATE

Potasu bromian



M = 167,01 g/mol

CAS: 7758-01-2

WE: 231-829-8



H: 271, 301, 350i

P: 201, 210, 221, 281, 309, 310

RID/ADR: 5.1, II

UN: 1484



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,27 g/cm ³ (20°C)
pH:	5,0 – 9,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1420 kg/m ³
Melting point:	350°C	Solubility:	
Boiling point:	370°C (decomposition)	in water:	69 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium bromate pure p. a.

CHEM*117393602

25 g	50 g	Appearance	white powder or white crystals
100 g	250 g	Assay	min. 99,8 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	5,5 – 9,0
		Total nitrogen (N)	max. 0,001 %
		Bromides (as Br)	max. 0,02 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Sodium (Na)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM BROMATE ANALYTICAL WEIGHED AMOUNT

Potasu bromian odważka analityczna

KBrO₃

M = 167,01 g/mol

CAS: 7758-01-2

WE: 231-829-8



H: 271, 301, 350i

P: 201, 210, 221, 281, 309, 310

RID/ADR: 5.1, II

UN: 1484



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,27 g/cm ³ (20°C)
pH:	5,0 – 9,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1420 kg/m ³
Melting point:	350°C	Solubility:	
Boiling point:	370°C (decomposition)	in water:	69 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium bromate 1/60 mol/l analytical weighed amount*

CHEM*167393803

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

1/60 mol/l ± 0,2 %

POTASSIUM BROMATE STANDARD SOLUTIONS

Potasu bromian roztwory mianowane

KBrO₃

M = 167,01 g/mol

CAS: 7758-01-2

WE: 231-829-8



H: 302, 350i

P: 201, 210, 281, 309, 310

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	5,0 – 9,0 (20°C)	Density:	1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium bromate standard solution 0,0167mol/l (0,1N)

CHEM*817393602

1l	Titer	0,01663 – 0,01677 mol/l

potassium bromate standard solution 0,02mol/l

CHEM*817393603

1l	Titer	0,01992 – 0,02008 mol/l

POTASSIUM CHLORIDE

Potasu chlorek

KCl

M = 74,56 g/mol

CAS: 7447-40-7

WE: 231-211-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,98 g/cm ³ (20°C)
pH:	5,5 - 8,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	770°C	Solubility:	
Boiling point:	1500°C	in water:	342 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	ni dotyczy		

potassium chloride pure

CHEM*427397401

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
2 kg	5 kg	pH (5%, 20°C)	5,5 - 8,0
10 kg	15 kg	Total nitrogen (N)	max. 0,003 %
25 kg		Bromides (Br)	max. 0,005 %
		Phosphates (as PO ₄)	max. 0,001 %
		Iodides (I)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Magnesium (Mg)	max. 0,002 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

potassium chloride pure p. a.**CHEM*117397402**

50 g	100 g	Appearance	white, powder
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	5,5 - 8,0
10 kg	15 kg	Total nitrogen (N)	max. 0,001 %
25 kg		Bromides (Br)	max. 0,005 %
		Phosphates (as PO ₄)	max. 0,0005 %
		Iodides (I)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Bar (Ba)	max. 0,001 %
		Magnesium (Mg)	max. 0,001 %
		Sodium (Na)	max. 0,2 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0002 %

POTASSIUM CHLORIDE ANALYTICAL WEIGHED AMOUNT

Potasu chlorek odważka analityczna

KCl

M = 74,56 g/mol

CAS: 7447-40-7

WE: 231-211-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,98 g/cm ³ (20°C)
pH:	5,5 - 8,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	770°C	Solubility:	
Boiling point:	1500°C	in water:	342 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium chloride 0,1 mol/l analytical weighed amount

CHEM*161397402

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM CHLORIDE STANDARD SOLUTIONS

Potasu chlorek roztwory mianowane

KCl

M = 74,56 g/mol

CAS: 7447-40-7

WE: 231-211-8

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	no data	Density:	(20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in other solvents:	no data

potassium chloride standard solution 0,001 mol/l

CHEM*817397410

100 ml	250 ml	Titer	0,000996 – 0,001004 mol/l
500 ml	1l		

potassium chloride standard solution 0,01 mol/l

CHEM*817397409

100 ml	250 ml	Titer	0,00996 – 0,01004 mol/l
500 ml	1l		

potassium chloride standard solution 0,1 mol/l

CHEM*817397407

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

potassium chloride standard solution 0,2 mol/l

CHEM*817397412

100 ml	500 ml	Titer	0,1992 – 0,2008 mol/l
1l			

potassium chloride standard solution 0,3 mol/l

CHEM*817397401

100 ml	250 ml	Titer	0,2988 – 0,3012 mol/l
500 ml	1l		

potassium chloride standard solution 0,5 mol/l **CHEM*817397404**

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1l		

potassium chloride standard solution 1 mol/l **CHEM*817397406**

100 ml	250 ml	Titer	0,996 – 1,004 mol/l
500 ml	1l		

potassium chloride standard solution 3 mol/l **CHEM*817397400**

50 ml	100 ml	Titer	2,988 – 3,012 mol/l
250 ml	500 ml		
1l	2,5 l		
3 l	5 l		
10 l			

potassium chloride standard solution 3,3 mol/l **CHEM*817397403**

100 ml	250 ml	Titer	3,2868 – 3,3132 mol/l
500 ml	1l		

potassium chloride standard solution 4 mol/l **CHEM*817397405**

100 ml	250 ml	Titer	3,984 – 4,016 mol/l
500 ml	1l		

potassium chloride saturated solution **CHEM*817397408**

50 ml	100 ml	Assay	approx 342 g/l
250 ml	500 ml		
1l	2,5 l		
3 l	5 l		
10 l			

POTASSIUM CHROMATE

Potasu chromian



M = 194,19 g/mol

CAS: 7789-00-6

WE: 232-140-5



H: 315, 317, 319, 335, 340, 350i, 410
P: 201, 273, 280, 302+352, 305+351+338, 308+313
RID/ADR: 6.1, II UN: 3288



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,73 g/cm ³ (20°C)
pH:	8,5-10 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1800 kg/m ³
Melting point:	968°C	Solubility:	
Boiling point:	decomposition > 1000 °C	in water:	629 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol
Ignition temperature:	not applicable		

potassium chromate pure

CHEM*427402502

25 g	50 g	Appearance	yellow crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg		pH (5%, 20°C)	8,5 - 10,0
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,05 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,01 %

potassium chromate pure p. a.

CHEM*117402503

25 g	50 g	Appearance	yellow crystals
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in water	max. 0,004 %
1 kg		pH (5%, 20°C)	8,5 - 10,0
		Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,025 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,007 %
		Iron (Fe)	max. 0,005 %

POTASSIUM CHROMATE SOLUTIONS (STĘŻENIA 0,5% < C < 20%)

Potasu chromian roztwory



M = 194,19 g/mol

CAS: 7789-00-6

WE: 232-140-5



H: 315, 317, 319, 335, 340, 350i, 410
P: 201, 273, 280, 302+352, 305+351+338, 308+313
RID/ADR: 6.1, II UN: 3288



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	no data	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	8,5-10 (20°C)	Density:	(18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol

potassium chromate 1%

CHEM*527410405

100 ml	250 ml	Assay	1 % ± 0,1 %
500 ml	1l	pH	8,5 - 10,0
		Density (18°C)	approx 1,0066 g/cm ³

potassium chromate 5%

CHEM*817402502

100 ml	250 ml	Assay	5 % ± 0,1 %
500 ml	1l	pH	8,5 - 10,0
		Density (18°C)	approx 1,0394 g/cm ³

potassium chromate 10%

CHEM*527410406

100 ml	250 ml	Assay	10 % ± 0,1 %
500 ml	1l	pH	8,5 - 10,0
		Density (18°C)	approx 1,0821 g/cm ³

POTASSIUM CITRATE TRIBASIC MONOHYDRATE

Tri-Potasu cytrynian 1 hydrat



M = 342,42 g/mol

CAS: 6100-05-6

WE: 212-755-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,98 g/cm ³ (20°C)
pH:	7,0-9,0 (50 g/l H ₂ O, 20°C)	Bulk density:	900-1000 kg/m ³
Melting point:	>180°C	Solubility:	
Boiling point:	not applicable	in water:	640 g/l (25°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

tri-potassium citrate 1 hydrat pure

CHEM*427407008

50 g	100 g	Appearance	colourless or white, crystals
250 g	500 g	Assay	min. 98,5 %
1 kg	5 kg	Substances insoluble in water	max. 0,01 %
10 kg		pH (10%, 20°C)	7,5 - 8,5
		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,003 %

tri-potassium citrate 1 hydrat pure p. a.

CHEM*117407009

25 g	50 g	Appearance	colourless or white crystals
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (10%, 20°C)	7,5 - 8,5
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

POTASSIUM DICHROMATE

Potasu dichromian



M = 294,19 g/mol

CAS: 7778-50-9

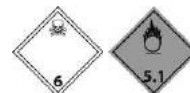
WE: 231-906-6



H: 272, 301, 314, 317, 330,
334, 340, 350, 360FD,
372, 410

P: 201, 280, 301+330+331,
304+340, 305+351+338,
308+313

RID/ADR: 6.1 (5.1), III UN: 3086



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	orange	Vapour pressure:	no data
Odor:	odorless	Density:	2,69 g/cm ³ (20°C)
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1300 kg/m ³
Melting point:	398°C	Solubility:	
Boiling point:	500°C, decomposition	in water:	120 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium dichromate pure

CHEM*427410407

50 g	100 g	Appearance	orange crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
		Substances precipitated NH ₄ OH	max. 0,05 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,05 %
		Calcium (Ca)	max. 0,02 %

potassium dichromate pure p. a.

CHEM*117410408

25 g	50 g	Appearance	orange crystals
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Substances precipitated NH ₄ OH	max. 0,02 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,05 %
		Calcium (Ca)	max. 0,01 %

POTASSIUM DICHROMATE ANALYTICAL WEIGHED AMOUNT

Potasu dichromian odważka analityczna



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3086



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	orange	Vapour pressure:	no data
Odor:	odorless	Density:	2,69 g/cm ³ (20°C)
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1300 kg/m ³
Melting point:	398°C	Solubility:	
Boiling point:	500°C, decomposition	in water:	120 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium dichromate 1/60 mol/l analytical weighed amount

CHEM*167411009

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

1/60 mol/l ± 0,2 %

potassium dichromate 0,1 mol/l analytical weighed amount

CHEM* 167411010

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM DICHROMATE 5% solution

Potasu dichromian roztwór 5%



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 335, 340, 350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 6.1, III UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	1,0336 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate 5% solution

CHEM*527410407

100 ml	250 ml
500 ml	1l
5 l	

Assay	5,0 ± 0,1 %
Density (20°C)	approx 1,0336 g/cm ³

POTASSIUM DICHROMATE 10% solution

Potasu dichromian roztwór 10%



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 335,
340, 350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	approx 1,0703 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate 10%

CHEM*527410408

100 ml	250 ml
500 ml	1l
5 l	

Assay	10,0 ± 0,5 %
Density (20°C)	approx 1,0703 g/cm ³

POTASSIUM DICHROMATE 0,004167 MOL/L (0,025N) STANDARD SOLUTION

Potasu dichromian roztwór 0,025N



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340, 350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340, 305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	approx 1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,025N (0,004167 mol/l) CHEM*817410405

1l

Titer

0,00415 – 0,00418 mol/l

POTASSIUM DICHROMATE 0,0125 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,0125M



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	approx 1,0008 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,0125 mol/l

CHEM*817410407

250 ml

500 ml

Titer

0,01245 – 0,01255 mol/l

1l

POTASSIUM DICHROMATE 0,025 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,025M



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	1,0034 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,025 mol/l

CHEM*817410406

250 ml

500 ml

Titer

0,0249 – 0,0251 mol/l

1l

POTASSIUM DICHROMATE 0,04167 MOL/L (0,25N) STANDARD SOLUTION

Potasu dichromian roztwór 0,25N



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	1,0068 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,25N (0,04167 mol/l)

CHEM*817410404

1l

Titer

0,0415 – 0,0418 mol/l

POTASSIUM DICHROMATE 0,1 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,1M



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	approx 1,0185 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,1 mol/l

CHEM*817410403

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

POTASSIUM DICHROMATE 0,25 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,25M



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	1,0482 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,25 mol/l

CHEM*817410408

250 ml

500 ml

Titer

0,249 – 0,251 mol/l

1l

POTASSIUM DICHROMATE 0,5 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,5M



M = 294,19 g/mol

CAS: 7778-50-9

WE: 231-906-6



H: 272, 301, 314, 317, 330, 334, 340,
350, 360FD, 372, 410

P: 201, 280, 301+330+331, 304+340,
305+351+338, 308+313

RID/ADR: 6.1, III

UN: 3287



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	orange	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 4 (50 g/l H ₂ O, 20°C)	Density:	approx 1,096 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble(20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium dichromate standard solution 0,5 mol/l

CHEM*817410410

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

POTASSIUM FLUORIDE

Potasu fluorek

KF

M = 58,1 g/mol

CAS: 7789-23-3

WE: 232-151-5



H: 301, 311, 331
P: 280, 302+352, 304+340
RID/ADR: 6.1, III UN: 1812



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,49 g/cm ³ (20°C)
pH:	alkaline	Bulk density:	400 kg/m ³
Melting point:	approx 860°C	Solubility:	
Boiling point:	1505°C	in water:	920 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _{OW} :	-0,77 (obl. Lit.)

potassium fluoride pure

CHEM*427414207

25 g	50 g	Appearance	colourless or white powder
100 g	250 g	Assay	min. 97,5 %
500 g	750 g	Loss on drying	max. 1,5 %
1 kg	2 kg	Substances insoluble in water	max. 0,1 %
3 kg		Free acids (as HF)	max. 0,05 %
		Free basics (as K ₂ CO ₃)	max. 0,2 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,03 %
		Heavy metals (as Pb)	max. 0,005 %
		Silicon (Si)	max. 0,25 %
		Iron (Fe)	max. 0,005 %

potassium fluoride pure p. a.**CHEM*117414208**

25 g	50 g	Appearance	colourless or white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Loss on drying	max. 1,0 %
1 kg		Substances insoluble in water	max. 0,01 %
		Free acids (as HF)	max. 0,01 %
		Free basics (as K ₂ CO ₃)	max. 0,05 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Sulfites (SO ₃)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,003 %
		Silicon (Si)	max. 0,1 %
		Iron (Fe)	max. 0,002 %

POTASSIUM FLUORIDE 2HYDRATE

Potasu fluorek 2hydrat



M = 94,13 g/mol

CAS: 13455-21-5

WE: 232-151-5



H: 301, 311, 331
P: 280, 302+352, 304+340
RID/ADR: 6.1, III UN: 1812



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	2,454 g/cm ³ (20°C)
pH:	alkaline	Bulk density:	no data
Melting point:	41°C	Solubility:	
Boiling point:	156°C	in water:	3493 g/l (18°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium fluoride 2 hydrat pure

CHEM*427414003

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 98,5 %
500 g	750 g	Substances insoluble in water	max. 0,03 %
1 kg		Free acids (as HF)	max. 0,1 %
		Free basics (as KOH)	max. 0,1 %
		Chlorides (Cl)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,002 %
		Silicon (Si)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

potassium fluoride 2 hydrat pure p. a.

CHEM*117414004

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Free acids (as HF)	max. 0,05 %
		Free basics (as KOH)	max. 0,05 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Silicon (Si)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM PHOSPHATE MONOBASIC

Potasu fosforan jednozasadowy



M = 136,09 g/mol

CAS: 7778-77-0

WE: 231-913-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,34 g/cm ³ (w 20°C)
pH:	4,1-4,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 800 - 1000 kg/m ³
Melting point:	253°C decomposition	Solubility:	
Boiling point:	no data	in water:	27 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium phosphate monobasic pure

CHEM*427420201

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,0 %
1 kg	5 kg	Loss on drying	max. 1,0 %
10 kg	20 kg	Substances insoluble in water	max. 0,02 %
25 kg		pH (5%, 20°C)	4,2 - 4,6
		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Iron (Fe)	max. 0,003 %

potassium phosphate monobasic pure p. a.

CHEM*117420202

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,5 %
500 g	1 kg	Loss on drying	max. 0,2 %
2 kg	5 kg	Substances insoluble in water	max. 0,01 %
10 kg	15 kg	pH (5%, 20°C)	4,3 - 4,6
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Potassium phosphate dibasic

di-potasu wodorofosforan



M = 174,18 g/mol

CAS: 7758-11-4

WE: 231-834-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	2,44 g/cm ³
Odor:	odorless	Bulk density:	approx 700 - 1000 kg/m ³
pH:	8,7-9,3 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	decomposition >180°C	in water:	1600 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data

Potassium phosphate dibasic pure

CHEM*427421009

50 g	100 g	Appearance	colourless crystals or powder
250 g	500 g	Assay	min. 98,0 %
1 kg		Substances insoluble in water	max. 0,02 %
		Loss on drying	max. 2,0 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,005 %
		Arsenic (As)	max. 0,001 %
		Iron (Fe)	max. 0,005 %

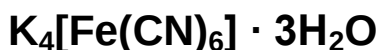
Potassium phosphate dibasic pure p. a.

CHEM*117421000

25 g	50 g	Appearance	colourless crystals or powder
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		Loss on drying	max. 1,0 %
		pH (5%, 20°C)	8,5 - 9,6
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0002 %
		Sodium (Na)	max. 0,5 %
		Iron (Fe)	max. 0,001 %

POTASSIUM HEXACYANOFERRATE (II) 3 HYDRATE

Potasu heksacyjanożelazian (II) 3hydrat



M = 422,41 g/mol

CAS: 14459-95-1

WE: 237-722-2

H: 412

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odor:	odorless	Density:	1,85 g/cm ³ (w 20°C)
pH:	8-10	Bulk density:	1200 kg/m ³
Melting point:	approx 70°C	Solubility:	
Boiling point:	decomposition >70°C	in water:	289 g/l (20°C), approx 900 g/l (96°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium hexacyanoferrate (II) 3 hydrate pure

CHEM*427469803

50 g	100 g	Appearance	yellow crystals
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,03 %
		Chlorides (Cl)	max. 0,5 %
		Cyjanki (CN)	max. 0,005 %
		Water	max. 1,0 %

potassium hexacyanoferrate (II) 3 hydrate pure p. a.

CHEM*117469804

25 g	50 g	Appearance	yellow crystals
100 g	250 g	Assay	99,0 – 102,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Water	max. 0,5 %
		Chlorides (Cl)	max. 0,005 %
		Cyjanki (CN)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,005 %
		Carbonates (CO ₃)	max. 0,002 %
		Zinc (Zn)	max. 0,002 %
		Cadmium (Cd)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,005 %

POTASSIUM HEXACYANOFERRATE (II) ANALYTICAL WEIGHED AMOUNT

Potasu cyjanożelazian (II) odważka analityczna



M = 368,34 g/mol

CAS: 13943-58-3

WE: 237-722-2

H: 412

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	yellow	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	8-10	Density:	approx 1,02 g/cm ³ (w 20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hexacyanoferrate (II) 0,1 mol/l analytical weighed amount CHEM*167469804

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

**POTASSIUM HEXACYANOFERRATE (II) 0,1 MOL/L
STANDARD SOLUTION***Potasu heksacyjanożelazian (II) roztwór 0,1M*

M = 368,34 g/mol

CAS: 13943-58-3

WE: 237-722-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	yellow	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	8-10	Density:	approx 1,02 g/cm ³ (w 20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hexacyanoferrate (II) standard solution 0,1 mol/l**CHEM*817469407**

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

POTASSIUM HEXACYANOFERRATE (III)

Potasu heksacyanożelazian (III)



M = 329,26 g/mol

CAS: 13746-66-2

WE: 237-323-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red	Vapour pressure:	no data
Odor:	odorless	Density:	1,85 g/cm ³ (w 20°C)
pH:	approx 6 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 900 - 1000 kg/m ³
Melting point:	>200°C decomposition	Solubility:	
Boiling point:	not applicable	in water:	464 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	acetone
Ignition temperature:	not applicable		

potassium hexacyanoferrate (III) pure

CHEM*427469406

50 g	100 g	Appearance	red crystals
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,025 %
		Chlorides (Cl)	max. 0,06 %
		Sulfates (SO ₄)	max. 0,02 %

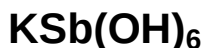
potassium hexacyanoferrate (III) pure p. a.

CHEM*117469407

25 g	50 g	Appearance	red crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,01 %
		Hexacyanoferrate (II)	max. 0,05 %

POTASSIUM HEXAHYDROXOANTIMONATE (V)

Potassiumium heksahydroksyantymonian (V)



M = 262,9,0 g/mol

CAS: 12208-13-8

WE: 235-387-7



H: 302, 332, 411

P: 273

RID/ADR: 6.1, III

UN: 1549



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	7,5 - 9,0 (20 g/l H ₂ O w 20°C)	Bulk density:	approx 1200 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	20 g/l (20°C), 110 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol - insoluble (20°C)
Ignition temperature:	not applicable		

potassium hexahydroxoantimonate (V) pure

CHEM*427469810

10 g	25 g	pH	7,5 - 11
50 g	100 g	Sodium (Na)	max. 0,3 %
250 g		Lead (Pb)	max. 0,01 %

potassium hexahydroxoantimonate (V) pure p. a.

CHEM*117469810

5 g	10 g	pH	8 - 10
25 g	50 g	Sodium (Na)	max. 0,2 %
100 g	250 g	Lead (Pb)	max. 0,005 %

POTASSIUM IODATE

Potasu jodan



M = 214,00 g/mol

CAS: 7758-05-6

WE: 231-831-9



H: 272, 318
P: 280, 305+351+338
RID/ADR: 5.1, II

UN: 1479



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,98 g/cm ³ (w 20°C)
pH:	5,0-8,0 (50 g/l, H ₂ O, 20°C)	Bulk density:	approx 2000 kg/m ³
Melting point:	560°C	Solubility:	
Boiling point:	560°C (decomposition)	in water:	80 g/l (20°C), 321 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium iodate pure

CHEM*427430800

25 g	50 g	Appearance	white, powder
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	5,0 – 8,0
		Total nitrogen (N)	max. 0,004 %
		Chlorides and chlorates (as Cl)	max. 0,1 %
		Iodides (I)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,01 %
		Copper i lead (Cu+Pb)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Iron (Fe)	max. 0,003 %

potassium iodate pure p. a.

CHEM*117430801

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,8 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	5,0 – 8,0
		Total nitrogen (N)	max. 0,002 %
		Chlorides i chlorates (as Cl)	max. 0,02 %
		Iodides (I)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Copper and lead (Cu+Pb)	max. 0,001 %
		Sodium (Na)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

POTASSIUM IODATE ANALYTICAL WEIGHED AMOUNT

Potasu jodan odważka analityczna

KIO₃

M = 214,00 g/mol

CAS: 7758-05-6

WE: 231-831-9



H: 272, 318
P: 280, 305+351+338
RID/ADR: 5.1, II

UN: 1479



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	3,98 g/cm ³ (w 20°C)
pH:	5,0-8,0 (50 g/l, H ₂ O, 20°C)	Bulk density:	approx 2000 kg/m ³
Melting point:	560°C	Solubility:	
Boiling point:	560°C (decomposition)	in water:	80 g/l (20°C), 321 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium iodate 1/60 mol/l analytical weighed amount

CHEM*167431006

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

1/60 mol/l ± 0,2 %

POTASSIUM IODATE

STANDARD SOLUTIONS ($C \leq 0,25 \text{ MOL/L}$)

Potasu jodan roztwory



M = 214,00 g/mol

CAS: 7758-05-6

WE: 231-831-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,0-8,0 (50 g/l, H_2O , 20°C)	Density:	approx 1,02 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium iodate standard solution 0,001 mol/l

CHEM*807430801

250 ml	500 ml	Titer	0,000996 – 0,001004 mol/l
1l			

potassium iodate standard solution 0,01 mol/l

CHEM*807430802

250 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1l			

potassium iodate standard solution 0,1 mol/l

CHEM*807430803

250 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1l			

potassium iodate standard solution 0,25 mol/l

CHEM*807430805

250 ml	500 ml	Titer	0,249 – 0,251 mol/l
1l			

POTASSIUM IODATE 0,5 MOL/L STANDARD SOLUTION

Potasu jodan roztwór 0,5M



M = 214,00 g/mol

CAS: 7758-05-6

WE: 231-831-9



H: 319

P: 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,0-8,0 (50 g/l, H ₂ O, 20°C)	Density:	approx 1,088 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium iodate standard solution 0,5 mol/l

CHEM*807430806

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

POTASSIUM IODIDE

Potasu jodek

KI

M = 166,01 g/mol

CAS: 7681-11-0

WE: 231-659-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	no data
Odor:	odorless	Density:	3,13 g/cm ³ (20°C)
pH:	approx 6,9 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1500 kg/m ³
Melting point:	686°C	Solubility:	
Boiling point:	1330°C	in water:	1430 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _{OW} :	0,04 (obl.)

potassium iodide pure

CHEM*427431609

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Moisture	max. 0,6 %
1 kg	5 kg	Substances insoluble in water	max. 0,02 %
10 kg	15 kg	Chlorides and bromides (as Cl)	max. 0,1 %
25 kg		Iodates and jod (IO ₃)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Magnesium (Mg)	max. 0,005 %
		Sodium (Na)	max. 0,2 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

potassium iodide pure p. a.**CHEM*117431609**

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Moisture	max. 0,1 %
1 kg	2 kg	Substances insoluble in water	max. 0,005 %
5 kg	10 kg	pH (5%, 20°C)	6,0 – 8,0
15 kg	20 kg	Total nitrogen (N)	max. 0,001 %
		Chlorides i bromides (as Cl)	max. 0,01 %
		Phosphates (PO ₄)	max. 0,001 %
		Iodates (IO ₃)	max. 0,0003 %
		Sulfates (SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00001 %
		Magnesium (Mg)	max. 0,001 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0003 %

POTASSIUM IODIDE ANALYTICAL WEIGHED AMOUNT

Potasu jodek odważka analityczna

KI

M = 166,01 g/mol

CAS: 7681-11-0

WE: 231-659-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	no data
Odor:	odorless	Density:	3,13 g/cm ³ (20°C)
pH:	approx 6,9 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1500 kg/m ³
Melting point:	686°C	Solubility:	
Boiling point:	1330°C	in water:	1430 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _{OW} :	0,04 (obl.)

potassium iodide 0,05 mol/l analytical weighed amount* CHEM*167431801

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

potassium iodide 0,1 mol/l analytical weighed amount* CHEM*167431800

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM IODIDE 10%*Potasu jodek roztwór 10%***KI**

M = 166,01 g/mol

CAS: 7681-11-0

WE: 231-659-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,0761 g/cm ³ (20°C)
pH:	approx 6,9	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	0,04 (obl.)
Ignition temperature:	not applicable		

potassium iodide 10% pure p. a.**CHEM*117431610**

500 ml

1l

Assay

10,0 % ± 0,1 %

Density:

1,0761 g/cm³ (20°C)

POTASSIUM IODIDE STANDARD SOLUTIONS

Potasu jodek roztwory mianowane

KI

M = 166,01 g/mol

CAS: 7681-11-0

WE: 231-659-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 5,5-8,5 (20°C)	Density:	approx 1,04 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium iodide standard solution 0,05 mol/l

CHEM*807431608

250 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1l			

potassium iodide standard solution 0,1 mol/l

CHEM*807431611

250 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1l			

potassium iodide standard solution 0,25 mol/l

CHEM*807431612

250 ml	500 ml	Titer	0,249 – 0,251 mol/l
1l			

potassium iodide standard solution 0,5 mol/l

CHEM*807431609

250 ml	500 ml	Titer	0,498 – 0,502 mol/l
1l			

potassium iodide standard solution 1 mol/l

CHEM*807431610

250 ml	500 ml	Titer	0,996 – 1,004 mol/l
1l			

POTASSIUM PERMANGANATE

Potasu nadmanganian

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3



H: 272, 302, 410
P: 210, 273
RID/ADR: 5.1, II

UN: 1490



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	violet	Vapour pressure:	< 0,01 hPa (200C)
Odor:	odorless	Density:	2,7 g/cm ³ (20°C)
pH:	7-9 (20 g/l)	Bulk density:	approx 1300-1600 kg/m ³
Melting point:	>240°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	61 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium permanganate pure

CHEM*427438808

100 g	250 g	Appearance	violet crystals
500 g	750 g	Assay	min. 99,0 %
1 kg	5 kg	Substances insoluble in water	max. 1,0 %
10 kg	15 kg	Insoluble zanieczyszczenia (without MnO ₂)	max. 0,03 %
20 kg	25 kg	Total nitrogen (N)	max. 0,01 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,04 %

potassium permanganate pure p. a.

CHEM*117438809

25 g	50 g	Appearance	violet crystals
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in water	max. 0,1 %
1 kg	5 kg	Insoluble impurities (without MnO ₂)	max. 0,01 %
10 kg	15 kg	Total nitrogen (N)	max. 0,005 %
25 kg		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,005 %

POTASSIUM PERMANGANATE ANALYTICAL WEIGHED AMOUNT

Potasu nadmanganian odważka analityczna

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3



H: 272, 302, 410

P: 210, 273

RID/ADR: 5.1, II

UN: 1490



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	violet	Vapour pressure:	< 0,01 hPa (20°C)
Odor:	odorless	Density:	2,7 g/cm ³ (20°C)
pH:	7-9 (20 g/l)	Bulk density:	approx 1300-1600 kg/m ³
Melting point:	>240°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	61 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium permanganate 0,02 mol/l analytical weighed amount* CHEM*167438908

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

potassium permanganate 0,1mol/l analytical weighed amount* CHEM*167438909

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM PERMANGANATE SOLUTION 5%

Potasu nadmanganian roztwór 5%

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3



H: 411

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	violet	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 8 (20°C)	Density:	approx 1,0312 g/cm ³ (15°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium permanganate 5%

CHEM*527438808

1 l	5 l
10 l	20 l
30 l	

Assay

5,0 % ± 0,1 %

Density

1,0312 g/cm³ (15°C)

POTASSIUM PERMANGANATE STANDARD SOLUTIONS($C \leq 0,0125$ MOL/L)

Potasu nadmanganian roztwory mianowane

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	violet	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 8 (20°C)	Density:	approx 1,00 g/cm ³ (15°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium permanganate standard solution 0,002 mol/l

CHEM*807438805

250 ml	500 ml	Titer	0,001992 – 0,002008 mol/l
1l			

potassium permanganate standard solution 0,0025 mol/l

CHEM*807438802

250 ml	500 ml	Titer	0,00249 – 0,00251 mol/l
1l			

potassium permanganate standard solution 0,01 mol/l

CHEM*807438801

250 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1l			

potassium permanganate standard solution 0,0125 mol/l

CHEM*807438806

250 ml	500 ml	Titer	0,01245 – 0,01255 mol/l
1l			

POTASSIUM PERMANGANATE STANDARD SOLUTIONS($0,02 \leq C \leq 0,1$ MOL/L)

Potasu nadmanganian roztwory mianowane

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3

H: 412

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	violet	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 8 (20°C)	Density:	approx 1,01 g/cm ³ (15°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium permanganate standard solution 0,02 mol/l

CHEM*807438808

250 ml	500 ml	Titer	0,01992 – 0,02008 mol/l
1l			

potassium permanganate standard solution 0,05 mol/l

CHEM*807438809

250 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1l			

potassium permanganate standard solution 0,1 mol/l

CHEM*807438807

250 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1l			

POTASSIUM PERMANGANATE STANDARD SOLUTIONS($C \geq 0,2 \text{ MOL/L}$)

Potasu nadmanganian roztwory mianowane

KMnO₄

M = 158,04 g/mol

CAS: 7722-64-7

WE: 231-760-3



H: 411

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	violet	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 8 (20°C)	Density:	approx 1,03 g/cm ³ (15°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium permanganate standard solution 0,2 mol/l

CHEM*807438803

250 ml

500 ml

Titer

0,1992 – 0,2008 mol/l

1l

potassium permanganate standard solution 0,25 mol/l

CHEM*807438813

250 ml

500 ml

Titer

0,249 – 0,251 mol/l

1l

potassium permanganate standard solution 0,5 mol/l

CHEM*807438804

250 ml

500 ml

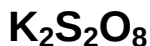
Titer

0,498 – 0,502 mol/l

1l

POTASSIUM PERSULFATE

Potasu nadsiarczan



M = 270,32 g/mol

CAS: 7727-21-1

WE: 231-781-8



H: 272, 302, 315, 317, 319, 334, 335
P: 210, 280, 302+352, 305+351+338
RID/ADR: 5.1, III UN: 1492



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	small
Odor:	odorless	Density:	2,48 g/cm ³ (20°C)
pH:	approx 4 - 5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 780 kg/m ³
Melting point:	decomposition approx 100°C	Solubility:	
Boiling point:	no data	in water:	52 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	insoluble in ethanol
Ignition temperature:	no data		

potassium persulfate pure

CHEM*427457210

25 g	50 g	Assay	min. 98,5 %
100 g	250 g	Chlorides (Cl)	max. 0,01 %
500 g	750 g	Heavy metals (as Pb)	max. 0,005 %
		Iron (Fe)	max. 0,003 %
1 kg			

potassium persulfate pure p. a.

CHEM*117457210

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
500 g	750 g	Heavy metals (as Pb)	max. 0,005 %
		Manganese (Mn)	max. 0,0005 %
1 kg		Iron (Fe)	max. 0,002 %

POTASSIUM ACETATE

Potasu octan

CH₃COOK

M = 98,15 g/mol

CAS: 127-08-2

WE: 204-822-2

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless/white	Vapour pressure:	no data
Odor:	acetic acid	Density:	1,57 g/cm ³ (20°C)
pH:	7,0-9,0(50 g/l H ₂ O, 20°C)	Bulk density:	approx 500 kg/m ³
Melting point:	292°C	Solubility:	
Boiling point:	no data	in water:	2530 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	>250°C		

potassium acetate pure

CHEM*427443302

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Water	max. 5,0 %
1 kg		Substances insoluble in water	max. 0,01 %
		Substances reducing KMnO ₄ (as HCOOH)	max. 0,05 %
		pH (5%, 20°C)	7,0 – 9,0
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Magnesium (Mg)	max. 0,003 %
		Sodium (Na)	max. 0,5 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

potassium acetate pure p. a.**CHEM*117443303**

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Water	max. 1,0 %
1 kg		Substances insoluble in water	max. 0,005 %
		Substances reducing KMnO_4 (as HCOOH)	max. 0,01 %
		pH (5%, 20°C)	7,0 – 9,0
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO_4)	max. 0,005 %
		Sulfates (SO_4)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,0005 %
		Sodium (Na)	max. 0,2 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM DISULFATE

Potasu pirosiarczan



M = 254,32 g/mol

CAS: 7790-62-7

WE: 232-216-8

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,28 g/cm ³ (25°C)
pH:	approx 0,8 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 830 kg/m ³
Melting point:	approx 325°C	Solubility:	
Boiling point:	no data	in water:	25,4 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium disulfate pure

CHEM*427447306

10 g	25 g	Appearance	colourless crystals
50 g	75 g	Assay	min. 96,5 %
100 g	250 g	Chlorides (Cl)	max. 0,001 %
500 g	1 kg	Heavy metals (as Pb)	max. 0,001 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

potassium disulfate pure p. a.

CHEM*117447307

10 g	25 g	Appearance	colourless crystals
50 g	75 g	Assay	min. 97,5 %
100 g	250 g	Total nitrogen (N)	max. 0,002 %
500 g	1 kg	Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Aluminium (Al)	max. 0,001 %
		Magnesium (Mg)	max. 0,0005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,003 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM DISULFITE

Potasu pirosiarczyn



M = 222,33 g/mol

CAS: 16731-55-8

WE: 240-795-3



H: 318, 335, EUH031

P: 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless/white	Vapour pressure:	approx 335 mbar (20°C)
Odor:	sharp	Density:	2,34 g/cm ³
pH:	approx 3,5-5,0(400 g/l H ₂ O, 20°C)	Bulk density:	1000 - 1200 kg/m ³
Melting point:	no data, decomposition >150°C	Solubility:	
		in water:	450 g/l (20°C)
Boiling point:	not applicable	in organic solvents:	insoluble in ethanol
Auto-ignition temperature:	not applicable	log P _{OW} :	-4,0
Ignition temperature:	not applicable		

potassium disulfite pure

CHEM*427447703

25 g	50 g	Appearance	white, powder
100 g	250 g	Assay	min. 95,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg		Heavy metals (as Pb)	max. 0,003 %
		Arsenic (As)	max. 0,0001 %
		Iron (Fe)	max. 0,001 %

potassium disulfite pure p. a.

CHEM*117447704

25 g	50 g	Appearance	white, powder
100 g	250 g	Assay	min. 96,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	Chlorides (Cl)	max. 0,005 %
5 kg		Phosphates (PO ₄)	max. 0,0002 %
		Tiosulfates (S ₂ O ₃)	max. 0,05 %
		Arsenic (As)	max. 0,0001 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

POTASSIUM THIOCYANATE

Potasu rodanek

KSCN

M = 97,18 g/mol

CAS: 333-20-0

WE: 206-370-1



H: 302, 312, 332, 412, EUH032

P: 273, 280, 302+352

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	<1 hPa (20°C)
Odor:	odorless	Density:	1,89 g/cm ³ (20°C)
pH:	5,3-8,7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 750-1000 kg/m ³
Melting point:	173°C	Solubility:	
Boiling point:	decomposition w 500°C	in water:	2230 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol, acetone
Ignition temperature:	not applicable		

potassium thiocyanate pure

CHEM*427455007

50 g	100 g	Appearance	white, powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	Chlorides (Cl)	max. 0,02 %
10 kg	15 kg	Sulfates (SO ₄)	max. 0,05 %
25 kg		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

potassium thiocyanate pure p. a.

CHEM*117455008

10 g	25 g	Appearance	white, powder
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Substances oxidizing iodine	max. 0,05 %
2 kg	5 kg	pH (5%, 20°C)	5,3 - 8,7
10 kg		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Sulfites (S)	max. 0,002 %
		Ammonia salts (NH ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

POTASSIUM THIOCYANATE ANALYTICAL WEIGHED AMOUNT

Potasu rodanek odważka analityczna

KSCN

M = 97,18 g/mol

CAS: 333-20-0

WE: 206-370-1



H: 302, 312, 332, 412, EUH032

P: 273, 280, 302+352

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	<1 hPa (20°C)
Odor:	odorless	Density:	1,89 g/cm ³ (20°C)
pH:	5,3-8,7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 750-1000 kg/m ³
Melting point:	173°C	Solubility:	
Boiling point:	decomposition at 500°C	in water:	223 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol, acetone
Ignition temperature:	not applicable		

potassium thiocyanate 0,1 mol/l analytical weighed amount

CHEM*167455237

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

POTASSIUM THIOCYANATE STANDARD SOLUTIONS(C < 3 MOL/L)

Potasu rodanek roztwory mianowane

KSCN

M = 97,18 g/mol

CAS: 333-20-0

WE: 206-370-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,01 g/cm ³ (18°C)
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	ethanol, acetone
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

potassium thiocyanate standard solution 0,01 mol/l

CHEM*817455010

500 ml	1l	Titer	0,00996 – 0,01004 mol/l

potassium thiocyanate standard solution 0,025 mol/l

CHEM*817455007

500 ml	1l	Titer	0,0249 – 0,0251 mol/l

potassium thiocyanate standard solution 0,05 mol/l

CHEM*817455004

500 ml	1l	Titer	0,0498 – 0,0502 mol/l

potassium thiocyanate standard solution 0,1 mol/l

CHEM*817455008

500 ml	1l	Titer	0,0996 – 0,1004 mol/l

potassium thiocyanate standard solution 0,5 mol/l

CHEM*817455009

500 ml	1l	Titer	0,498 – 0,502 mol/l

potassium thiocyanate standard solution 1 mol/l

CHEM*817455006

500 ml	1l	Titer	0,996 – 1,004 mol/l

POTASSIUM SULFATE

Potasu siarczan



M = 174,27 g/mol

CAS: 7778-80-5

WE: 231-915-5

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,66 g/cm ³
pH:	5,5 - 7,5 (50 g/l H ₂ O, 20°C)	Bulk density:	1400 kg/m ³
Melting point:	1069°C	Solubility:	
Boiling point:	1689°C	in water:	110 g/l (20°C), 240 (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium sulfate pure

CHEM*427457202

50 g	100 g	Appearance	white or colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	Chlorides (Cl)	max. 0,002 %
15 kg	25 kg	Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,005 %
		Cadmium (Cd)	max. 0,005 %
		Magnesium (Mg)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Sodium (Na)	max. 0,15 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

potassium sulfate pure p. a.**CHEM*117457203**

10 g	25 g	Appearance	white or colourless crystals
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	5,5 – 8,0
2 kg	5 kg	Total nitrogen (N)	max. 0,001 %
10 kg	15 kg	Chlorides (Cl)	max. 0,001 %
25 kg		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Magnesium (Mg)	max. 0,002 %
		Copper (Cu)	max. 0,0005 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM SODIUM CARBONATE

Potasu sodu węglan



M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335

P: 302+352, 305+351+338,

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,47 g/cm ³ (20°C)
pH:	approx 11,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1750 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium sodium carbonate pure

CHEM*427381306

50 g	100 g	Assay	99,0 - 101,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Loss on roasting	max. 6,0 %
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,01 %
		Phosphates (PO ₄)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,0015 %
		Arsenic (As)	max. 0,00005 %
		Magnesium and calcium (as Mg)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

potassium sodium carbonate pure p. a.

CHEM*117381307

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	99,0 - 101,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
		Loss on roasting	max. 3,0 %
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,003 %
		Silicates (as SiO ₂)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0015 %
		Arsenic (As)	max. 0,00005 %
		Magnesium and calcium (as Mg)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM SODIUM TARTRATE 4 HYDRATE

Potasu sodu tartrate 4 hydrat



M = 282,23 g/mol

CAS: 6381-59-5

WE: 205-698-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	7,0-8,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	70 -80°C	Solubility:	
Boiling point:	100°C (decomposition)	in water:	630 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium sodium tartrate 4 hydrate pure

CHEM*427381703

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	98,5 – 103,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	7,0 - 8,5
15 kg	20 kg	Reducing substances	passes test
25 kg		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,05 %
		Ammonia salts (NH ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

potassium sodium tartrate4 hydrat pure p. a.

CHEM*117381704

25 g	50 g	Appearance	colourless crystals or white powder
100 g	250 g	Assay	99,0 - 102,0 %
500 g	750 g	Substances insoluble in water	max. 0,01 %
1 kg	2 kg	pH (5%, 20°C)	7,0 - 8,5
5 kg	10 kg	Reducing substances	passes test
15 kg		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,01 %
		Ammonia salts (NH ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

di-POTASSIUM OXALATE 1 HYDRATE

Potasu szczawian 1hydrat



M = 184,24 g/mol

CAS: 6487-48-5

WE: 209-506-8



H: 302, 312

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	2,13 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 700 - 1100 kg/m ³
pH:	7,0-8,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	360 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data
Explosion limits:	not applicable	log P _(w/o) :	-0,81 (obl. lit.)

di-potassium oxalate 1 hydrat pure

CHEM*427459805

50 g	100 g	Appearance	colourless, powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	7,0 - 8,5
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,03 %
		Zinc (Zn)	max. 0,005 %
		Cadmium (Cd)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,003 %

di-potassium oxalate 1 hydrat pure p. a.

CHEM*117459806

25 g	50 g	Appearance	colourless, powder
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg		pH (5%, 20°C)	7,0 - 8,5
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,01 %
		Total nitrogen (N)	max. 0,002 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,0005 %

POTASSIUM CARBONATE

Potassium carbonate



M = 138,21 g/mol

CAS: 584-08-7

WE: 209-529-3



H: 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,43 g/cm ³ (20°C)
pH: approx 11,5 - 12,5 (50 g/l H ₂ O, 20°C)		Bulk density:	approx 800kg/m ³
Melting point:	891°C	Solubility:	
Boiling point:	no data	in water:	approx 1120 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium carbonate pure

CHEM*427465708

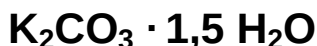
100 g	250 g	Appearance	white powder
500 g	750 g	Assay	min. 98,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,02 %
10 kg	15 kg	Loss on roasting	max. 1,0 %
25 kg		Total nitrogen (N)	max. 0,002 %
		Chlorides i chlorates (as Cl)	max. 0,01 %
		Phosphates (PO ₄)	max. 0,002 %
		Silicates (as SiO ₂)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Aluminium (Al)	max. 0,003 %
		Magnesium and calcium (Mg+Ca)	max. 0,015 %
		Iron (Fe)	max. 0,002 %

potassium carbonate anhydrous pure p. a.**CHEM*117465709**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	Loss on roasting	max. 0,8 %
15 kg	25 kg	Total nitrogen (N)	max. 0,001 %
		Chlorides and chlorates (as Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,001 %
		Silicates (as SiO ₂)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,004 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Aluminium (Al)	max. 0,001 %
		Magnesium and calcium (Mg+Ca)	max. 0,008 %
		Iron (Fe)	max. 0,001 %

POTASSIUM CARBONATE 1,5 HYDRATE

Potasu węglan 1,5 hydrat



M = 165,23 g/mol

CAS: 6381-79-9

WE: 209-529-3



H: 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:		Explosion limits:	not applicable
	solid	Vapour pressure:	no data
Colour:	white	Density:	no data
Odor:	odorless	Bulk density:	no data
pH:	alkaline	Solubility:	
Melting point:	891°C	in water:	approx 1300 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

potassium CARBONATE 1,5 hydrat pure

CHEM*427465901

25 g	50 g	Appearance	colourless crystals or white powder
100 g	250 g	Assay	min. 98,0 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		Loss on roasting	16 - 18 %
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,002 %
		Silicates (as SiO ₂)	max. 0,01 %
		Sulfur (as SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Aluminium (Al)	max. 0,002 %
		Magnesium (Mg)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

potassium CARBONATE 1,5 hydrat pure p. a.**CHEM*117465902**

25 g	50 g	Appearance	colourless crystals or white powder
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		Loss on roasting	16 - 17,5 %
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,001 %
		Silicates (as SiO ₂)	max. 0,001 %
		Sulfur całkowita (as SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Aluminium (Al)	max. 0,001 %
		Magnesium (Mg)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

di-POTASSIUM TARTRATE 0,5 HYDRATE

Potasu winian 0,5hydrat



M = 235,28 g/mol

CAS: 6100-19-2

WE: 213-067-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	approx 7,0 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 880 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water: 2000 g/l (20°C)	
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

di potassium tartrate 0,5 hydrate pure

CHEM*427467201

25 g	50 g	Appearance	drobne, white crystals
100 g	250 g	Assay	min. 98,5 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		Free acids (as C ₄ H ₆ O ₆)	max. 0,016 %
		Free basics (as KOH)	max. 0,012 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Ammonia salts (NH ₄)	max. 0,004 %
		Heavy metals (as Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,008 %
		Iron (Fe)	max. 0,002 %

di potassium tartrate 0,5 hydrat pure p. a.**CHEM*117467202**

5 g	10 g	Appearance	drobne, white crystals
25 g	50 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in water	max. 0,005 %
500 g	1 kg	Free acids (as $C_4H_6O_6$)	max. 0,008 %
		Free basics (as KOH)	max. 0,006 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO_4)	max. 0,01 %
		Phosphates (PO_4)	max. 0,002 %
		Ammonia salts (NH_4)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,001 %
		Calcium (Ca)	max. 0,004 %

POTASSIUM BISULFATE

Potasu wodorosiarczan

KHSO₄

M = 136,17 g/mol

CAS: 7646-93-7

WE: 231-594-1



H: 314, 335
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 2509



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	2,24 g/cm ³
pH:	approx 1 (50 g/l H ₂ O, 20°C)	Bulk density:	1140 kg/m ³
Melting point:	195°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	490 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

potassium bisulfate pure

CHEM*427457600

50 g	100 g	Assay	min. 96 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
1 kg		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,002 %
		Magnesium (Mg)	max. 0,001 %
		Sodium (Na)	max. 0,05 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %
		Appearance	colourless crystals

potassium bisulfate pure p. a.

CHEM*117457600

50 g	100 g	Assay	min. 96 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
1 kg		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Aluminium (Al)	max. 0,002 %
		Magnesium (Mg)	max. 0,0005 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,001 %
		Appearance	colourless crystals

POTASSIUM HYDROXIDE

Potasu wodorotlenek

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1813



Physical and chemical properties:

Character:	solid,	Vapour pressure:	1 hPa (719°C)
Colour:	white	Density:	2,044 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	no data
pH:	approx 13,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	361°C	in water:	528 g/l (20°C)
Boiling point:	1320°C	in other solvents:	ethanol, ether
Explosion limits:	not applicable		

potassium hydroxide pure

CHEM*427468008

100 g	250 g	Appearance	white granule
500 g	750 g	Assay	min. 85,0 %
1 kg	5 kg	Total nitrogen (N)	max. 0,001 %
10 kg	15 kg	Chlorides (as Cl)	max. 0,01 %
25 kg		Phosphates (PO ₄)	max. 0,003 %
		Silicon dioxide (SiO ₂)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,005 %
		Carbonates (as K ₂ CO ₃)	max. 1,5 %
		Heavy metals (as Pb)	max. 0,002 %
		Aluminium (Al)	max. 0,01 %
		Calcium (Ca)	max. 0,003 %
		Iron (Fe)	max. 0,001 %

potassium hydroxide pure p. a.**CHEM*117468009**

50 g	100 g	Appearance	white granule
250 g	500 g	Assay	min. 85,0 %
750 g	1 kg	Total nitrogen (N)	max. 0,001 %
2 kg	5 kg	Chlorides (as Cl)	max. 0,004 %
10 kg	15 kg	Phosphates (PO ₄)	max. 0,001 %
25 kg		Siliconu dioxide (SiO ₂)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,002 %
		Carbonates (as K ₂ CO ₃)	max. 1,5 %
		Heavy metals (as Pb)	max. 0,001 %
		Bar (Ba)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Aluminium (Al)	max. 0,001 %
		Cadmium (Cd)	max. 0,0005 %
		Cobalt (Co)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Silver (Ag)	max. 0,0005 %
		Strontium (Sr)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

POTASSIUM HYDROXIDE

ANALYTICAL WEIGHED AMOUNT ($C \leq 0,5 \text{ MOL/L}$)

Potasu wodorotlenek odważka analityczna

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,137 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide 0,1 mol/l analytical weighed amount

CHEM*167468238

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l $\pm$ 0,2 %

potassium hydroxide 0,5 mol/l analytical weighed amount

CHEM*167468239

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,5 mol/l $\pm$ 0,2 %

POTASSIUM HYDROXIDE

ANALYTICAL WEIGHED AMOUNT (C > 0,5 MOL/L)

Potasu wodorotlenek odważka analityczna

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,255 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide 1 mol/l analytical weighed amount

CHEM*167468240

1 szt.

Concentration after dilution to 1000 ml at 20°C

1 mol/l ± 0,2 %

POTASSIUM HYDROXIDE solution 5%*Potasu wodorotlenek roztwór 5%***KOH**

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314
 P: 280, 301+330+331, 305+351+338, 309, 310
 RID/ADR: 8, II UN: 1814

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,044 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 5% pure p. a.**CHEM*527468002**

100 ml	250 ml	Assay	5,0 % ± 0,1 %
500 ml	1 l	Density (20°C)	approx 1,044 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution 10%

Potasu wodorotlenek roztwór 10%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,090 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 10% pure p. a.

CHEM*527468006

100 ml	250 ml	Assay	10,0 % ± 0,5 %
500 ml	1 l	Density (20°C)	approx 1,090 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution 15%

Potasu wodorotlenek roztwór 15%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,1379 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 15% pure p. a.

CHEM*527468017

100 ml	250 ml	Assay	15,0 % ± 0,5 %
500 ml	1 l	Density (20°C)	approx 1,1379 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution 20%

Potasu wodorotlenek roztwór 20%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,186 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 20% pure p. a.

CHEM*527468007

100 ml	250 ml	Assay	20,0 % ± 0,5 %
500 ml	1 l	Density (20°C)	approx 1,186 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution 29-30%

Potasu wodorotlenek roztwór 29-30%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,277 – 1,288 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 29-30% pure p. a.

CHEM*527468009

100 ml	250 ml	Assay	29,0 – 30,0 %
500 ml	1l	Density (20°C)	1,277 – 1,288 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution 40%

Potasu wodorotlenek roztwór 40%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,3959 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 40% pure p. a.

CHEM*527468019

100 ml	250 ml	Assay	40,0 ± 1,0 %
500 ml	1 l	Density (20°C)	approx 1,3959 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE 45%

Potasu wodorotlenek roztwór 45%

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,45 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution 45% pure p. a.

CHEM*527468018

100 ml	250 ml	Assay	45,0 ± 1,0 %
500 ml	1 l	Density (20°C)	approx 1,45 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE solution APPROX 50%*Potasu wodorotlenek roztwór ok. 50%***KOH**

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,51 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide solution approx 50% pure p. a.**CHEM*527468008**

100 ml	250 ml	Assay	approx 50,0 %
500 ml	1 l	Density (20°C)	approx 1,51 g/cm ³
2.5 l	5 l	Carbonates (CO ₃)	max. 1,5 %
10 l	20 l	Chlorides (Cl)	max. 0,004 %
30 l	60 l	Sulfates (SO ₄)	max. 0,002 %
		Phosphates (as PO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %

POTASSIUM HYDROXIDE STANDARD SOLUTIONS(C < 0,1 MOL/L)

Potasu wodorotlenek roztwory mianowane

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide standard solution 0,01 mol/l

CHEM*817468013

100 ml	250 ml	Titer	0,00996 – 0,01004 mol/l
500 ml	1l		

potassium hydroxide standard solution 0,05 mol/l

CHEM*817468023

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1l		

POTASSIUM HYDROXIDE 0,01 MOL/L (0,01 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek roztwory mianowane 0,01M w etanolu

KOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,5% v/v (ethanol)
Colour:	colourless	top:	15% v/v (ethanol)
Odor:	ethanolu	Viscosity dynamic:	1,2 mPa*s (ethanol)
pH:	approx 14 (20°C)	Viscosity:	-
Melting point:	-114,5°C (ethanol)	Vapour pressure:	59 hPa (ethanol)
Boiling point:	78,3°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C (ethanol)	in water:	soluble
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 0,01 mol/l in ethanol

CHEM*817468015

100 ml

250 ml

Titer

0,00996 – 0,01004 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 0,05 MOL/L (0,05 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek roztwory mianowane 0,05M w etanolu

KOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225
P: 210
RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,5% v/v (ethanol)
Colour:	colourless	top:	15% v/v (ethanol)
Odor:	ethanol	Viscosity dynamic:	1,2 mPa*s (ethanol)
pH:	approx 14 (20°C)	Viscosity:	-
Melting point:	-114,5°C (ethanol)	Vapour pressure:	59 hPa (ethanol)
Boiling point:	78,3°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C (ethanol)	in water:	soluble
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 0,05 mol/l in ethanol

CHEM*817468016

100 ml	250 ml
500 ml	1l

Titer

0,0498 – 0,0502 mol/l

POTASSIUM HYDROXIDE

STANDARD SOLUTIONS ($0,1 \leq C \leq 0,25$ MOL/L)

Potasu wodorotlenek roztwory mianowane

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,01 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide standard solution 0,1 mol/l

CHEM*817468009

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

potassium hydroxide standard solution 0,2 mol/l

CHEM*817468022

100 ml	250 ml	Titer	0,1992 – 0,2008 mol/l
500 ml	1l		

potassium hydroxide standard solution 0,25 mol/l

CHEM*817468003

100 ml	250 ml	Titer	0,249 – 0,251 mol/l
500 ml	1l		

POTASSIUM HYDROXIDE 0,1 MOL/L STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek roztwory 0,1M w etanolu

KOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 315, 319
P: 210, 302+352, 305+351+338
RID/ADR: 3, III UN: 2924



Physical and chemical properties:

Character:	liquid	bottom:	3,5% v/v (ethanol)
Colour:	colourless	top:	15% v/v (ethanol)
Odor:	ethanol	Viscosity dynamic:	1,2 mPa*s (ethanol)
pH:	approx 14 (20°C)	Viscosity:	-
Melting point:	-114,5°C (ethanol)	Vapour pressure:	59 hPa (ethanol)
Boiling point:	78,3°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C (ethanol)	in water:	soluble
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 0,1 mol/l in ethanol

CHEM*817468004

100 ml	250 ml
500 ml	1l

Titer

0,0996 – 0,1004 mol/l

POTASSIUM HYDROXIDE 0,1 MOL/L STANDARD SOLUTION IN METHANOL

Potasu wodorotlenek roztwory mianowane 0,1M w metanolu

KOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 311, 315, 319, 331, 370
P: 210, 233, 280, 302+352, 305+351+338, 310
RID/ADR: 3 (3+6.1+8), II UN: 3286



Physical and chemical properties:

Character:	liquid	bottom:	6% v/v
Colour:	colourless	top:	36,5% v/v
Odor:	methanol	Viscosity w temp. 20°C:	0,599 mPa·s
pH:	approx 14 (20°C)		(methanol)
Melting point:	-97,8°C	Vapour pressure:	100 mm (21°C)
Boiling point:	64,8°C	Density:	0,79 g/cm ³ (20°C)
Auto-ignition temperature:	455°C (methanol)	Solubility:	
Ignition temperature:	12°C	in water:	soluble (20°C)
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 0,1 mol/l in methanol

CHEM*817468019

100 ml

250 ml

Titer

0,0996 – 0,1004 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 0,1 MOL/L STANDARD SOLUTION IN 2-PROPANOL

Potasu wodorotlenek roztwory mianowane 0,1M w 2-propanolu

KOH/P-2

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 315, 319, 336
P: 210, 233, 302+352, 305+351+338
RID/ADR: 3, III UN: 2924



Physical and chemical properties:

Character:	liquid	top:	approx 12% v/v
Colour:	colourless	Viscosity w temp. 15°C:	approx 2,86 mPa·s
Odor:	characteristic		
pH:	neutral	Vapour pressure:	approx 43 mbar (20°C)
Melting point:	approx -89°C	Density:	no data
Boiling point:	approx 82-83°C	Bulk density:	not applicable
Auto-ignition temperature:	approx 400°C	Solubility:	
Ignition temperature:	approx 12°C	in water:	soluble
Explosion limits:		in organic solvents:	soluble
bottom:	approx 2,0% v/v		

potassium hydroxide standard solution 0,1 mol/l in propanol

CHEM*817468011

100 ml	250 ml
500 ml	1l

Titer

0,0996 – 0,1004 mol/l

POTASSIUM HYDROXIDE 0,5 MOL/L (0,5 N) STANDARD SOLUTION

Potasu wodorotlenek roztwory mianowane 0,5M

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,023 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide standard solution 0,5 mol/l

CHEM*817468007

100 ml

250 ml

Titer

0,498 – 0,502 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 0,5 MOL/L (0,5 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek roztwory mianowane 0,5M w etanolu

KOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 314
P: 210, 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 3, III UN: 2924



Physical and chemical properties:

Character:	liquid	bottom:	3,5% v/v (ethanol)
Colour:	colourless	top:	15% v/v (ethanol)
Odor:	ethanol	Viscosity dynamic:	1,2 mPa*s (ethanol)
pH:	approx 14 (20°C)	Viscosity:	-
Melting point:	-114,5°C (ethanol)	Vapour pressure:	59 hPa (ethanol)
Boiling point:	78,3°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C (ethanol)	in water:	soluble
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 0,5 mol/l in ethanol

CHEM*817468005

100 ml

250 ml

Titer

0,498 – 0,502 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 0,5 MOL/L (0,5 N) STANDARD SOLUTION IN METHANOL

Potasu wodorotlenek roztwory mianowane 0,5M w metanolu

KOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 302, 311, 314, 331, 370
P: 210, 233, 280, 301+330+331, 302+352,
305+351+338
RID/ADR: 3 (3+6.1+8), II UN: 3286



Physical and chemical properties:

Character:	liquid	top:	44% v/v (methanol)
Colour:	colourless	Viscosity w temp. 20°C:	0,599 mPa·s
Odor:	methanol		(methanol)
pH:	approx 14 (20°C)	Vapour pressure:	128 mbar (20°C)
Melting point:	no data		(methanol)
Boiling point:	no data	Density:	no data
Auto-ignition temperature:	455°C (methanol)	Solubility:	
Ignition temperature:	11°C (methanol)	in water:	soluble (20°C)
Explosion limits:		in organic solvents:	soluble
bottom:	5,5% v/v (methanol)		

potassium hydroxide standard solution 0,5 mol/l in methanol

CHEM*817468018

100 ml

250 ml

Titer

0,498 – 0,502 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 0,5 MOL/L STANDARD SOLUTION IN 2-PROPANOL

Potasu wodorotlenek roztwory mianowane 0,5M w 2-propanolu

KOH/P-2

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 314, 336

P: 210, 233, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 3, III

UN: 2924



Physical and chemical properties:

Character:	liquid	top:	approx 12% v/v
Colour:	colourless	Viscosity w temp. 15°C:	approx 2,86 mPa·s
Odor:	characteristic		
pH:	neutral	Vapour pressure:	approx 43 mbar (20°C)
Melting point:	approx -89°C	Density:	no data
Boiling point:	approx 82-83°C	Bulk density:	not applicable
Auto-ignition temperature:	approx 400°C	Solubility:	
Ignition temperature:	approx 12°C	in water:	soluble
Explosion limits:		in organic solvents:	soluble
bottom:	approx 2,0% v/v		

potassium hydroxide standard solution 0,5 mol/l in propanol

CHEM*817468020

100 ml	250 ml
500 ml	1 l

Titer

0,498 – 0,502 mol/l

POTASSIUM HYDROXIDE

STANDARD SOLUTIONS ($1,0 \leq C \leq 5,5 \text{ MOL/L}$)

Potasu wodorotlenek roztwory mianowane

KOH

M = 56,11 g/mol

CAS: 1310-58-3

WE: 215-181-3



H: 290, 302, 314

P: 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1814



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 14 (20°C)	Density:	approx 1,09 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	approx 100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

potassium hydroxide standard solution 1 mol/l

CHEM*817468008

100 ml	250 ml	Titer	0,996 – 1,004 mol/l
500 ml	1l		

potassium hydroxide standard solution 1,5 mol/l

CHEM*817468006

100 ml	250 ml	Titer	1,494 – 1,506 mol/l
500 ml	1l		

potassium hydroxide standard solution 2 mol/l

CHEM*817468001

100 ml	250 ml	Titer	1,992 – 2,008 mol/l
500 ml	1l		

potassium hydroxide standard solution 3 mol/l

CHEM*817468010

100 ml	250 ml	Titer	2,988 – 3,012 mol/l
500 ml	1l		

POTASSIUM HYDROXIDE 1 MOL/L (1 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek, roztwór mianowany 1M w etanolu

KOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 314
P: 210, 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 3, III UN: 2924



Physical and chemical properties:

Character:	liquid	bottom:	3,5% v/v (ethanol)
Colour:	colourless	top:	15% v/v (ethanol)
Odor:	ethanol	Viscosity dynamic:	1,2 mPa*s (ethanol)
pH:	approx 14 (20°C)	Viscosity:	-
Melting point:	-114,5°C (ethanol)	Vapour pressure:	59 hPa (ethanol)
Boiling point:	78,3°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C (ethanol)	in water:	soluble
Explosion limits:		in organic solvents:	soluble

potassium hydroxide standard solution 1 mol/l in ethanol

CHEM*817468002

100 ml	250 ml
500 ml	1l

Titer

0,996 – 1,004 mol/l

POTASSIUM HYDROXIDE 1 MOL/L (1 N) STANDARD SOLUTION IN METHANOL

Potasu wodorotlenek roztwory mianowane 1M w metanolu

KOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 302, 311, 314, 331, 370
P: 210, 233, 280, 301+330+331, 302+352,
305+351+338
RID/ADR: 3 (3+6.1+8), II UN: 3286



Physical and chemical properties:

Character:	liquid	top:	44% v/v (methanol)
Colour:	colourless	Viscosity w temp. 20°C:	0,599 mPa·s
Odor:	methanol		(methanol)
pH:	approx 14 (20°C)	Vapour pressure:	128 mbar (20°C)
Melting point:	no data		(methanol)
Boiling point:	no data	Density:	no data
Auto-ignition temperature:	455°C (methanol)	Solubility:	
Ignition temperature:	11°C (methanol)	in water:	soluble (20°C)
Explosion limits:		in organic solvents:	soluble
bottom:	5,5% v/v (methanol)		

potassium hydroxide standard solution 1 mol/l in methanol

CHEM*817468000

100 ml

250 ml

Titer

0,996 – 1,004 mol/l

500 ml

1l

POTASSIUM HYDROXIDE 1 MOL/L STANDARD SOLUTION IN 2-PROPANOL

Potasu wodorotlenek roztwory mianowane 1M w 2-propanolu

KOH/P-2

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 302, 314, 336

P: 210, 233, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 3, III

UN: 2924



Physical and chemical properties:

Character:	liquid	top:	approx 12% v/v
Colour:	colourless	Viscosity w temp. 15°C:	approx 2,86 mPa·s
Odor:	characteristic		
pH:	neutral	Vapour pressure:	approx 43 mbar (20°C)
Melting point:	approx -89°C	Density:	no data
Boiling point:	approx 82-83°C	Bulk density:	not applicable
Auto-ignition temperature:	approx 400°C	Solubility:	
Ignition temperature:	approx 12°C	in water:	soluble
Explosion limits:		in organic solvents:	soluble
bottom:	approx 2,0% v/v		

potassium hydroxide standard solution 1 mol/l in propanol

CHEM*817468021

100 ml

250 ml

Titer

0,996 – 1,004 mol/l

500 ml

1l

POTASSIUM BICARBONATE

Potasu wodorowęglan



M = 100,12 g/mol

CAS: 298-14-6

WE: 206-059-0

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	2,17 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	approx 900 kg/m ³
pH:	approx 8,5 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	>292°C (decomposition)	in water:	333 g/l (20°C)
Boiling point:	not applicable	in other solvents:	
Explosion limits:	not applicable		

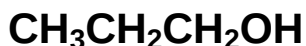
potassium bicarbonate pure

CHEM*427466403

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
2 kg	5 kg	Chlorides (as Cl)	max. 0,005 %
10 kg	15 kg	Phosphates (PO ₄)	max. 0,002 %
25 kg		Silicates (as SiO ₂)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,005 %
		Potassium carbonate (K ₂ CO ₃)	passes test
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0004 %
		Total nitrogen (N)	max. 0,003 %
		Aluminium (Al)	max. 0,002 %
		Magnesium and calcium (as Mg)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

1-PROPANOL

1-Propanol



M = 60,1 g/mol

CAS: 71-23-8

WE: 200-746-9



H: 225, 318, 336
P: 210, 233, 280, 305+351+338, 313
RID/ADR: 3, II UN: 1274



Physical and chemical properties:

Character:	liquid	top:	13,5% v/v
Colour:	colourless	Vapour pressure:	18,7 mbar (20°C)
Odor:	characteristic	Density:	0,804 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	-126,5°C	in water:	soluble
Boiling point:	97,4°C	in organic solvents:	soluble
Auto-ignition temperature:	405°C	Critical temperature:	263,6°C
Ignition temperature:	15°C	Critical pressure:	5,17 MPa
Explosion limits:		Refractive index 20°C:	1,386
bottom:	2,1% v/v	Viscosity 20°C:	2,26 mPa·s

1-propanol pure

CHEM*427514601

50 ml	100 ml	Assay	min. 99,0 %
250 ml	500 ml	Density (20°C)	0,803 - 0,805 g/cm ³
1 l	2.5 l	Water	max. 0,3 %
3 l	5 l	Free acids (as C ₂ H ₅ COOH)	max. 0,002 %
10 l	20 l	Residue on evaporation	max. 0,001 %
30 l	60 l		
200 l			

1-propanol pure p. a.**CHEM*117514602**

50 ml	100 ml	Assay	min. 99,5 %
250 ml	500 ml	Colour	max. 10 as Hz
1 l	2.5 l	Density (20°C)	0,803 - 0,805 g/cm ³
3 l	5 l	Water	max. 0,1 %
10 l	20 l	Acids	max. 0,0004 meq/g
30 l	60 l	Bases	max. 0,0006 meq/g
200 l		Acetone (GC)	max. 0,01 %
		Ethanol (GC)	max. 0,01 %
		Ether di-n-propyl	max. 0,1 %
		Methanol (GC)	max. 0,01 %
		2-Propanol	max. 0,05 %
		Residue on evaporation	max. 0,001 %
		Substances insoluble in water	passes test
		Substances darkened under the influence of H ₂ SO ₄	passes test
		Carbonyl compounds(as C ₂ H ₅ CHO)	max. 0,03 %
		Chromium (Cr)	max. 0,000002 %
		Zinc (Zn)	max. 0,00001 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Nickel (Ni)	max. 0,000002 %
		Lead (Pb)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

1-propanol HPLC**CHEM*617514602**

1 l	2.5 l	Assay (GC)	min. 99,5 %
		Water (KF)	max. 0,05 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transsmision (1cm, water):	
		250 nm	min. 90,0 %
		290 nm	min. 98,0 %
		300 nm	min. 99,0 %

1-propanol GC**CHEM*617514604**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,1 %
		Colour	max. 10 as Hz
		Signal (GC) in the rage 1,2,4-trichlorobenzene to dekachlorobiphenyl	max. 3 pg/ml

1-propanol GC standard

CHEM*617514603

25 ml

50 ml

Purity

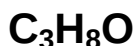
min. 99,9 %

75 ml

100 ml

2-PROPANOL

2-Propanol



M = 60,1 g/mol

CAS: 67-63-0

WE: 200-661-7



H: 225, 319, 336
P: 210, 233, 305+351+338
RID/ADR: 3, II UN: 1219



Physical and chemical properties:

Character:	liquid	Viscosity w temp. 15°C:	2,86 mPa·s
Colour:	colourless	Vapour pressure:	43 mbar (20°C)
Odor:	characteristic	Density:	0,785 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	-89°C	in water:	soluble
Boiling point:	82-83°C	in organic solvents:	soluble
Auto-ignition temperature:	400°C	log P _{OW} :	no data
Ignition temperature:	12°C	Critical temperature:	235,17°C
Explosion limits:		Critical pressure:	4,76 MPa
bottom:	2,0% v/v	Refractive index at 20°C:	1,3771
top:	12% v/v		

2-propanol purified

CHEM*327515001

2.5 l	3 l	Assay	min. 99,0%
5 l	10 l	Density (20°C)	0,785 - 0,787 g/cm ³
20 l	30 l	Water	max. 0,2%
60 l	200 l	Substances reducing KMnO ₄ (as O)	max. 0,0005 %
		Free acids (as CH ₃ COOH)	max. 0,003%
		Organic impurities	max. 0,12 %
		Residue on evaporation	max. 0,003 %

2-propanol pure**CHEM*427515001**

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	min. 99,5%
2.5 l	3 l	Density (20°C)	0,785 - 0,787 g/cm ³
5 l	10 l	Refractive index(20°C)	1,377 - 1,378
20 l	30 l	Water	max. 0,2%
60 l	200 l	Substances insoluble in water	passes test
		Free acids (as CH ₃ COOH)	max. 0,003%
		Aldehydes and ketones(as CO)	max. 0,05 %
		Ethanol	max. 0,1 %
		Methanol	max. 0,1 %
		Residue on evaporation	max. 0,002 %
		Substances reducing KMnO ₄ (as O)	max. 0,0004 %

2-propanol pure p. a.**CHEM*117515002**

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	min. 99,7 %
2.5 l	3 l	Density (20°C)	0,785 - 0,787 g/cm ³
5 l	10 l	Water	max. 0,1 %
20 l	30 l	Substances insoluble in water	passes test
60 l	200 l	Free acids (as CH ₃ COOH)	max. 0,002 %
		Aldehydes and ketones(as CO)	max. 0,005 %
		Ethanol	max. 0,01 %
		Methanol	max. 0,01 %
		Residue on evaporation	max. 0,001 %
		Substances reducingKMnO ₄ (as O)	max. 0,0002 %

2-propanol sp.pure**CHEM*617515005**

1l	Appearance	colourless, clear liquid
	Assay	min. 99,7 %
	Density (20°C)	0,786 - 0,788 g/cm ³
	Refractive index(20°C)	1,377 - 1,378
	Water	max. 0,1 %
	Free basics (as NH ₃)	max. 0,0001 %
	Free acids (as C ₂ H ₅ COOH)	max. 0,003 %
	Aldehydy	max. 0,001 %
	Furfurol	max. 0,0001 %
	Residue on evaporation	max. 0,0005 %
	Antymon (Sb)	max. 0,000005 %
	Arsenic (As)	max. 0,000005 %
	Copper (Cu)	max. 0,0000005 %
	Nickel (Ni)	max. 0,0000001 %
	Lead (Pb)	max. 0,0000001 %
	Silver (Ag)	max. 0,00000005 %
	Iron (Fe)	max. 0,0000005 %

2-propanol GC for pesticide analysis**CHEM*617515004**

500 ml	1l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,2 %
2.5 l		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

2-propanol GC**CHEM*617515006**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,1 %
		Colour	max. 10 as Hz
		Signal(GC) in the range 1,2,4-trichlorobenzene to dekachlorobiphenyl	max. 3 pg/ml

2-propanol standard GC**CHEM*617515003**

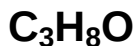
25 ml	50 ml	Purity	min. 99,9 %
75 ml	100 ml		

2-propanol HPLC**CHEM*617515002**

1l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,1 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transsmision (1cm, water):	
		210 nm	min. 40,0 %
		220 nm	min. 60,0 %
		230 nm	min. 80,0 %
		240 nm	min. 98,0 %
		250 nm	min. 99,0 %
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

2-PROPANOL 70%

2-Propanol 70%



M = 60,1 g/mol

CAS: 67-63-0

WE: 200-661-7



H: 225, 319, 336
P: 210, 233, 305+351+338
RID/ADR: 3, II UN: 1219



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	alcohol	Density:	0,873 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	no data	log P _{OW} :	no data
Ignition temperature:	22,2°C		

2-propanol 70% pure p. a.

CHEM*117515007

1l	2.5 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	70,0 % ± 1,0 %
10 l	20 l	Density (20°C)	approx 0,873 g/cm ³
		Water	approx 30,0 %
		Assay methanol	max. 0,05 %

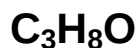
2-propanol 70%

CHEM*527515001

500 ml	1l	Appearance	colourless, clear liquid
2.5 l	3 l	Assay	65,0 – 75,0 %
5 l	10 l	Density (20°C)	0,85 - 0,873 g/cm ³
20 l	30 l	Water	25,0 – 35,0 %
60 l	200 l	Assay methanol	max. 0,05 %

2-PROPANOL 90%

2-Propanol 90%



M = 60,1 g/mol

CAS: 67-63-0

WE: 200-661-7



H: 225, 319, 336
P: 210, 233, 305+351+338
RID/ADR: 3, II UN: 1219



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	alcohol	Density:	0,818 g/cm ³ (20°C)
pH:	neutral	Solubility:	
Melting point:	no data	in water:	dowolna
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	no data	log P _{OW} :	no data
Ignition temperature:	no data		

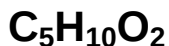
2-propanol 90%

CHEM*527515002

1 l	2.5 l	Appearance	colourless, clear liquid
3 l	5 l	Assay	90,0 % ± 1,0 %
10 l	20 l	Density (20°C)	approx 0,818 g/cm ³
30 l		Water	approx 10,0 %
		Assay methanol	max. 0,05 %

n-PROPYL ACETATE

Propylu octan



M = 102,13 g/mol

CAS: 109-60-4

WE: 203-686-1



H: 225, 319, 336, EUH066
 P: 210, 243, 280, 305+351+338, 403+235
 RID/ADR: 3, II UN: 1276



Physical and chemical properties:

Character:	liquid	bottom:	1,7% v/v
Colour:	colourless	top:	8% v/v
Odor:	fruit	Viscosity 20°C:	0,585 mPa·s
pH:	no data	Vapour pressure:	33 hPa (20°C)
Melting point:	-92,5°C	Density:	0,886 g/cm ³ (20°C)
Boiling point:	100 - 102°C	Solubility:	
Auto-ignition temperature:	430°C	in water:	23 g/l (20°C)
Ignition temperature:	10°C	in organic solvents:	soluble
Explosion limits:			

n-propyl acetate pure

CHEM*427560008

50 ml	100 l	Assay	min. 99,0 %
250 ml	500 ml	Colour	max. 10 as Hz
1l	2.5 l	Acidity	max. 0,05 %
3 l		Organic impurities	passes test
		Non-volatile matter	max. 0,005 %
		Water	max. 0,05 %
		Appearance	colourless, clear liquid

n-propyl acetate pure p. a.

CHEM*117560008

50 ml	100 l	Assay	min. 99,5 %
250 ml	500 ml	Colour	max. 10 as Hz
1l	2.5 l	Acidity	max. 0,02 %
3 l		Organic impurities	passes test
		Non-volatile matter	max. 0,0025 %
		Water	max. 0,05 %
		Appearance	colourless, clear liquid

BROMOCRESOL PURPLE

Purpura bromokrezolowa



M = 540,24 g/mol

CAS: 115-40-2

WE: 204-087-8

H: not applicable
 P: not applicable
 RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	purple	Vapour pressure:	no data
Odor:	characteristic	Density:	no data
pH:	no data	Bulk density:	approx 515 kg/m ³
Melting point:	240°C (decomposition)	Solubility:	
Boiling point:	not applicable	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	alcohol 75 g/l
Ignition temperature:	no data		

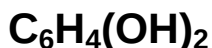
Bromocresol Purple ind

CHEM*217603503

5 g	10 g	Appearance	purple powder
25 g	50 g	Molar absorptivity coefficient:	
75 g	100 g	E (pH 5,2; 410 - 450 nm)	min. 18000
		E (pH 6,8; 570 - 590 nm)	min. 47000
		Solubility in water passes test	
		TLC test	passes test
		Residue on roasting (as SO ₄)	12 - 19 %
		pH changes:	
		yellow	min. 5,2
		Purple	max. 6,8

RESORCINOL

Rezorcyna



M = 110,11 g/mol

CAS: 108-46-3

WE: 203-585-2



H: 301

P: 301+310

RID/ADR: 6.1, III

UN: 2876



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	0,1 mbar (20°C)
Odor:	unpleasant	Density:	1,28 g/cm ³ (20°C)
pH:	approx 4 - 6 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 600 - 700 kg/m ³
Melting point:	110°C	Solubility:	
Boiling point:	281°C	in water:	1000 g/l (20°C)
Auto-ignition temperature:	605°C	in organic solvents:	ethanol
Ignition temperature:	127 °C		

Resorcinol pure

CHEM*427634605

1 l	2.5 l	Appearance	colourless or pink crystals
3 l	5 l	Assay	min. 99%
10 l	20 l	Melting point	109 - 111°C
30 l		Free acids	passes test
		Diresorcinol and phenol	passes test
		Residue on roasting (as SO ₄)	max. 0,1%
		Substances insoluble in water	max. 0,05%

RHODAMINE B

Rodamina B



M = 479,02 g/mol

CAS: 81-88-9

WE: 201-383-9



H: 318, 412

P: 260, 273, 280, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	red	Vapour pressure:	no data
Odor:	odorless	Density:	1,31 g/cm ³ (20°C)
pH:	approx2 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 240 kg/m ³
Melting point:	199-201°C	Solubility:	
Boiling point:	no data	in water:	34 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol (20°C)=
Ignition temperature:	no data		

rhodamine

CHEM*527641408

10 g	25 g	Appearance	green crystals or red powder
50 g	100 g	Molar absorptivity coefficient:	
250 g	500 g	E (pH 7,0; 555 nm)	min. 100500
		Loss on drying	max. 5,0 %
		Solubility in water	passes test
		Antimony (III) sensitivity	min. 0,0000001 g/ml
		TLC test	passes test

EXTRACTION DILUENT

Rozpuszczalnik ekstrakcyjny

M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 315, 318, 319, 335, 373, 411, EUH066

P: 201, 273, 280, 302+352, 305+351+338,
309, 310

RID/ADR: 3, III

UN: 1263



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	approx 0,8 g/cm ³ (20°C)
Melting point:	114°C (2-butanol)*	Solubility:	
Boiling point:	55°C (acetone)*	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

extraction diluent

CHEM*757650112

1 l	2.5 l	Acetone	passes test
3 l	5 l	Petroleum spirits	passes test
10 l	20 l	Isobutanol	passes test
		Butyl acetate	passes test
30 l		Toluene	passes test

EPOXY DILUENT

Rozpuszczalnik epoksydowy

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 312, 315, 318, 332, 335, EUH066
P: 210, 280, 305+351+338, 309, 310
RID/ADR: 3, III UN: 1263



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	0,8 g/cm ³ (20°C)
Melting point:	114°C (2-butanol)	Solubility:	
Boiling point:	55°C (acetone)	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

epoxy diluent

CHEM*757650111

1 l	2.5 l	Acetone	passes test
3 l	5 l	Btanone-2	passes test
10 l	20 l	Isobutanol	passes test
30 l		Xylene	passes test
		Cosmetic paraffin	passes test

PHTALAL – CARBAMIDE DILUENT

Rozpuszczalnik ftalowo - karbamidowy

M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 312, 315, 318, 332, 335, 410
P: 210, 273, 280, 302+352, 305+353+338
RID/ADR: 3, III UN: 1263



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	approx 0,8 g/cm ³ (20°C)
Melting point:	114°C (2-butanol)	Solubility:	
Boiling point:	63°C	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

phthalal – carbamide diluent

CHEM*757650114

1 l	2.5 l	Extraction naphtha	passes test
3 l	5 l	Xylene	passes test
10 l	20 l	Isobutanol	passes test
30 l			

PHTHALAL DILUENT

Rozpuszczalnik falowy

M = not applicable

CAS: not applicable

WE: not applicable



H: 226, 312, 315, 332, 335, EUH066
P: 210, 273, 280, 304+340
RID/ADR: 3, III UN: 1263



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	approx 0,8 g/cm ³ (20°C)
pH:	no data	Solubility:	
Melting point:	--114°C (2-butanol)*	in water:	no data
Boiling point:	99°C (2-butanol)*	in organic solvents:	
Auto-ignition temperature:	no data		no data
Ignition temperature:	no data		

phthalal diluent

CHEM*757650113

1 l	2.5 l	Petroleum spirits	passes test
3 l	5 l	Butanol	passes test
10 l	20 l	Xylene	passes test
30 l			

DILUENT „NITRO”

Rozpuszczalnik NITRO

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 315, 319, 336, 361d, 373, EUH066
 P: 201, 210, 280, 305+351+338, 309, 310
 RID/ADR: 3, III UN: 1263



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	approx 0,829 g/cm ³ (20°C)
Melting point:	(toluene, acetone)	Solubility:	
Boiling point:	55°C (acetone)	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

diluent „Nitro”

CHEM*757651423

1 l	2.5 l	Acetone	passes test
3 l	5 l	Toluene	passes test
10 l	20 l		
30 l			

UNIVERSAL DILUENT

Rozpuszczalnik uniwersalny

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 304, 312, 315, 332, 336, 361d, 373
P: 201, 210, 273, 280, 301+310, 308+313
RID/ADR: 3, III UN: 1263



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	approx 0,8 g/cm ³ (20°C)
Melting point:	(toluene, acetone)	Solubility:	
Boiling point:	55°C (acetone)	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data

universal diluent

CHEM*757650115

1 l	2.5 l	Acetone	passes test
3 l	5 l	Extraction naphtha	passes test
10 l	20 l	Toluene	passes test
30 l			

BUFFER SOLUTION pH 1,00*Roztwór buforowy pH 1*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	1,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 1,00**CHEM*177654004**

100 ml

500 ml

Appearance
pH (20°C)colourless, clear liquid
0,95 ÷ 1,05

1l

BUFFER SOLUTION pH 1,68

Roztwór buforowy pH 1,68

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	1,68 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 1,68

CHEM*177654003

100 ml

1l

Appearance
pH (20°C)

colourless, clear liquid
1,675 ÷ 1,685

BUFFER SOLUTION pH 2,00*Roztwór buforowy pH 2*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	2,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 2,00**CHEM*177654605**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

1,95 ÷ 2,05

BUFFER SOLUTION pH 2,20*Roztwór buforowy pH 2,2*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	2,20 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 2,00**CHEM*177654606**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

2,18 ÷ 2,22

BUFFER SOLUTION pH 3,00*Roztwór buforowy pH 3*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	3,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 3,00**CHEM*177655402**

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	2,95 ÷ 3,05

BUFFER SOLUTION pH 3,5

Roztwór buforowy pH 3,5

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	3,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 3,50

CHEM*177655403

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

3,48 ÷ 3,52

BUFFER SOLUTION pH 3,95*Roztwór buforowy pH 3,95*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	3,95 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 3,95 (acetate)**CHEM*177655404**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

3,945 ÷ 3,955

BUFFER SOLUTION pH 4,00

Roztwór buforowy pH 4

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,00

CHEM*177655708

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	3,95 ÷ 4,05

buffer solution pH 4,00 (yellow)

CHEM*177655712

100 ml	500 ml	Appearance	yellow, clear liquid
1l		pH (20°C)	3,95 ÷ 4,05

BUFFER SOLUTION pH 4,01*Roztwór buforowy pH 4,01*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,01 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,01**CHEM*177655711**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

4,005 ÷ 4,015

BUFFER SOLUTION pH 4,01 (phthalate)

Roztwór buforowy pH 4,01 (ftalanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,01 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,01 (phthalate)

CHEM*177655714

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

4,005 ÷ 4,015

BUFFER SOLUTION pH 4,20

Roztwór buforowy pH 4,2

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,20 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,20

CHEM*177655707

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

4,18 ÷ 4,22

BUFFER SOLUTION pH 4,50

Roztwór buforowy pH 4,5

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,50

CHEM*177655710

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	4,48 ÷ 4,52

BUFFER SOLUTION FOR RELEASE pH 4,50 (acetate)

Roztwór buforowy do uwalniania pH 4,5 (octanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 4,50 (acetate)

CHEM*177655716

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	4,55 ± 0,05
10 l	20 l	sodium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 4,50 (acetate)

Roztwór buforowy do uwalniania pH 4,5 (octanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 4,50 acetate - CONCENTRATE

CHEM*177655717

400 ml

1l

Appearance

colourless, clear liquid

In the concentrate diluted 1:25

2l

pH (20°C)

4,55 ± 0,05

sodium

0,05± 0,005mol/l

BUFFER SOLUTION pH 4,60 ACETATE

Roztwór buforowy pH 4,6 octanowy

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4,60 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 4,60 acetate

CHEM*177655709

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

4,58 ÷ 4,62

BUFFER SOLUTION pH 5,00*Roztwór buforowy pH 5*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 5,00**CHEM*177657404**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

4,95 ÷ 5,05

BUFFER SOLUTION pH 5,00 ACETATE

Roztwór buforowy pH 5 (octanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 5,00 acetate**CHEM*177657407**

100 ml

1l

Appearance
pH (20°C)colourless, clear liquid
4,95 ÷ 5,05

BUFFER SOLUTION pH 5,10 ACETATE

Roztwór buforowy pH 5,1 (octanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,10 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 5,10 acetate**CHEM*177657403**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

5,08 ÷ 5,12

BUFFER SOLUTION pH 5,5

Roztwór buforowy pH 5,5

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 5,50

CHEM*177657405

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

5,48 ÷ 5,52

BUFFER SOLUTION pH 5,50 ACETATE*Roztwór buforowy pH 5,5 (octanowy)*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 5,50 acetate**CHEM*177657406**

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	5,48 ÷ 5,52

BUFFER SOLUTION FOR RELEASE pH 5,80 PHOSPHATE

Roztwór buforowy do uwalniania pH 5,8 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,80 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 5,80 (phosphate)

CHEM*177657409

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	5,80 ± 0,05
10 l	20 l	potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 5,80 PHOSPHATE

Roztwór buforowy do uwalniania pH 5,8 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 5,80 phosphate- CONCENTRATE CHEM*177657410

400 ml

1l

Appearance

colourless, clear liquid

In the concentrate diluted 1:25

2l

pH (20°C)

5,80 ± 0,05

potassium

0,05± 0,005mol/l

BUFFER SOLUTION pH 6,00

Roztwór buforowy pH 6

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 6,00**CHEM*177657801**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

5,95 ÷ 6,05

BUFFER SOLUTION FOR RELEASE pH 6,00 PHOSPHATE

Roztwór buforowy do uwalniania 6,0 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 6,00 (phosphate)

CHEM*177657901

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	6,00 ± 0,05
10 l	20 l	potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 6,00 PHOSPHATE

Roztwór buforowy do uwalniania pH 6,0 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 6,0 phosphate CONCENTRATE

CHEM*177657902

400 ml

1l

Appearance

colourless, clear liquid

In the concentrate diluted 1:25

2l

pH (20°C)

6,00 ± 0,05

potassium

0,05± 0,005mol/l

BUFFER SOLUTION pH 6,00 ACETATE

Roztwór buforowy pH 6 (octanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 6,00 acetate**CHEM*177657804**

100 ml

1l

Appearance
pH (20°C)colourless, clear liquid
5,95 ÷ 6,05

BUFFER SOLUTION pH 6,50

Roztwór buforowy pH 6,5

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 6,50

CHEM*177657802

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	6,48 ÷ 6,52

buffer solution pH 6,50 phosphate

CHEM*177657800

100 ml	1l	Appearance	colourless, clear liquid
		pH (20°C)	6,48 ÷ 6,52

BUFFER SOLUTION pH 6,80

Roztwór buforowy pH 6,8

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,80 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 6,80

CHEM*177657806

100 ml	500 ml	Appearance	colourless, clear liquid
1 l		pH (20°C)	6,78 ÷ 6,82

buffer solution pH 6,80 phosphate

CHEM*177657803

100 ml	1 l	Appearance	colourless, clear liquid
10 l		pH (20°C)	6,48 ÷ 6,52

BUFFER SOLUTION FOR RELEASE pH 6,80 PHOSPHATE

Roztwór buforowy do uwalniania pH 6,8 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,80 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 6,80 (phosphate)

CHEM*177657810

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	6,80 ± 0,05
10 l	20 l	potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 6,80 PHOSPHATE

Roztwór buforowy do uwalniania pH 6,8 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 6,80 phosphate CONCENTRATE

CHEM*177657811

400 ml	1l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2l		pH (20°C)	6,80 ± 0,05
		potassium	0,05± 0,005mol/l

BUFFER SOLUTION FOR RELEASE pH 6,80 CITRATE

Roztwór buforowy do uwalniania pH 6,8 cytrynianowy

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,80 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 6,80 (citrate)

CHEM*177657812

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	6,80 ± 0,05
10 l	20 l	sodium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 6,80 CITRATE

Roztwór buforowy do uwalniania pH 6,8 cytrynianowy

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 6,80 citrate CONCENTRATE

CHEM*177657813

400 ml	1 l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2 l		pH (20°C)	6,80 ± 0,05
		sodium	0,05 ± 0,005 mol/l

BUFFER SOLUTION pH 6,86 PHOSPHATE*Roztwór buforowy pH 6,86 (fosforanowy)*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	6,86 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 6,86 phosphate**CHEM*177657808**

100 ml

1l

Appearance
pH (20°C)colourless, clear liquid
6,855 ÷ 6,865

BUFFER SOLUTION pH 7,00

Roztwór buforowy pH 7

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 7,00

CHEM*177659304

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	6,95 ÷ 7,05

buffer solution pH 7,00 green

CHEM*177659306

100 ml	500 ml	Appearance	green, clear liquid
1l		pH (20°C)	6,95 ÷ 7,05

BUFFER SOLUTION FOR RELEASE pH 7,00 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,0 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 7,00 (phosphate)

CHEM*177659310

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	7,00 ± 0,05
10 l	20 l	potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 7,00 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,0 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 7,00 phosphate CONCENTRATE

CHEM*177659311

400 ml	1l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2l		pH (20°C)	7,00 ± 0,05
		potassium	0,05± 0,005mol/l

BUFFER SOLUTION pH 7,01*Roztwór buforowy pH 7,01*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,01 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 7,01**CHEM*177659307**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

7,005 ÷ 7,015

BUFFER SOLUTION pH 7,20

Roztwór buforowy pH 7,2

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,20 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 7,20

CHEM*177659302

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	7,18 ÷ 7,22

buffer solution pH 7,20 phosphate

CHEM*177659303

100 ml	1l	Appearance	colourless, clear liquid
		pH (20°C)	7,18 ÷ 7,22

BUFFER SOLUTION FOR RELEASE pH 7,20 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,2 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,2 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 7,20 (phosphate)

CHEM*177659312

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	7,20 ± 0,05
10 l	20 l	Potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 7,20 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,20 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 7,20 phosphate - CONCENTRATE CHEM*177659313

400 ml

1l

Appearance

colourless, clear liquid

In the concentrate diluted 1:25

2l

pH (20°C)

7,20 ± 0,05

potassium

0,05± 0,005mol/l

BUFFER SOLUTION FOR RELEASE pH 7,40 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,4 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,40 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 7,40 (phosphate)

CHEM*177659314

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	7,40 ± 0,05
10 l	20 l	potassium	0,05 ± 0,005 mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 7,40 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,40 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 7,40 phosphate - CONCENTRATE CHEM*177659315

400 ml	1l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2l		pH (20°C)	7,40 ± 0,05
		potassium	0,05± 0,005mol/l

BUFFER SOLUTION FOR RELEASE pH 7,50 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,50 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution for release pH 7,50 (phosphate)

CHEM*177659316

100 ml	500 ml	Appearance	colourless, clear liquid
1 l	5 l	pH (20°C)	7,50 ± 0,05
10 l	20 l	potassium	0,05± 0,005mol/l
30 l			

BUFFER SOLUTION FOR RELEASE - concentrate pH 7,50 PHOSPHATE

Roztwór buforowy do uwalniania pH 7,50 (fosforanowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release pH 7,50 phosphate - CONCENTRATE CHEM*177659317

400 ml	1 l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2 l		pH (20°C)	7,50 ± 0,05
		Potassium	0,05 ± 0,005 mol/l

BUFFER SOLUTION pH 8,00*Roztwór buforowy pH 8*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	8,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 8,00**CHEM*177661203**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

7,95 ÷ 8,05

BUFFER SOLUTION pH 8,50*Roztwór buforowy pH 8,5*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	8,50 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 8,50**CHEM*177661204**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

8,48 ÷ 8,52

BUFFER SOLUTION pH 9,00*Roztwór buforowy pH 9*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	9,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 9,00**CHEM*177661804**

100 ml	500 ml	Appearance	colourless, clear liquid
1l		pH (20°C)	8,95 ÷ 9,05

buffer solution pH 9,00 red**CHEM*177661811**

100 ml	500 ml	Appearance	red, clear liquid
1l		pH (20°C)	8,95 ÷ 9,05

BUFFER SOLUTION pH 9,18

Roztwór buforowy pH 9,18

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	9,18 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 9,18

CHEM*177661800

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,175 ÷ 9,185

BUFFER SOLUTION pH 9,21*Roztwór buforowy pH 9,21*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	9,21 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 9,21**CHEM*177661803**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,205 ÷ 9,215

BUFFER SOLUTION pH 9,22*Roztwór buforowy pH 9,22*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	9,22 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 9,22**CHEM*177661802**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,215 ÷ 9,225

BUFFER SOLUTION pH 9,6*Roztwór buforowy pH 9,6*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	9,6 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 9,6**CHEM*177661806**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,58 ÷ 9,62

BUFFER SOLUTION pH 10,00*Roztwór buforowy pH 10*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	10,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 10,00**CHEM*177663001**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,95 ÷ 10,05

BUFFER SOLUTION pH 10,00 AMMONIA

Roztwór buforowy pH 10 (amoniakalny)

M = not applicable

CAS: not applicable

WE: not applicable



H: 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	10,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 10,00 ammonia

CHEM*177663005

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

9,95 ÷ 10,05

BUFFER SOLUTION pH 10,01*Roztwór buforowy pH 10,01*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	10,01 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 10,01**CHEM*177663000**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

10,005 ÷ 10,015

BUFFER SOLUTION pH 10,50*Roztwór buforowy pH 10,5*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	10,5 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 10,50**CHEM*177663003**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

10,48 ÷ 10,52

BUFFER SOLUTION pH 11,00*Roztwór buforowy pH 11*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	11,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 11,00**CHEM*177664806**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

10,95 ÷ 11,05

BUFFER SOLUTION pH 12,00*Roztwór buforowy pH 12*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	12,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 12,00**CHEM*177664807**

100 ml

500 ml

Appearance
pH (20°C)colourless, clear liquid
11,95 ÷ 12,05

1l

BUFFER SOLUTION pH 12,4*Roztwór buforowy pH 12,4*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	12,40 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 12,40**CHEM*177661809**

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

12,38 ÷ 12,42

BUFFER SOLUTION pH 13,00

Roztwór buforowy pH 13

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	13,00 (20°C)	Density:	approx 1,02 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

buffer solution pH 13,00

CHEM*177664814

100 ml

500 ml

Appearance

colourless, clear liquid

1l

pH (20°C)

12,95 ÷ 13,05

BUFFER SOLUTION FOR RELEASE HCl 0,01M

Roztwór buforowy do uwalniania HCl 0,01M

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release HCl 0,01M

CHEM* 177665001

500 ml	1 l	Appearance	colourless, clear liquid
5 l	10 l	Assay HCl	0,0090 – 0,011 mol/dm ³
20 l	30 l		

BUFFER SOLUTION FOR RELEASE - concentrate HCl 0,01M

Roztwór buforowy do uwalniania HCl 0,01M

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release HCl 0,01M - CONCENTRATE

CHEM* 177665002

400 ml

1l

Appearance

colourless, clear liquid

In the concentrate diluted 1:25

2l

Assay HCl

0,0090 – 0,011mol/dm³

BUFFER SOLUTION FOR RELEASE HCl 0,1M

Roztwór buforowy do uwalniania HCl 0,1M

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release HCl 0,1M

CHEM* 177665003

500 ml	1 l	Appearance	colourless, clear liquid
5 l	10 l	Assay HCl	0,090 – 0,11mol/dm ³
20 l	30 l		

SOLUTION FOR RELEASE - concentrate HCl 0,1M

Roztwór do uwalniania HCl 0,1M

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,00 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution for release HCl 0,1M - CONCENTRATE

CHEM* 177665004

400 ml	1l	Appearance	colourless, clear liquid
		In the concentrate diluted 1:25	
2l		Assay HCl	0,090 – 0,11mol/dm ³

REDOX BUFFER 360mV colour*Roztwór buforowy redox 360mV*

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

redox buffer 360mV colour**CHEM*177664899**

100 ml

500 ml

Potential

360 mV± 5

1l

Appearance

clear liquid

BUFFER SOLUTION „TE” Tris – EDTA

Bufor „TE” Tris – EDTA

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer solution „TE” tris - EDTA

CHEM* 177665010

100 ml	500 ml	Assay TrisHCl	passes test
1 l	5 l	Assay EDTA	passes test
		Appearance	colourless, clear liquid

BUFFER Tris HCl pH 6,8

Bufor „TE” Tris – EDTA

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer tris HCl pH 6,8

CHEM* 177665011

100 ml	500 ml	pH	6,8 ± 0,02
		Assay TrisHCl	passes test
1 l	5 l	Assay EDTA	passes test
		Appearance	colourless, clear liquid

BUFFER Tris HCl pH 8,8

Bufor „TE” Tris – EDTA

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

buffer tris HCl, pH 8,8

CHEM* 177665012

100 ml	500 ml	pH	8,8 ± 0,02
		Assay TrisHCl	passes test
1 l	5 l	Assay EDTA	passes test
		Appearance	colourless, clear liquid

SOLUTION FOR THE CONDUCTOMETER CALIBRATION

1413 μ S

Roztwór do kalibracji konduktometru 1413 μ S

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	no data	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

solution for the conductometer calibration 1413 μ S

CHEM*177664900

100 ml

500 ml

Electrolytic specific conductance (25°C)

1413 μ S/cm $\pm$ 5

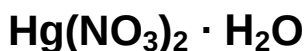
1l

Appearance

colourless, clear liquid

MERCURY (II) NITRATE MONOHYDRATE

Rtęci (II) azotan 1 hydrat



M = 342,62 g/mol

CAS: 7783-34-8

WE: 233-152-3



H: 300, 310, 330, 373, 410

P: 210, 273, 280, 301+310, 304+340, 403+233

RID/ADR: 6.1, II

UN: 1625



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	no data
Odor:	nitric acid	Density:	approx 4,39 g/cm ³ (20°C)
pH:	no data	Bulk density:	approx 1200 kg/m ³
Melting point:	79°C (bezwodny)	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) nitrate monohydrate pure p. a.

CHEM*117685109

10 g	25 g	Assay	min. 97,0 %
50 g	75 g	Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
100 g		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

MERCURY (II) BROMIDE

Rtęci (II) bromek

HgBr₂

M = 360,40 g/mol

CAS: 7789-47-1

WE: 232-169-3



H: 300, 310, 330, 373, 410

P: 210, 273, 280, 301+310, 304+340, 403+233

RID/ADR: 6.1, II

UN: 1634



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1 hPa w 136,5 °C
Odor:	no data	Density:	6,050 g/cm ³
pH:	no data	Bulk density:	no data
Melting point:	236 °C - lit.	Solubility:	
Boiling point:	322 °C - lit.	in water:	no data
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) bromide pure p. a.

CHEM*117681108

10 g	25 g	Assay	min. 99,0 %
50 g	75 g	Substances insoluble in methanol	max.. 0,05 %
		Chlorides (Cl)	max.. 0,25 %
100 g	250 g	Residue on reduction	max.. 0,02 %

MERCURY (I) CHLORIDE

Rtęci (I) chlorek



M = 472,09 g/mol

CAS: 10112-91-1

WE: 232-169-3



H: 302, 315, 319, 335, 410
P: 273, 280, 302+352, 305+351+338
RID/ADR: 6.1, III UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	no data	Density:	7,15 g/cm ³
pH:	no data	Bulk density:	no data
Melting point:	400 °C	Solubility:	
Boiling point:	no data	in water:	2 mg/l
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (I) chloride pure

CHEM*427681501

10 g	25 g	Assay	min. 97,0 %
50 g	75 g	Residue on roasting	max. 0,2 %
100 g		Sulfates (SO ₄)	max. 0,05 %
		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Mercury Hg (II)	max. 0,1 %
		Iron (Fe)	max. 0,005 %

Mercury (I) chloride pure p. a.

CHEM*117681502

10 g	25 g	Assay	min. 98,0 %
50 g	75 g	Residue on roasting	max. 0,1 %
100 g		Sulfates (SO ₄)	max. 0,02 %
		Copper (Cu)	max. 0,002 %
		Nickel (Ni)	max. 0,002 %
		Mercury Hg (II)	max. 0,05 %
		Iron (Fe)	max. 0,002 %

MERCURY (II) CHLORIDE

Rtęci (II) chlorek

HgCl₂

M = 271,50 g/mol

CAS: 7487-94-7

WE: 231-299-8



H: 300, 314, 341, 361f, 372, 410

P: 201, 273, 280, 301+330+331,
305+353+338, 309+310

RID/ADR: 6.1, II

UN: 1624



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	0,01 hPa (20°C), approx 0,1 hPa (100°C)
Odor:	odorless	Density:	5,44 g/cm ³ (20°C)
pH:	3,2 (15 g/l H ₂ O, 20°C)	Bulk density:	approx 2000 kg/m ³
Melting point:	280,7°C	Solubility:	
Boiling point:	302°C	in water:	74 g/l (20°C), 550g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) chloride pure p. a.

CHEM*117681505

5 g	10 g	Appearance	colourless crystals or white powder
25 g	50 g	Assay	min. 99,5 %
75 g	100 g	Solubility in ether	passes test
250 g		Residue on reduction	max. 0,02 %
		Iron (Fe)	max. 0,002 %

MERCURY (II) IODIDE RED

Rtęci (II) jodek czerwony

HgI₂

M = 454,40 g/mol

CAS: 7774-29-0

WE: 231-873-8



H: 301, 310, 330, 373, 410
P: 273, 280, 302+352, 304+340, 309, 310
RID/ADR: 6.1, II UN: 1624



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red	Vapour pressure:	0,001 mbar (60°C), approx 0,006 mbar (80°C)
Odor:	odorless	Density:	6,28 g/cm ³ (20°C)
pH:	approx 6 - 7 (50 g/l H ₂ O, 20°C)	Bulk density:	1350 kg/m ³
Melting point:	259°C	Solubility:	
Boiling point:	354°C	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) iodide red pure p. a.

CHEM*117690601

5 g	10 g	Assay	min. 99,0 %
25 g	50 g	Solubility mercury salts (as Hg)	max. 0,05 %
75 g	100 g	Solubility (10% in 10% KI)	passes test
250 g		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Mercury (I) (as Hg)	max. 0,1 %

MERCURY (II) ACETATE

Rtęci (II) octan



M = 318,68 g/mol

CAS: 1600-27-7

WE: 216-491-1



H: 301, 310, 330, 373, 410
P: 273, 280, 302+352, 304+340, 309, 310
RID/ADR: 6.1, II UN: 1629



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	sharp	Density:	3,27 g/cm ³ (20°C)
pH:	no data	Bulk density:	approx 1000 kg/m ³
Melting point:	178 - 180°C	Solubility:	
Boiling point:	no data	in water:	400 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) acetate pure p. a.

CHEM*117691103

5 g	10 g	Assay	min. 98,0 %
25 g	50 g	Substances insoluble in water	max. 0,01 %
75 g	100 g	Residue on reduction	max. 0,02 %
250 g		Nitrates (NO ₃)	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Mercury Hg (I)	max. 0,4 %
		Iron (Fe)	max. 0,001 %

MERCURY (II) SULFATE

Rtęci (II) siarczan



M = 296,65 g/mol

CAS: 7783-35-9

WE: 231-992-5



H: 301, 310, 330, 373, 410
P: 273, 280, 302+352, 304+340, 309, 310
RID/ADR: 6.1, II UN: 1645



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 6,47 g/cm ³ (20°C)
pH:	approx 1 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 670 kg/m ³
Melting point:	>450°C	Solubility:	
	Boiling point:	in water:	
	not applicable	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Mercury (II) sulfate pure p. a.

CHEM*117694004

5 g	10 g	Appearance	white crystals or powder
25 g	50 g	Assay	min. 98,0 %
75 g	100 g	Chlorides (Cl)	max. 0,01 %
250 g		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Mercury Hg (I)	max. 0,2 %
		Iron (Fe)	max. 0,005 %

MERCURY (II) OXIDE RED

Rtęci (II) tlenek czerwony

HgO

M = 216,59 g/mol

CAS: 21908-53-2

WE: 244-654-7



H: 300, 310, 330, 373, 410
P: 210, 273, 280, 301+310, 304+340, 403+233
RID/ADR: 6.1, II UN: 1641



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red	Vapour pressure:	no data
Odor:	odorless	Density:	11,1 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	500°C (760 mm Hg)	Solubility:	
Boiling point:	not applicable	in water:	< 0,1 %
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Mercury (II) oxide red pure p. a.

CHEM*117695606

5 g	10 g	Assay	min. 99,5 %
25 g	50 g	Chlorides (Cl)	max. 0,02 %
75 g	100 g	Sulfates (SO ₄)	max. 0,007 %
250 g		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,01 %

MERCURY (II) OXIDE YELLOW

Rtęci (II) tlenek żółty

HgO

M = 216,59 g/mol

CAS: 21908-53-2

WE: 244-654-7



H: 300, 310, 330, 373, 410

P: 210, 273, 280, 301+310, 304+340, 403+233

RID/ADR: 6.1, II

UN: 1641



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	not applicable
Odor:	odorless	Density:	11,1 g/cm ³
pH: approx 8 (50 g/l H ₂ O, zawiesina, 20°C)		Bulk density:	approx 2000 kg/m ³
Melting point:	>400°C	Solubility:	
Boiling point:	not applicable	in water:	0,052 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

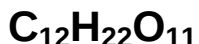
Mercury (II) oxide yellow pure p. a.

CHEM*117695800

5 g	10 g	Assay	min. 99,5 %
25 g	50 g	Chlorides (Cl)	max. 0,025 %
75 g	100 g	Sulfates (SO ₄)	max. 0,005 %
250 g		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,003 %

SUCROSE

Sacharoza



M = 342,3 g/mol

CAS: 57-50-1

WE: 200-334-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties

Character:	solid	Explosion limits:	no data
Colour:	white - colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	5,5-7	Bulk density:	approx 800 - 900 kg/m ³
Melting point:	189-191°C	Solubility:	
Boiling point:	no data	in water:	1970 g/l (15°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data	log P _{OW} :	-3,67

Sucrose pure

CHEM*427720906

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Specific rotation (20°C, 10%, H ₂ O)	min. 66,25 °
2 kg	5 kg	Substances insoluble in water	max. 0,006 %
10 kg	15 kg	Residue on roasting	max. 0,03 %
20 kg	25 kg	Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Barium (Ba)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

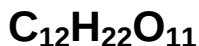
Sucrose pure p. a.

CHEM*117720907

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 99,8 %
750 g	1 kg	Specific rotation(20°C, 10%, H ₂ O)	min. 66,4 °
2 kg	5 kg	Substances insoluble in water	max. 0,003 %
10 kg	15 kg	Acids (as CH ₃ COOH)	max. 0,008 %
20 kg		Residue on roasting	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Barium (Ba)	max. 0,002 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0002 %

SUCROSE SOLUTION

Sacharoza w roztworze



M = 342,3 g/mol

CAS: 57-50-1

WE: 200-334-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	not applicable
pH:	5,5-7	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	no data	log P_{OW} :	-3,67 (obl.)
Ignition temperature:	no data		

Sucrose solution 30%

CHEM*527720906

500 ml

1 l

Assay

30,0 % ± 1,0 %

Density (20°C)

approx 1,127 g/cm³

Sucrose solution 60%

CHEM*527720907

500 ml

1 l

Assay

60,0 % ± 1,0 %

Density (20°C)

approx 1,286 g/cm³

SULFUR

Siarka

S

M = 32,06 g/mol

CAS: 7704-34-9

WE: 231-722-6



H: 315

P: 302+352

RID/ADR: 4.1, III

UN: 1350



Physical and chemical properties:

Character:	solid	Bottom:	40,0 %
Colour:	yellow	Dynamic viscosity (120°C):	17 mPa*s (liquid)
Odor:	weak characteristic	Vapour pressure:	10 mmHg (246°C)
Melting point:	113 - 119°C	Density:	1,80 - 2,36 g/cm ³ (20°C)
Boiling point:	444°C	Bulk density:	approx 400 - 500 kg/m ³
Auto-ignition temperature:	235°C	Solubility:	
Ignition temperature:	168 - 207°C	in water:	insoluble
Explosion limits:		in organic solvents:	no data
Top:	1,0 %		

sulfur

CHEM*527795704

100 g	250 g	Appearance	yellow powder
500 g	750 g	Assay	min. 99,85 %
1 kg	2 kg	Ash	max. 0,1 %
5 kg	10 kg	Acids (as H ₂ SO ₄)	max. 0,01 %
15 kg	20 kg	Organic compounds	max. 0,02 %
25 kg		Arsenic, Selenium, Tellurium (As, Se, Te)	-
		Water	max. 0,2 %

Sublimed sulfur pure p. a.

CHEM*117796706

25 g	50 g	Appearance	yellow powder
100 g	250 g	Assay	min. 99,9 %
500 g	750 g	Water	max. 0,1 %
1 kg	2 kg	Solubility in NaOH	passes test
5 kg		Acids (as H ₂ SO ₄)	max. 0,005 %
		Ash	max. 0,02 %
		Organic compounds	max. 0,015 %
		Arsenic (As)	max. 0,00001 %

MOLECULAR SIEVES, 3 Å

Sita molekularne 3A

M = not applicable

CAS: 308080-99-1

WE: 215-283-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow - brown	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	no data	Bulk density:	approx 795 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble
Ignition temperature:	not applicable		

Molecular sieves, 3 Å

CHEM*467874309

50 g	100 g	Pore size	0,3 nm
250 g	500 g	Particle size	1,6 – 2,5 nm
750 g	1 kg	Water absorptive capacity	22 %
2 kg	5 kg	Bulk density	0,795 kg/m ³
10 kg	15 kg	Crushing strength	33 N
20 kg		Residue on roasting	0,7 %

MOLECULAR SIEVES, 4 Å

Sita molekularne 4A

M = not applicable

CAS: 70955-01-0

WE: 215-283-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow - brown	Vapour pressure:	no data
Odor:	odorless	Density:	1,1 – 2,2 g/cm ³
pH:	11 (zawiesina, 50 g/l, H ₂ O, 20°C)	Bulk density:	approx 700 - 750 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble
Ignition temperature:	not applicable		

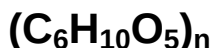
Molecular sieves, 4 Å

CHEM*467875004

50 g	100 g	Dynamic activity at 5 % relative moisture	min. 16,0 %
250 g	500 g	Residue on roasting	max. 3,0 %
750 g	1 kg	Abrasibility	max. 1,0 %
2 kg	5 kg	Mechanical strength	min. 94,0 %
10 kg	15 kg	Bulk density	640 - 750 kg/m ³
20 kg			

STARCH, SOORLE

Skrobia rozpuszczalna



M = (162,1)_n g/mol

CAS: 9005-84-9

WE: 232-679-6

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	5,0 - 7,5 (20 g/l H ₂ O, 20°C)	Bulk density:	approx 280 kg/m ³
Melting point:	256-258°C	Solubility:	
Boiling point:	no data	in water:	50 g/l (90°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Starch, soorle pure

CHEM*427898205

10 g	25 g	Appearance	white powder
50 g	100 g	Solubility in water	passes test
250 g	500 g	pH (2%, 20°C)	5,5 - 6,5
750 g	1 kg	Sensitivity	passes test
2 kg	5 kg	Loss on drying	max. 15 %
		Residue on roasting (as SO ₄)	max. 0,7 %

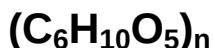
Starch, soorle pure p. a.

CHEM*117898206

10 g	25 g	Appearance	white powder
50 g	100 g	Solubility in water	passes test
250 g	500 g	pH (2%, 20°C)	5,5 - 6,5
750 g	1 kg	Sensitivity	passes test
2 kg	5 kg	Loss on drying	max. 12 %
10 kg	15 kg	Residue on roasting (as SO ₄)	max. 0,4 %
		Substances reducing	passes test

STARCH SOLUTION

Skrobia roztwory



M = (162,1)_n g/mol

CAS: 9005-84-9

WE: 232-679-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	odorless	Vapour pressure:	no data
pH:	5,0 - 7,5	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data

Starch, soorle solution 0,5%

CHEM*527898208

100 ml	250 ml	Assay	0,5 % ± 0,01 %
500 ml	1l	pH	5,0 - 7,5

Starch, soorle solution 1%

CHEM*527898206

100 ml	250 ml	Assay	1,0 % ± 0,1 %
500 ml	1l	pH	5,0 - 7,5

Starch, soorle solution 5%

CHEM*527898207

100 ml	250 ml	Assay	5,0 % ± 0,1 %
500 ml	1l	pH	5,0 - 7,5

SILICONE GREASE

Smar silikonowy do celów laboratoryjnych

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,02 – 1,04 g/cm ³
pH:	4,0 – 6,0	Solubility:	
Melting point:	no data	in water:	insoluble
Boiling point:	not applicable	in organic solvents:	insoluble in acetone, ethanol
Auto-ignition temperature:	no data		
Ignition temperature:	>280°C		

Silicone grease

CHEM*322021011

18 g	25 g	Density	1,02 -1,04 g/cm ³
50 g	100 g	Specific heat	1200 -1300 J/kg*K
250 g	500 g	Heat conduction	4 - 4,5 J/m*s*K
1 kg		Non - worked penetration	200 - 250 mm
		Worked penetration	280 - 360 mm
		pH of water extract	5,8 - 6,8

SODIUM NITRATE

Sodu azotan



M = 84,99 g/mol

CAS: 7631-99-4

WE: 231-554-3



H: 272, 302

P: 260

RID/ADR: 5.1, III

UN: 1498



Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	white	Density:	2,26 g/cm ³
Odor:	odorless	Bulk density:	approx 1200 kg/m ³
pH:	5,5-8,3 (50 g/l, H ₂ O, 20°C)	Solubility:	
Melting point:	306,8°C	in water:	874 g/l (20°C)
Boiling point:	>380°C	in other solutions:	ethanol, methanol
Auto-ignition temperature:	not applicable	log P _{OW} :	-3,8 (doświadczalnie)
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Sodium nitrate pure

CHEM*427926600

50 g	100 g	Assay	min. 99,5 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Water	max. 1,0 %
2 kg	5 kg	Nitrites (NO ₂)	max. 0,0005 %
10 kg	15 kg	Chlorides (Cl)	max. 0,005 %
25 kg		Chlorates and perchlorates(Cl)	max. 0,006 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Magnesium (Mg)	max. 0,003 %
		Calcium (Ca)	max. 0,004 %
		Iron (Fe)	max. 0,001 %

Sodium nitrate pure p. a.**CHEM*117926601**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	5 - 7,5
10 kg		Water	max. 1 %
		Nitrites (NO ₂)	max. 0,0002 %
		Chlorides (Cl)	max. 0,0005 %
		Chlorates and perchlorates (Cl)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,0002 %
		Sulfates (SO ₄)	max. 0,003 %
		Ammonia salts (NH ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0002 %

SODIUM NITRITE

Sodu azotyn



M = 69,00 g/mol

CAS: 7632-00-0

WE: 231-555-9



H: 272, 301, 400
P: 273, 309, 310
RID/ADR: 5.1, III

UN: 1500



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white or yellow	Vapour pressure:	not applicable
Odor:	odorless	Density:	approx 2,15 g/cm ³ (w 20°C)
pH:	approx 9 (50 g/l H ₂ O 20°C)	Bulk density:	approx 1 050-1 300 kg/m ³
Melting point:	271°C	Solubility:	
Boiling point:	320°C	in water:	450g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents: DMSO, acetone, ethanol	
Ignition temperature:	not applicable	log P _{OW} :	-3,7

Sodium nitrite pure

CHEM*427926906

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
1 kg	2 kg	Chlorides (Cl)	max. 0,02 %
5 kg	10 kg	Sulfates (SO ₄)	max. 0,03 %
15 kg	25 kg	Heavy metals (as Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

Sodium nitrite pure p. a.

CHEM*117926907

10 g	25 g	Assay	min. 98,0 %
50 g	100 g	Substances insoluble in water	max. 0,005 %
250 g	500 g	Chlorides (Cl)	max. 0,01 %
1 kg	2 kg	Sulfates (SO ₄)	max. 0,015 %
5 kg	10 kg	Heavy metals (as Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SODIUM NITRITE STANDARD SOLUTION 0,1 MOL/L

Sodu azotyn, roztwór mianowany 0,1M



M = 69,00 g/mol

CAS: 7632-00-0

WE: 231-555-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless or yellow	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	not applicable
pH:	approx 9 (20°C)	Density:	approx 1,003 g/cm ³ (w 20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium nitrite standard solution 0,1 mol/l

CHEM* 817926907

100 ml

250 ml

Titer

0,0996 – 0,1004 mol/l

500 ml

1l

SODIUM AZIDE

Sodu azydek



M = 65,01 g/mol

CAS: 26628-22-8

WE: 247-852-1



H: 300, 410, EUH032

P: 273, 301+310

RID/ADR: 6.1, II

UN: 1687



Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,85 g/cm ³ (w 20°C)
pH:	no data	Bulk density:	no data
Melting point:	275°C	Solubility:	
Boiling point:	300°C	in water:	420 g/l (17°C)
Auto-ignition temperature:	no data	in organic solvents:	no data

Sodium azide pure

CHEM* 327953307

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Loss on drying	max. 0,5 %
750 g	1 kg	Heavy metals (as Pb)	max. 0,005 %
5 kg	10 kg	Iron (Fe)	max. 0,002 %
15 kg			

SODIUM BENZOATE

Sodu benzoesan



M = 144,11 g/mol

CAS: 532-32-1

WE: 208-534-8

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,44 g/cm ³
pH:	approx 8 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 350 kg/m ³
Melting point:	> 300°C	Solubility:	
Boiling point:	no data	in water:	approx 550 g/l (20°C), approx 800 g/l (100°C)
Auto-ignition temperature:	800°C	in organic solvents:	no data
Ignition temperature:	>500°C		

Sodium benzoate pure

CHEM*427932106

50 g	100 g	Appearance	white powder or granulated product
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Loss on drying	max. 1,5 %
5 kg	10 kg	Substances insoluble in water	passes test
15 kg		Acidity or alkalinity	passes test
		Substances easy carbonize	passes test
		Chlorides (Cl)	max. 0,03 %
		Sulfates (SO ₄)	max. 0,02 %
		Carbonates (as Na ₂ CO ₃)	0
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0002 %

Sodium benzoate pure p. a.

CHEM*117932106

50 g	100 g	Appearance	white powder or granulat
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Loss on drying	max. 1,5 %
5 kg	10 kg	Substances insoluble in water	passes test
15 kg		Acidity or alkalinity	passes test
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,005 %

SODIUM BROMIDE

Sodu bromek

NaBr

M = 102,9 g/mol

CAS: 7647-15-6

WE: 231-599-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1,3 hPa (806°C)
Odor:	odorless	Density:	3,2 g/cm ³ (20°C)
pH:	5,0-7,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1400 kg/m ³
Melting point/rozkładu:	755°C/800°C	Solubility:	
Boiling point:	1390°C	in water:	905 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		22 g/l

Sodium bromide pure

CHEM*427935109

50 g	100 g	Assay	min. 95,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
750 g	1 kg	Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,8 %
		Bromates (BrO ₃)	max. 0,005 %
		Iodides (I)	max. 0,1 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Barium (Ba)	max. 0,008 %
		Magnesium (Mg)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

Sodium bromide pure p. a.**CHEM*117935100**

50 g	100 g	Appearance	white, crystalline powder
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH of water extract	passes test
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,2 %
		Bromates (BrO ₃)	max. 0,001 %
		Iodides (I)	max. 0,05 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0002 %
		Barium (Ba)	max. 0,002 %
		Magnesium (Mg)	max. 0,001 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

SODIUM CHLORATE

Sodu chloran



M = 106,44 g/mol

CAS: 7775-09-9

WE: 231-887-4



H: 271, 302, 411
P: 210, 280, 306+360
RID/ADR: 5.1, II

UN: 1495



Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	colourless do whitego	Explosion limits:	not applicable
Odor:	odorless	Density:	2,49 g/cm ³ (15°C)
pH:	approx 5 - 7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1500 kg/m ³
Melting point:	255°C	Solubility:	
Boiling point:	300°C	in water:	1000 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol 7,7 g/l (20°C)

Sodium chlorate pure

CHEM*427940408

100 g	250 g	Appearance	colourless crystals
500 g	1 kg	Assay	min. 99,0 %
5 kg	10 kg	Substances insoluble in water	max. 0,01 %
20 kg		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %
		Potassium (K)	max. 0,02 %

SODIUM CHLORATE SOLUTION 28%*Sodu chloran roztwór 28%*

M = 106,44 g/mol

CAS: 7775-09-9

WE: 231-887-4

H: 302, 411
P: 273
RID/ADR: 9, III

UN: 3082

**Physical and chemical properties:**

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Density:	no data
pH:	5 - 7 (50 g/l, 20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		

Sodium chlorate solution 28%**CHEM*527940410**

500 ml	1 l	Assay	28,0 ± 1,0 %
2.5 l	3 l		
5 l			

SODIUM CHLORIDE

Sodu chlorek

NaCl

M = 58,44 g/mol

CAS: 7647-14-5

WE: 231-598-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1,3 hPa (865°C)
Odor:	odorless	Density:	2,16 g/cm ³ (20°C)
pH:	5,0-8,0 (100 g/l H ₂ O w 20°C)	Bulk density:	approx 1140 kg/m ³
Melting point:	800°C	Solubility:	
Boiling point:	1461°C	in water:	360 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium chloride pure

CHEM*427941205

100 g	250 g	Appearance	colourless crystals or white powder
500 g	750 g	Assay	min. 99,8 %
1 kg	2 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	Residue on roasting	max. 1,5 %
15 kg	20 kg	Total nitrogen (N)	max. 0,002 %
25 kg		Iodides (I)	max. 0,012 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,01 %
		Magnesium (Mg)	max. 0,005 %
		Potassium (K)	max. 0,05 %
		Calcium (Ca)	max. 0,008 %
		Iron (Fe)	max. 0,001 %

Sodium chloride pure p. a.**CHEM*117941206**

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 99,9 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	5,0 - 8,0
10 kg	15 kg	Residue on roasting	max. 1,0 %
20 kg	25 kg	Total nitrogen (N)	max. 0,001 %
		Iodides (I)	max. 0,008 %
		Sulfates (SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Barium (Ba)	max. 0,003 %
		Magnesium (Mg)	max. 0,002 %
		Potassium (K)	max. 0,03 %
		Calcium (Ca)	max. 0,004 %
		Iron (Fe)	max. 0,0005 %

Sodium chloride (tablets)**CHEM*527941208**

1 kg	2 kg	Assay	min. 99,9%
5 kg	10 kg	Moisture	max. 0,1%
25 kg			

Sodium chloride for salt spray chamber**CHEM*117941207**

2 kg	5 kg	Assay	min. 99,90 %
10 kg	15 kg	Calcium (Ca)	max. 0,0002 %
20 kg	25 kg	Potassium (K)	max. 0,004 %
		Magnesium (Mg)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %
		Heavy metals (as Pb)	max. 0,00001 %
		Copper (Cu)	max. 0,00001 %
		Nickel (Ni)	max. 0,00001 %
		Arsenic (As)	max. 0,00001 %
		Barium (Ba)	passes test
		Aluminium (Al)	max. 0,000002 %
		Iodides (I)	passes test
		Bromki (Br)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,00025 %
		pH (5%, 20°C)	6,0 ÷ 7,5
		Loss on drying	max. 0,1 %

SODIUM CHLORIDE ANALYTICAL WEIGHED AMOUNT

Sodu chlorek odważka analityczna

NaCl

M = 58,44 g/mol

CAS: 7647-14-5

WE: 231-598-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1,3 hPa (865°C)
Odor:	odorless	Density:	2,16 g/cm ³ (20°C)
pH:	5,0-8,0 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 1140 kg/m ³
Melting point:	800°C	Solubility:	
Boiling point:	1461°C	in water:	360 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium chloride 0,02 mol/l analytical weighed amount

CHEM*167941409

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

Sodium chloride 0,1 mol/l analytical weighed amount

CHEM*167941407

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

Sodium chloride 0,25 mol/l analytical weighed amount

CHEM*167941408

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,25 mol/l ± 0,2 %

SODIUM CHLORIDE SOLUTION

Sodu chlorek roztwory

NaCl

M = 58,44 g/mol

CAS: 7647-14-5

WE: 231-598-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,0-8,0	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium chloride solution 0,9%

CHEM*527941206

100 ml	250 ml	Assay	0,9 % ± 0,05%
500 ml	1l	Density (20°C)	approx 1,0052 g/cm ³

Sodium chloride solution 1%

CHEM*527941205

100 ml	250 ml	Assay	1,0 % ± 0,05%
500 ml	1l	Density (20°C)	approx 1,0053 g/cm ³

Sodium chloride solution 3%

CHEM*117941207

100 ml	250 ml	Assay	3,0 % ± 0,1%
500 ml	1l	Density (20°C)	approx 1,019 g/cm ³
2.5 l	3 l		
5 l	10 l		
20 l	30 l		

Sodium chloride solution 5%

CHEM*527941211

100 ml	250 ml	Assay	5,0 % ± 0,1%
500 ml	1l	Density (20°C)	approx 1,034 g/cm ³
2.5 l	3 l		
5 l	10 l		
20 l	30 l		

SODIUM CHLORIDE STANDARD SOLUTION

Sodu chlorek, roztwory mianowane

NaCl

M = 58,44 g/mol

CAS: 7647-14-5

WE: 231-598-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,0-8,0	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium chloride standard solution 0,02 mol/l

CHEM*817935100

100 ml	250 ml	Titer	0,01992 – 0,02008 mol/l
500 ml	1l		

Sodium chloride standard solution 0,1 mol/l

CHEM*817935101

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

Sodium chloride standard solution 0,25 mol/l

CHEM* 817935105

100 ml	250 ml	Titer	0,249 – 0,251 mol/l
500 ml	1l		

Sodium chloride standard solution 0,5 mol/l

CHEM*817935104

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1l		

Sodium chloride standard solution 1 mol/l

CHEM*817935103

100 ml	250 ml	Titer	0,996 – 1,004 mol/l
500 ml	1l		

SODIUM CHLORIDE STANDARD SOLUTION

Sodu chlorek, roztwory standardowe

NaCl

M = 58,44 g/mol

CAS: 7647-14-5

WE: 231-598-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,0-8,0	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium chloride standard solution 50mg/l

CHEM*817935121

1 l	Assay	0,005 ± 0,0001%
	Appearance	colourless liquid

Sodium chloride standard solution 100mg/l

CHEM*817935122

1 l	Assay	0,01 ± 0,001%
	Appearance	colourless liquid

Sodium chloride standard solution 200mg/l

CHEM*817935120

1 l	Assay	0,02 ± 0,001%
	Appearance	colourless liquid

SODIUM CHLORITE SOLUTION 7,5%

Sodu chloryn roztwór 7,5%



M = 90,44 g/mol

CAS: 7758-19-2

WE: 231-836-6



H: 319, EUH032
P: 280, 305+351+338
RID/ADR: 8, III

UN: 1908



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless or yellow	Vapour pressure:	no data
Odor:	chlorine	Density:	1,052-1,062 g/cm ³ (20°C)
pH:	approx 12,4	Solubility:	
Melting point:	-3°C	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable	log P _{OW} :	no data
Ignition temperature:	not applicable		

sodu chlorite 7,5%

CHEM*527941210

2.5 l	3 l	Assay	7,5 % ± 0,1%
5 l	10 l	Density (20°C)	1,052 - 1,062 g/cm ³
20 l	30 l	Antimony (Sb)	max. 0,00001 %
		Arsenic (As)	max. 0,00003 %
		Chromium (Cr)	max. 0,00003 %
		Cadmium (Cd)	max. 0,00001 %
		Nickel (Ni)	max. 0,00003 %
		Lead (Pb)	max. 0,00001 %
		Mercury (Hg)	max. 0,00001 %
		Selenium (Se)	max. 0,00001 %

SODIUM CYANIDE

Sodium cyanide

NaCN

M = 49,01 g/mol

CAS: 143-33-9

WE: 205-599-4



H: 301, 330, 410
P: 273, 280, 302+352, 304+340
RID/ADR: 6.1, I UN: 1689



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1,013 mbar. (20°C)
Odor:	weak of bitter almond	Density:	1,6 g/cm ³ (20°C)
pH:	approx 11,7 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 750 - 900 kg/m ³
Melting point:	563°C	Solubility:	
Boiling point:	1496°C	in water:	370 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable		

Sodium cyanide

CHEM* 327953307

50 kg

Assay	min. 95,0 %
Water	max. 0,1 %
Sulfides (S)	max. 0,005 %
Thiocyanate (SCN)	max. 0,05 %
Chlorides (Cl)	max. 0,15 %
Phosphates (PO ₄)	max. 0,05 %
Sulfates (SO ₄)	max. 0,05 %
Lead (Pb)	max. 0,005 %
Iron (Fe)	max. 0,05 %

SODIUM CITRATE DIHYDRATE

Sodu cytrynian 2 hydrat



M = 294,1 g/mol

CAS: 6132-04-3

WE: 200-675-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,665 g/cm ³ (20°C)
pH:	7,5 - 9,0 (50 g/l H ₂ O, 25°C)	Bulk density:	900-1050 kg/m ³
Melting point:	313°C	Solubility:	
Boiling point:	no data	in water:	720 g/l (25°C), 1670 g/l (100°C)
Auto-ignition temperature:	345°C	in organic solvents:	no data
Ignition temperature:	no data		

Sodium citrate dihydrate pure

CHEM*117957800

50 g	100 g	Appearance	white or colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	7,5 - 9,0
15 kg	25 kg	Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,003 %

Sodium citrate dihydrate pure p. a.

CHEM*117957800

50 g	100 g	Appearance	white or colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
5 kg	10 kg	pH (5%, 20°C)	7,0 - 9,0
15 kg	20 kg	Chlorides (Cl)	max. 0,001 %
25 kg		Phosphates (PO ₄)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Ammonia salts (NH ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM CITRATE SOLUTION

Sodu cytrynian roztwory



M = 258,07 g/mol

CAS: 68-04-2

WE: 200-675-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,5 - 9,0	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

sodium citrate solution 1%

CHEM*527957802

100 ml	250 ml	Assay	1,0 % ± 0,1%
500 ml	1 l		

sodium citrate solution 3,8%

CHEM*527957801

100 ml	250 ml	Assay	3,8 % ± 0,1%
500 ml	1 l		

sodium citrate solution 10%

CHEM*527957800

100 ml	250 ml	Assay	10,0 % ± 0,5%
500 ml	1 l		

SODU CYTRYNIAN STANDARD SOLUTION

Sodu cytrynian roztwory mianowane



M = 258,07 g/mol

CAS: 68-04-2

WE: 200-675-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,5 - 9,0	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

sodium citrate standard solution 0,1mol/l

CHEM*817957801

500 ml

1l

Titer

0,0996 – 0,1004 mol/l

sodium citrate standard solution 0,5mol/l

CHEM*817957802

500 ml

1l

Titer

0,498 – 0,502 mol/l

sodium citrate standard solution 1mol/l

CHEM*817957803

500 ml

1l

Titer

0,996 – 1,004 mol/l

SODIUM DICHROMATE

Sodu dichromian



M = 262,00 g/mol

CAS: 10588-01-9

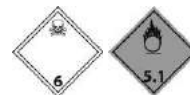
WE: 234-190-3



H: 272, 301, 312, 314, 317,
330, 334, 340, 350,
360FD, 372, 410

P: 201, 273, 280,
301+330+331, 302+352,
304+340, 305+351+338,

RID/ADR: 6.1 (5.1), I UN: 3086



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	orange	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,5 g/m ³
pH:	approx 3,5 (100 g/l H ₂ O, 20°C)	Bulk density:	no data
Melting point:	357°C	Solubility:	
Boiling point:	400°C	in water:	236 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

sodium dichromate pure

CHEM*427970403

50 g	100 g	Assay	min. 98,5 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Substances precipitated with ammonia	max. 0,01 %
		Chlorides (Cl)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,02 %
		Calcium (Ca)	max. 0,004 %
		Aluminium (Al)	max. 0,004 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,01 %
		Iron (Fe)	max. 0,004 %

sodium dichromate pure p. a.

CHEM*117970404

10 g	25 g	Assay	min. 99,5 %
50 g	100 g	Substances insoluble in water	max. 0,005 %
250 g	500 g	Substances precipitated with ammonia	max. 0,005 %
750 g	1 kg	Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Aluminium (Al)	max. 0,002 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,002 %

SODIUM DICHROMATE DIHYDRATE

Sodu dichromian 2 hydrat



M = 298,00 g/mol

CAS: 7789-12-0

WE: 234-190-3

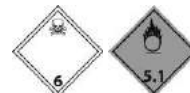


H: 272, 301, 312, 314, 317,
330, 334, 340, 350,
360FD, 372, 410

P: 201, 273, 280,
301+330+331, 302+352,
304+340, 305+351+338,

RID/ADR: 6.1 (5.1), I

UN: 3086



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	orange	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,52 g/m ³
pH:	3,5 (100 g/l H ₂ O, 20°C)	Bulk density:	1200 kg/m ³
Melting point:	>400°C	Solubility:	
Boiling point:	no data	in water:	1800 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

sodium dichromate dihydrate pure

CHEM*427970402

50 g	100 g	Assay	98,0 – 101,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Substances precipitated with ammonia	max. 0,01 %
		Chlorides (Cl)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,02 %
		Aluminium (Al)	max. 0,004 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,01 %
		Calcium (Ca)	max. 0,004 %
		Iron (Fe)	max. 0,004 %

sodium dichromate dihydrate pure p. a.

CHEM*117970403

50 g	100 g	Assay	99,5 - 100,5 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	Substances precipitated with ammonia	max. 0,005 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,01 %
		Aluminium (Al)	max. 0,002 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,002 %

SODIUM FLUORIDE

Sodu fluorek

NaF

M = 41,99 g/mol

CAS: 7681-49-4

WE: 231-667-8



H: 301, 315, 319, EUH032

P: 302+352, 305+351+338

RID/ADR: 6.1, III

UN: 1690



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1,3 hPa (1077°C)
Odor:	odorless	Density:	2,8 g/cm ³ (20°C)
pH:	approx 10,2 (40 g/l H ₂ O, 20°C)	Bulk density:	no data
Melting point:	988°C	Solubility:	
Boiling point:	1695°C	in water:	40,5 g/l (20°C)
Auto-ignition temperature:	not applicable	in other solutions:	HF
Ignition temperature:	not applicable		

Sodium fluoride pure

CHEM*427987000

50 g	100 g	Assay (w przeliczeniu na subst. bezw.)	98,5 – 102,0 %
250 g	500 g	Substances insoluble in water	max. 0,025 %
750 g	1 kg	Loss on drying (150°C)	max. 0,5 %
		Acids (as HF)	max. 0,2 %
		Zasady (as NaOH)	max. 0,1 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,02 %
		Fluosilicate (as SiF ₆)	passes test
		Heavy metals (as Pb)	max. 0,002 %
		Copper (Cu)	max. 0,002 %
		Iron (Fe)	max. 0,005 %

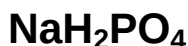
Sodium fluoride pure p. a.

CHEM*117987000

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Substances insoluble in water	max. 0,005 %
250 g	500 g	Loss on drying(150°C)	max. 0,2 %
750 g	1 kg	Acids (as HF)	max. 0,05 %
		Bases (as NaOH)	max. 0,04 %
		Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,01 %
		Fluosilicate (as SiF ₆)	max. 0,1 %
		Heavy metals (as Pb)	max. 0,001 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,02 %
		Iron (Fe)	max. 0,002 %

SODIUM PHOSPHATE MONOBASIC

Sodu diwodorofosforan bezwodny



M = 120,00 g/mol

CAS: 7558-80-7

WE: 231-449-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white do colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	4,0-4,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 940 kg/m ³
Melting point:	approx 200°C	Solubility:	
Boiling point:	>200°C	in water:	640 g/l (10°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium phosphate monobasic pure

CHEM*427992003

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	4,0 - 4,5
2 kg	5 kg	Chlorides (Cl)	max. 0,005 %
10 kg	15 kg	Heavy metals (as Pb)	max. 0,005 %
25 kg		Sulfates (SO ₄)	max. 0,02 %
		Arsenic (As)	max. 0,0005 %
		Magnesium (Mg)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,005 %

Sodium phosphate monobasic pure p. a.

CHEM*117992004

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	4,0 - 4,5
		Chlorides (Cl)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Potassium (K)	max. 0,03 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,003 %

SODIUM PHOSPHATE MONOBASIC MONOHYDRATE

Sodu diwodorofosforan 1 hydrat



M = 138,00 g/mol

CAS: 10049-21-5

WE: 231-449-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white do colourless	Vapour pressure:	no data
Odor:	odorless	Density:	2,04 g/cm ³ (20°C)
pH:	4,1-4,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 880 kg/m ³
Melting point:	approx 100°C	Solubility:	
Boiling point/rozkładu:	not applicable	in water:	850 g/l (10°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium phosphate monobasic monohydrate pure

CHEM*427991803

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	4,1 - 4,5
2 kg	5 kg	Total nitrogen (N)	max. 0,005 %
10 kg	15 kg	Chlorides (Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Arsenic (As)	max. 0,0005 %
		Magnesium (Mg)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,005 %

Sodium phosphate monobasic monohydrate pure p. a.

CHEM*117991804

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	pH (5%, 20°C)	approx 4,5
2 kg	5 kg	Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0001 %
		Magnesium (Mg)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

SODIUM PHOSPHATE MONOBASIC DEHYDRATE

Sodu diwodorofosforan 2 hydrat



M = 156,01 g/mol

CAS: 13472-35-0

WE: 231-449-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white or colourless	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,91 g/cm ³ (w 20°C)
pH:	4,0 - 4,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	60°C	Solubility:	
Boiling point:	>60°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium phosphate monobasic dehydrate pure

CHEM*427991807

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Loss on drying	22,5 – 24,0 %
5 kg	10 kg	Substances insoluble in water	max. 0,01 %
15 kg	25 kg	pH (5%, 20°C)	4,1 - 4,5
		Total nitrogen (N)	max. 0,005 %
		Chlorides (Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Arsenic (As)	max. 0,0005 %
		Magnesium (Mg)	max. 0,005 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,005 %

Sodium phosphate monobasic dehydrate pure p. a.**CHEM*117991808**

50 g	100 g	Appearance	colourless or white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Loss on drying	22,8 – 24,0 %
		Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	4,1 - 4,5
		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0002 %
		Magnesium (Mg)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

SODIUM PHOSPHATE DIBASIC

di-sodu wodorofosforan bezwodny



M = 141,96 g/mol

CAS: 7558-79-4

WE: 231-448-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,53 g/cm ³ (w 20°C)
pH:	8,7-9,3	Bulk density:	approx 880 kg/m ³
Melting point:	>240°C	Solubility:	
Boiling point:	not applicable	in water:	75 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium phosphate dibasic pure

CHEM*427992309

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
2 kg	5 kg	Loss on drying(105°C, 2 h)	max. 0,4 %
10 kg	15 kg	pH (5%, 20°C)	8,9 - 9,3
20 kg		Total nitrogen (N)	max. 0,004 %
		Chlorides (Cl)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,02 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,002 %

Sodium phosphate dibasic pure p. a.

CHEM*117992300

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	Loss on drying(105°C, 2 h)	max. 0,2 %
10 kg	15 kg	pH (5%, 20°C)	8,9 - 9,2
20 kg	25 kg	Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

SODIUM PHOSPHATE DIBASIC DIHYDRATE

di-sodu wodorofosforan 2 hydrat



M = 177,99 g/mol

CAS: 10028-24-7

WE: 231-448-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,1 g/cm ³ (w 20°C)
pH:	8,7-9,3 (20 g/l H ₂ O w 20°C)	Bulk density:	approx 850 - 1000 kg/m ³
Melting point:	92,5°C	Solubility:	
Boiling point:	>95°C	in water:	93 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium phosphate dibasic dihydrate pure

CHEM*427992808

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	pH (5%, 20°C)	8,7 - 9,3
2 kg	5 kg	Loss on drying(130°C)	19,5 - 21 %
10 kg	15 kg	Chlorides (Cl)	max. 0,002 %
25 kg		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,002 %
		Zinc (Zn)	max. 0,002 %
		Copper (Cu)	max. 0,002 %
		Potassium (K)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

Sodium phosphate dibasic dihydrate pure p. a.

CHEM*117992801

50 g	100 g	Assay	99 - 101 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
750 g	1 kg	pH (5%, 20°C)	8,9 - 9,2
2 kg	5 kg	Loss on drying(130°C)	19,5 - 21 %
10 kg	15 kg	Chlorides (Cl)	max. 0,001 %
25 kg		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SODIUM PHOSPHATE DIBASIC DODECAHYDRATE

di-sodu wodorofosforan 12 hydrat



M = 358,14 g/mol

CAS: 10039-32-4

WE: 231-448-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	not applicable
Colour:	colourless	Vapour pressure:	not applicable
Odor:	odorless	Density:	1,52 g/cm ³ (w 20°C)
pH:	9,0 - 9,5 (50 g/l H ₂ O w 20°C)	Bulk density:	800 - 900 kg/m ³
Melting point:	approx 34°C	Solubility:	
Boiling point/rozkład:	>34°C	in water:	approx 218 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium phosphate dibasic dodecahydrate pure

CHEM*427992805

100 g	250 g	Appearance	white crystals or powder
500 g	750 g	Assay	98,0 – 102,0 %
1 kg	2 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	9,0 - 9,5
15 kg	25 kg	Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0005 %
		Iron (Fe)	max. 0,002 %

Sodium phosphate dibasic dodecahydrate pure p. a.

CHEM*117992809

50 g	100 g	Appearance	white crystals or powder
250 g	500 g	Assay	99,0 – 102,0 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	9,0 - 9,3
10 kg	15 kg	Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0001 %
		Potassium (K)	max. 0,03 %
		Iron (Fe)	max. 0,001 %

SODIUM PHOSPHATE TRIBASIC

tri-sodu fosforan bezwodny



M = 163,94 g/mol

CAS: 7601-54-9

WE: 231-509-8



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	2,5 g/cm ³ (20°C)
pH:	11,5-12,4 (1%)	Bulk density:	400 kg/m ³
Melting point:	1600°C	Solubility:	
Boiling point:	not applicable	in water:	88 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium phosphate tribasic pure

CHEM*427993505

100 g	250 g	Assay	min. 94 %
500 g	750 g	Chlorides (Cl)	max. 0,002 %
1 kg	2 kg	Sulfates (SO ₄)	max. 0,002 %
5 kg	10 kg	Iron (Fe)	max. 0,0002 %
15 kg	25 kg	Heavy metals (as Pb)	max. 0,002 %

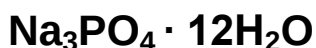
Sodium phosphate tribasic pure p. a.

CHEM*117993506

50 g	100 g	Assay	min. 98 %
250 g	500 g	Chlorides (Cl)	max. 0,001 %
750 g	1 kg	Sulfates (SO ₄)	max. 0,001 %
2 kg	5 kg	Iron (Fe)	max. 0,0001 %
10 kg	15 kg	Heavy metals (as Pb)	max. 0,001 %
25 kg			

SODIUM PHOSPHATE TRIBASIC DODECAHYDRATE

tri-sodu fosforan 12 hydrat



M = 380,18 g/mol

CAS: 10101-89-0

WE: 231-509-8



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless or white	Vapour pressure:	no data
Odor:	odorless	Density:	1,62 g/cm ³ (w 20°C)
pH:	approx 12 (10 g/l, H ₂ O)	Bulk density:	900 kg/m ³
Melting point:	75°C	Solubility:	
Boiling point:	>75°C	in water:	200 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol - insoluble
Ignition temperature:	not applicable		

Sodium phosphate tribasic dodecahydrate pure

CHEM*427993503

100 g	250 g	Appearance	colourless crystals
500 g	750 g	Assay	min. 97,5 %
1 kg	2 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	Free bases (as NaOH)	max. 2,5 %
15 kg	25 kg	Total nitrogen (N)	max. 0,003 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Carbonates (as Na ₂ CO ₃)	passes test
		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0001 %
		Iron (Fe)	max. 0,002 %

Sodium phosphate tribasic dodecahydrate pure p. a.

CHEM*117993504

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	Free bases (as NaOH)	max. 2,0 %
10 kg	15 kg	Total nitrogen (N)	max. 0,002 %
25 kg		Chlorides (Cl)	max. 0,003 %
		Sulfates (SO ₄)	max. 0,005 %
		Carbonates (as Na ₂ CO ₃)	passes test
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,001 %

SODIUM METAPHOSPHATE

Sodu heksametafosforan



M = 611,77 g/mol

CAS: 10124-56-8

WE: 233-343-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	white	Density:	approx 2,5 g/cm ³ (w 20°C)
Odor:	odorless	Bulk density:	600 - 1100 kg/m ³
pH:	4,0 – 7,5 (10 g/l, H ₂ O)	Solubility:	
Melting point:	> 600°C	in water:	81 g/l (20°C), 330 g/l (100°C)
Boiling point:	no data	in organic solvents:	rozp. w acetonie, niesoluble w metanolu
Auto-ignition temperature:	not applicable	log P _(OW) :	-7,18
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Sodium metaphosphate pure

CHEM*428026703

50 g	100 g	Assay (as NaPO ₃)	min. 60 %
250 g	500 g	Phosphates (as P ₂ O ₅)	min. 69 %
750 g	1 kg	Water	max. 0,5 %
2 kg	5 kg	pH (1%, 20°C)	4,0 – 7,5
10 kg	15 kg		
20 kg			

SODIUM IODATE

Sodu jodan



M = 197,89 g/mol

CAS: 7681-55-2

WE: 231-672-5



H: 272

P: 210

RID/ADR: 5.1, II

UN: 1479



Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	white	Density:	4,28 g/cm ³ (w 20°C)
Odor:	odorless	Bulk density:	approx 1150 kg/m ³
pH:	5,0 - 8,0 (50 g/l, H ₂ O)	Solubility:	
Melting point:	no data	in water:	81 g/l (20°C), 330 g/l (100°C)
Boiling point:	no data	in organic solvents:	soluble in acetone, insoluble in methanol
Auto-ignition temperature:	not applicable	log P _(OW) :	-7,18
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Sodium iodate pure

CHEM*428013101

50 g	100 g	Appearance	white, crystalline powder
250 g	500 g	Assay	min. 99,0 %
1 kg		Substances insoluble in water	max. 0,01 %
		Total nitrogen (N)	max. 0,004 %
		Chlorides i chlorates (as Cl)	max. 0,04 %
		Iodides (I)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,01 %
		Copper and lead (Cu+Pb)	max. 0,002 %
		Potassium (K)	max. 0,04 %
		Iron (Fe)	max. 0,002 %

Sodium iodate pure p. a.

CHEM*118013102

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 99,5 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	5,0 - 8,0
		Total nitrogen (N)	max. 0,002 %
		Chlorides i chlorates (as Cl)	max. 0,02 %
		Iodides (I)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,005 %
		Copper and lead (Cu+Pb)	max. 0,001 %
		Potassium (K)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

SODIUM IODIDE

Sodu jodek

Nal

M = 149,89 g/mol

CAS: 7681-82-5

WE: 231-679-3



H: 400

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	not applicable
Colour:	white	Density:	3,67 g/cm ³ (w 20°C)
Odor:	odorless	Bulk density:	1500-2000 kg/m ³
pH:	6,0 - 9,0 (50 g/l, H ₂ O)	Solubility:	
Melting point:	662°C	in water:	1790 g/l (20°C),
Boiling point:	1304°C	in organic solvents:	ethanol 426g/l,
Auto-ignition temperature:	not applicable		acetone 399g/l
Ignition temperature:	not applicable	log P _(OW) :	-7,18
Explosion limits:	not applicable		

Sodium iodide pure p. a.

CHEM*118013500

5 g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 99 %
250 g	500g	Substances insoluble in water	max. 0,005 %
1kg		pH (5%, 20°C)	6,0 - 9,0
		Total nitrogen (N)	max. 0,001 %
		Chlorides and bromides (as Cl)	max. 0,05 %
		Iodates (IO ₃)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,0005%
		Arsenic (As)	max. 0,0005 %
		Barium (Ba)	max. 0,002%
		Magnesium (Mg)	max. 0,001%
		Calcium (Ca)	max. 0,002%
		Iron (Fe)	max. 0,0005 %
		Moisture	max. 5%

SODIUM METASILICATE PENTAHYDRATE

Sodu metakrzemian 5 hydrat



M = 212,14 g/mol

CAS: 10213-79-3

WE: 229-912-9



H: 314, 335
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, III UN: 3253



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	0,85 - 1,05 g/cm ³
pH:	12,4 (10 g/l, H ₂ O)	Bulk density:	900-1000 kg/m ³
Melting point:	approx 72°C	Solubility:	
Boiling point:	approx 110°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium metasilicate pentahydrate pure

CHEM* 428027500

50 g	75 g	Assay	min. 97,0 %
100 g	250 g	Assay Na ₂ O	28,1 - 29,5 % (m/m)
500 g	1 kg	Assay SiO ₂	28,0 - 29,4 % (m/m)
2 kg	5 kg	Molar fraction	1,01 - 1,05
10 kg	15 kg	Mass fraction	0,98 - 1,02
25 kg		pH (1%, 20°C)	min. 12
		Insoluble substances	max. 0,02%(m/m)
		Iron	max. 50 ppm
		Density	0,85 - 1,05 g/cm ³
		Appearance	white granule
		Granulation < 0,20mm	max. 2,0%
		Granulation >1,250mm	max. 2,0%
		Granulation > 1,60mm	max. 2,0%

SODIUM MOLYBDATE DIHYDRATE

Sodu molibdenian 2 hydrat



M = 241,95 g/mol

CAS: 10102-40-6

WE: 231-551-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	3,28 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	~1000 kg/m ³
pH:	7,9 - 10,3 (50 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	no data	in water:	560 g/l (0°C), 1150 g/l (100°C), 840 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Sodium molybdate dihydrate pure

CHEM*428033709

25 g	50 g	Appearance	colourless crystals or powder
75 g	100 g	Assay	min. 98,0 %
250 g	500 g	pH (5 %, 20°C)	7 - 10,5
1 kg		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

Sodium molybdate dihydrate pure p. a.**CHEM*118033700**

25 g	50 g	Appearance	colourless crystals or powder
75 g	100 g	Assay	min. 99,5 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
1 kg		pH (5 %, 20°C)	7 - 10,5
		Chlorides (Cl)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Ammonia salts (NH ₄)	max. 0,001 %
		Chromium (Cr)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Cobalt (Co)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Manganese (Mn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,05 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,001 %

SODIUM FORMATE

Sodu mrówczan

HCOONa

M = 68,01 g/mol

CAS: 141-53-7

WE: 205-488-0

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,92 g/cm ³ (20°C)
pH:	7,0 - 8,5 (50 g/l H ₂ O, 25°C)	Bulk density:	635 kg/m ³
Melting point:	255°C	Solubility:	
Boiling point:	440°C	in water:	550 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium formate pure

CHEM*428034200

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	pH (5%, 20°C)	7,0 - 8,5
750 g	1 kg	Substances insoluble in water	max. 0,025 %
2 kg	5 kg	Acids (as HCOOH)	max. 0,1 %
10 kg	15 kg	Chlorides (as Cl)	max. 0,005 %
25 kg		Sulfates (SO ₄)	max. 0,01 %
		Magnesium (Mg)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

Sodium formate pure p. a.

CHEM*118034201

25 g	50 g	Assay	min. 99,0 %
100 g	250 g	pH (5%, 20°C)	7,0 - 8,5
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	Acids (as HCOOH)	max. 0,05 %
5 kg	10 kg	Chlorides (as Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Copper (Cu)	max. 0,001 %
		Nickel (Ni)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM (META)PERIODATE

Sodu (meta)nadjodan



M = 213,89 g/mol

CAS: 7790-28-5

WE: 232-197-6



H: 271
P: 210, 221
RID/ADR: 5.1, II

UN: 3087



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless -white	Vapour pressure:	no data
Odor:	odorless	Density:	3,87 g/cm ³ (20°C)
pH:	approx 5,2 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 2000 do 2100 kg/m ³
Melting point:	175°C	Solubility:	
Boiling point:	300°C	in water:	100 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium (meta)periodate pure

CHEM*428027908

10 g	25 g	Assay	min. 99,0 %
50 g	100 g	Bromates, bromides, chlorates, chlorides	max. 0,02 %
250 g	500 g	Iodides (I)	max. 0,02 %
750 g	1 kg	Sulfates (SO ₄)	max. 0,01 %
		Manganese (Mn)	max. 0,0005 %

Sodium (meta)periodate pure p. a.

CHEM*118027909

10 g	25 g	Assay	99,8 - 100,3 %
50 g	100 g	Bromides, chlorates, chlorides (as Cl)	max. 0,02 %
250 g	500 g	Iodides (I)	max. 0,001 %
750 g	1 kg	Sulfates (SO ₄)	max. 0,01 %
		Manganese (Mn)	max. 0,0003 %
		Substances insoluble in water	max. 0,005 %
		Loss on drying (110°C)	max. 0,05 %

SODIUM (META)PERIODATE STANDARD SOLUTION

Sodu (meta)nadjodan roztwory mianowane

NaIO_4

M = 213,89 g/mol

CAS: 7790-28-5

WE: 232-197-6

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	approx 5,2	Density:	
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium (meta)periodate standard solution 0,05 mol/l

CHEM*818027911

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1 l		

Sodium (meta)periodate standard solution 0,1 mol/l

CHEM*818027910

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1 l		

Sodium (meta)periodate standard solution 0,25 mol/l

CHEM*818027912

100 ml	250 ml	Titer	0,249 – 0,251 mol/l
500 ml	1 l		

SODIUM PERSULFATE

Sodu nadsiarczan



M = 238,10 g/mol

CAS: 7775-27-1

WE: 231-892-1



H: 272, 302, 315, 317, 319, 334, 335
P: 210, 280, 302+352, 305+351+338
RID/ADR: 5.1, III UN: 1505



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,40 g/cm ³ (20°C)
pH:	3,5 - 3,8 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 1150 kg/m ³
Melting point:	approx 180°C	Solubility:	
Boiling point:	no data	in water:	556 g/l (20°C), 680 g/l (60°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium persulfate pure

CHEM* 428036803

10 g	25 g	Assay	min. 98,0 %
50 g	100 g	Available oxygen	min. 6,65 %
		Water	max. 0,08 %
250 g	500 g	Heavy metals (as Pb)	max. 0,002 %
750 g	1 kg	Manganese (Mn)	max. 0,0001 %
		Iron (Fe)	max. 0,002 %

Sodium persulfate pure p. a.

CHEM* 118036803

10 g	25 g	Assay	min. 98,0 %
50 g	100 g	Substances insoluble in water	max. 0,05 %
		Total nitrogen (N)	max. 0,1 %
250 g	500 g	Chlorides (Cl)	max. 0,05 %
750 g	1 kg	Magnesium (Mg)	max. 0,01 %
		Copper (Cu)	max. 0,002 %
		Nickel (Ni)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

SODIUM ACETATE

Sodu octan bezwodny



M = 82,03 g/mol

CAS: 127-09-3

WE: 204-823-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,53 g/cm ³ (20°C)
pH:	7,5 - 9,5 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 300 - 400 kg/m ³
Melting point:	324°C	Solubility:	
Boiling point:	>400°C	in water:	500 g/l (20°C)
Auto-ignition temperature:	607°C	in organic solvents:	ethanol
Ignition temperature:	> 250°C	Log P _(OW) :	-4,22

Sodium acetate pure

CHEM*428056402

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
2 kg	5 kg	pH (5%, 20°C)	7,5 – 9,5
10 kg	15 kg	Chlorides (as Cl)	max. 0,005 %
25 kg		Sulfates (SO ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,005 %
		Magnesium (Mg)	max. 0,001 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

Sodium acetate pure p. a.**CHEM*118056403**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	pH (5%, 20°C)	7,0 – 9,2
10 kg	15 kg	Loss on drying (120°C)	max. 1,0 %
20 kg		Chlorides (as Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Zinc (Zn)	max. 0,0005 %
		Aluminium (Al)	max. 0,001 %
		Magnesium (Mg)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,03 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM ACETATE TRIHYDRATE

Sodu octan 3 hydrat



M = 136,08 g/mol

CAS: 6131-90-4

WE: 204-823-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	weak acetic acid	Density:	1,45 g/cm ³ (20°C)
pH:	7,5 – 9,5 (50 g/l, H ₂ O, 25°C)	Bulk density:	320-470 kg/m ³
Melting point:	58°C	Solubility:	
Boiling point:	123°C > 400°C	in water:	1250 g/l (20°C)
Auto-ignition temperature:	600°C	in organic solvents:	ethanol approx 50 g/l (20°C), diethyl ether
Ignition temperature:	not applicable		

Sodium acetate trihydrate pure

CHEM*428056708

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 99,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,01 %
10 kg	15 kg	pH (5%, 20°C)	7,5 – 9,5
25 kg		Chlorides (as Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,005 %
		Aluminium (Al)	max. 0,001 %
		Magnesium (Mg)	max. 0,002 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

Sodium acetate trihydrate pure p. a.**CHEM*118056709**

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	99,0 – 101,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,005 %
10 kg	15 kg	pH (5%, 20°C)	7,5 – 9,2
25 kg		Substances reducing KMnO_4 (as HCOOH)	max. 0,005 %
		Chlorides (as Cl)	max. 0,001 %
		Phosphates (PO_4)	max. 0,0005 %
		Sulfates (SO_4)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00005 %
		Zinc (Zn)	max. 0,0005 %
		Aluminium (Al)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM ACETATE STANDARD SOLUTION

Sodu octan roztwory mianowane



M = 82,03 g/mol

CAS: 127-09-3

WE: 204-823-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	weak acetic acid	Density:	no data
pH:	no data	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

sodu octan standard solution 0,01 mol/l

CHEM*818056709

250 ml

500 ml

Titer

0,00996 – 0,01004 mol/l

1 l

sodu octan standard solution 0,05 mol/l

CHEM* 818056710

250 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1 l

sodu octan standard solution 0,1 mol/l

CHEM*818056705

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1 l

sodu octan standard solution 0,2 mol/l

CHEM*818056706

250 ml

500 ml

Titer

0,1992 – 0,2008 mol/l

1 l

sodu octan standard solution 0,5 mol/l

CHEM*818056708

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1 l

sodu octan standard solution 1 mol/l

CHEM*818056707

250 ml

500 ml

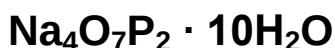
Titer

0,996 – 1,004 mol/l

1 l

SODIUM PYROPHOSPHATE DECAHYDRATE

tetra-sodu pirofosforan 10hydrat



M = 446,06 g/mol

CAS: 13472-36-1

WE: 231-767-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,82 g/cm ³ (20°C)
pH:	9,5 - 10,5 (50 g/l H ₂ O w 20°C)	Bulk density:	approx 650 kg/m ³
Melting point:	approx 79,5°C	Solubility:	
Boiling point:	93°C	in water:	approx 60 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium pyrophosphate decahydrate pure

CHEM* 428064205

10 g	25 g	Appearance	colourless or white crystals
50 g	100 g	Assay	98,5 - 102,0 %
250 g	500 g	Substances insoluble in water	max. 0,02 %
1 kg		Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,3 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0005 %
		Iron (Fe)	max. 0,001 %

Sodium pyrophosphate decahydrate pure p. a.

CHEM*118064206

10 g	25 g	Appearance	colourless or white crystals
50 g	100 g	Assay	99,0 - 101,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
1 kg		pH (5 %, 20°C)	9,5 - 10,5
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,1 %
		Sulfates (SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Potassium (K)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM PYROSULFATE

Sodu pirosiarczan



M = 222,10 g/mol

CAS: 13870-29-6

WE: 237-625-5

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	not applicable
Odor:	no data	Density:	2,658 g/cm ³
pH:	no data	Solubility:	
Melting point:	400,9 °C	in water:	soluble
Boiling point:	460 °C	in organic solvents:	no data
Auto-ignition temperature:	no data	Log P _(OW) :	no data
Ignition temperature:	no data		

Sodium pyrosulfate pure

CHEM*428066207

50 g	100 g	Assay	min. 97,0 %
250 g	500 g	Total nitrogen (N)	max. 0,005 %
750 g	1 kg	Chlorides (Cl)	max. 0,001 %
2 kg	5 kg	Phosphates (PO ₄)	max. 0,002 %
10 kg	15 kg	Heavy metals (as Pb)	max. 0,002 %
20 kg	25 kg	Aluminium (Al)	max. 0,002 %
		Magnesium (Mg)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

Sodium pyrosulfate pure p. a.

CHEM*118066208

10 g	50 g	Assay	min. 97,5%
100 g	250 g	Total nitrogen (N)	max. 0,002%
500 g	750 g	Chlorides (Cl)	max. 0,0005%
1 kg	5 kg	Phosphates (PO ₄)	max. 0,001%
10 kg		Heavy metals (as Pb)	max. 0,001%
		Aluminium (Al)	max. 0,001%
		Magnesium (Mg)	max. 0,0005%
		Calcium (Ca)	max. 0,003%
		Iron (Fe)	max. 0,0005%

SODIUM METABISULFITE

Sodu pirosiarczyn



M = 190,1 g/mol

CAS: 7681-57-4

WE: 231-673-0



H: 302, 318, EUH031

P: 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	characteristic	Density:	1,48 g/cm ³ (20°C)
pH:	3,5 - 5,5 (50 g/l H ₂ O, 20°C)	Bulk density:	1000-1200 kg/m ³
Melting point:	150°C	Solubility:	
Boiling point:	not applicable	in water:	650 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	ethanol
Ignition temperature:	not applicable	Log P _(OW) :	-3,7

Sodium metabisulfite pure

CHEM*428066202

50 g	100 g	Appearance	white, crystalline powder
250 g	500 g	Assay	min. 96,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
2 kg	5 kg	Chlorides (as Cl)	max. 0,01 %
10 kg	15 kg	Heavy metals (as Pb)	max. 0,005 %
20 kg	25 kg	Arsenic (As)	max. 0,0001 %
		Iron (Fe)	max. 0,002 %

Sodium metabisulfite pure p. a.

CHEM*118066503

10 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	5 kg	Chlorides (as Cl)	max. 0,005 %
10 kg		Heavy metals (as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYPOCHLORITE SOLUTION

(5% ≤ C < 10%)

Sodu podchloryn

NaClO

M = 74,44 g/mol

CAS: 7681-52-9

WE: 231-668-3



H: 314, 400, EUH031
 P: 260, 280, 301+330+331, 305+351+338
 RID/ADR: 8, III UN: 1791



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless - yellow	Explosion limits:	not applicable
Odor:	chlorine	Vapour pressure:	2,3 kPa (20°C)
pH:	neutral (10 g/l, H ₂ O, 20°C)	Density:	(18°C)
Melting point:	no data	Solubility:	
Boiling point:	40°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hypochlorite solution 5%

CHEM*528066500

1 l	2.5 l	Appearance	liquid: colourless or yellow
3 l	5 l	Active chlorine	
10 l	20 l	Na ₂ CO ₃ + NaOH	max. 10 g/l
		Phosphates (PO ₄)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Density	1,033 g/cm ³ (18°C)

Sodium hypochlorite solution 9,6%

CHEM* 5280665080

500 ml	1 l	Assay	9,6 ± 0,1%
2.5 l	3 l	Density (20°C)	approx 1,181 g/cm ³
5 l	10 l	NaOH	max. 13 g/l
20 l	30 l		

SODIUM HYPOCHLORITE SOLUTION

(10% ≤ C < 25%)

Sodu podchloryn

NaClO

M = 74,44 g/mol

CAS: 7681-52-9

WE: 231-668-3



H: 314, 400, EUH031
 P: 260, 280, 301+330+331, 305+351+338
 RID/ADR: 8, II UN: 1791



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless to yellow	Explosion limits:	not applicable
Odor:	chloru	Vapour pressure:	approx 25 hPa (20°C)
pH:	11,5 - 12,5 (20°C)	Density:	not applicable
Melting point:	approx -15°C	Solubility:	
Boiling point:	60°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hypochlorite solution 10%

CHEM* 528066501

100 ml	500 ml	Appearance	liquid: colourless or yellow
1 l	2.5 l	Active chlorine	approx 10,0 %
3 l	5 l	Na ₂ CO ₃ + NaOH	max. 20 g/l
10 l	20 l	Iron (Fe)	max. 0,05 %
30 l	60 l	Density	1,0681 g/cm ³ (18°C)

Sodium hypochlorite solution 15%

CHEM*528066502

100 ml	500 ml	Appearance	liquid colourless or yellow
1 l	2.5 l	Active chlorine	approx 15,0 %
3 l	5 l	Na ₂ CO ₃ + NaOH	max. 20 g/l
10 l	20 l	Iron (Fe)	max. 0,05 %
30 l	60 l	Density	1,1055 g/cm ³ (18°C)

Sodium hypochlorite solution 15-20% stabilized**CHEM*528066510**

100 ml	500 ml	Assay	15 – 20 %
1 l	2.5 l	Density (20°C)	1,15 ÷ 1,25 g/cm ³
3 l	5 l	Assay NaOH	max. 2,0 %
10 l	20 l	Stabilizer	1 - 1,5 %
30 l	60 l		

SODIUM HYPOPHOSPHITE MONOHYDRATE

Sodu podfosforyn 1 hydrat



M = 105,99 g/mol

CAS: 10039-56-2

WE: 231-669-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,81 g/cm ³ (20°C)
pH:	approx 6,5	Bulk density:	approx 800-1000 kg/m ³
Melting point:	>90°C	Solubility:	
Boiling point:	not applicable	in water:	1000 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	
Ignition temperature:	not applicable	Log P _(OW) :	no data

Sodium hypophosphite monohydrate pure

CHEM*428068005

50 g	100 g	Appearance	colourless or white crystals or powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	pH (5%, 20°C)	6,0 – 8,0
		Chlorides (as Cl)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0003 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

Sodium hypophosphite monohydrate pure p. a.

CHEM*118068006

50 g	100 g	Appearance	colourless or white crystals or powder
250 g	500 g	Assay	101,0 – 105,0 %
750 g	1 kg	pH (5%, 20°C)	approx 6,5
		Chlorides (as Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0002 %
		Arsenic (As)	max. 0,00005 %
		Lead (Pb)	max. 0,00005 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0002 %

SODIUM SALICYLATE

Sodu salicylan



M = 160,11 g/mol

CAS: 54-21-7

WE: 200-198-0

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	0,35 g/cm ³ w 20 °C
pH:	approx 6,5 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 320 kg/m ³
Melting point:	200°C	Solubility:	
Boiling point:	no data	in water:	1000 g/l (20°C)
Auto-ignition temperature:	> 250°C	in organic solvents:	ethanol
Ignition temperature:	no data		

Sodium salicylate pure

CHEM* 428075204

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Loss on drying(110°C)	max. 0,7 %
1 kg		Chlorides (as Cl)	max. 0,007 %
		Sulfates (SO ₄)	max. 0,03 %
		Heavy metals (as Pb)	max. 0,002 %

Sodium salicylate pure p. a.

CHEM*118066503

25 g	50 g	Appearance	white, crystalline powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Loss on drying (110°C)	max. 0,5 %
1 kg		Chlorides (as Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,001 %

SODIUM SULFATE

Sodu siarczan



M = 142,04 g/mol

CAS: 7757-82-6

WE: 231-820-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,68 g/cm ³ (25°C)
pH:	5,2 – 8,0 (50 g/l H ₂ O w 20°C)	Bulk density:	approx 1000 - 1400 kg/m ³
Melting point:	884°C, 890°C	Solubility:	
		in water:	200 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sodium sulfate pure

CHEM*428078706

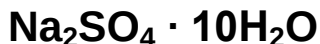
50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	pH (5%, 20°C)	5,2 - 7,5
15 kg	25 kg	Residue on roasting	max. 1,0 %
30 kg		Chlorides (as Cl)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0002 %
		Magnesium (Mg)	max. 0,002 %
		Potassium (K)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

Sodium sulfate pure p. a.**CHEM*118078707**

50 g	100 g	Appearance	white, higroskopijny powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	5,2 - 7,5
15 kg	25 kg	Residue on roasting	max. 0,5 %
30 kg		Total nitrogen (N)	max. 0,0005 %
		Chlorides (as Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,0001 %
		Magnesium (Mg)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM SULFATE DECAHYDRATE

Sodu siarczan 10 hydrat



M = 322,19 g/mol

CAS: 7727-73-3

WE: 231-820-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,46 g/cm ³ (w 20°C)
pH:	5,0 – 8,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 700 kg/m ³
Melting point:	32,4°C	Solubility:	
Boiling point:		in water:	approx 420 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in methanol
Ignition temperature:	not applicable		

Sodium sulfate decahydrate pure

CHEM*428078707

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	5,0 – 8,0
15 kg	25 kg	Total nitrogen (N)	max. 0,003 %
		Chlorides (as Cl)	max. 0,002 %
		Phosphates (PO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0003 %
		Zinc (Zn)	max. 0,002 %
		Magnesium (Mg)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

Sodium sulfate decahydrate pure p. a.**CHEM*118078708**

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in water	max. 0,002 %
2 kg	5 kg	pH (5%, 20°C)	5,0 – 8,0
		Total nitrogen (N)	max. 0,0005 %
		Chlorides (as Cl)	max. 0,0003 %
		Phosphates (PO ₄)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,0003 %
		Arsenic (As)	max. 0,00004 %
		Zinc (Zn)	max. 0,001 %
		Magnesium (Mg)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

SODIUM SULFATE STANDARD SOLUTION

Sodu siarczan roztwory mianowane



M = 142,04 g/mol

CAS: 7757-82-6

WE: 231-820-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,2 – 8,0 (50 g/l H ₂ O w 20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

sodium sulfate standard solution 0,1 mol/l

CHEM*818078705

250 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l			

sodium sulfate standard solution 0,25 mol/l

CHEM* 818078704

250 ml	500 ml	Titer	0,249 – 0,251 mol/l
1 l			

sodium sulfate standard solution 0,5 mol/l

CHEM* 818078703

250 ml	500 ml	Titer	0,498 – 0,502 mol/l
1 l			

sodium sulfate standard solution 1 mol/l

CHEM* 818078702

250 ml	500 ml	Titer	0,996 – 1,004 mol/l
1 l			

SODIUM SULFIDE NONAHYDRATE

Sodu siarczek 9 hydrat



M = 240,18 g/mol

CAS: 1313-84-4

WE: 215-211-5



H: 314, 400, EUH031
P: 260, 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1849



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	characteristic	Density:	1,427 g/cm ³
pH:	approx 12,4 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 830 kg/m ³
Melting point:	50°C	Solubility:	
Boiling point:	no data	in water:	470 g/l (10°C), 960 g/l (50°C)
Auto-ignition temperature:	> 480°C	in organic solvents:	n-oktanol, diethy ether
Ignition temperature:	not applicable		

Sodium sulfide nonahydrate pure

CHEM*428080004

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 95,0 %
1 kg		Sulfites and tiosulfates (as SO ₄)	max. 1 %

Sodium sulfide nonahydrate pure p. a.

CHEM*118080005

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Sulfites and tiosulfates (as SO ₄)	max. 0,1 %
1 kg		Ammonia salts (NH ₄)	max. 0,005 %
		Iron (Fe)	passes test

SODIUM SULFITE

Sodu siarczyny bezwodny



M = 126,04 g/mol

CAS: 7757-83-7

WE: 231-821-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odor:	odorless	Density:	2,63 g/cm ³ (15°C)
pH:	approx 9,7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1480 kg/m ³
Melting point:	> 500 °C	Solubility:	
Boiling point:	no data	in water:	220g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol
Ignition temperature:	not applicable	log P _(OW) :	4,0

Sodium sulfite pure

CHEM*428081005

10 g	25 g	Assay	min. 91,0 %
50 g	100 g	Substances insoluble in water	max. 0,02 %
250 g	500 g	Chlorides (Cl)	max. 0,02 %
750 g	1 kg	Tiosulfates (S ₂ O ₃)	max. 0,1 %
5 kg	10 kg	Carbonates (as Na ₂ CO ₃)	max. 0,15 %
15 kg	25 kg	Arsenic (As)	max. 0,0001 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

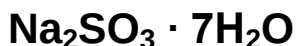
Sodium sulfite pure p. a.

CHEM*118081006

10 g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 96,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
750 g	1 kg	Chlorides (Cl)	max. 0,01 %
2 kg	5 kg	Tiosulfates (S ₂ O ₃)	max. 0,04 %
10 kg	15 kg	Carbonates (as Na ₂ CO ₃)	max. 0,15 %
25 kg		Arsenic (As)	max. 0,00004 %
		Zinc (Zn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SODIUM SULFITE HEPTAHYDRATE

Sodu siarczyn 7 hydrat



M = 252,16 g/mol

CAS: 10102-15-5

WE: 231-821-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	weak	Density:	1,561 g/cm ³ (20°C)
pH:	alkaline	Bulk density:	no data
Melting point:	150°C	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol
Ignition temperature:	not applicable		

Sodium sulfite heptahydrate pure

CHEM*428081300

50 g	100 g	Assay	min. 91,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
1 kg	2 kg	Chlorides (Cl)	max. 0,01 %
5 kg	10 kg	Thiosulfates (S ₂ O ₃)	max. 0,04 %
15 kg	25 kg	Carbonates (Na ₂ CO ₃)	max. 0,16 %
		Arsenic (As)	max. 0,00005 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

Sodium sulfite heptahydrate pure p. a.

CHEM*118081301

50 g	100 g	Assay	min. 95,0 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	Chlorides (Cl)	max. 0,005 %
5 kg	10 kg	Thiosulfates (S ₂ O ₃)	max. 0,02 %
		Carbonates (Na ₂ CO ₃)	max. 0,16 %
		Arsenic (As)	max. 0,00002 %
		Zinc (Zn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIMU SULFITE STANDARD SOLUTION ($C \leq 1,85 \text{ MOL/L}$)

Sodu siarczyny roztwory mianowane



M = 126,04 g/mol

CAS: 7757-83-7

WE: 231-821-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Vapour pressure:	not applicable
Colour:	colourless	Density:	not applicable
Odor:	odorless	Solubility:	
pH:	approx 9,7	in water:	soluble
Melting point:	no data	in organic solvents:	rozp.
Boiling point:	no data		w glicerynie, prawie nierozp. w alkoholu
Auto-ignition temperature:	not applicable	log $P_{(OW)}$:	4,0
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

sodium sulfite standard solution 0,025 mol/l

CHEM*818078708

500 ml

1 l

Titer

0,0249 – 0,0251 mol/l

sodium sulfite standard solution 0,05 mol/l

CHEM*818078705

500 ml

1 l

Titer

0,0498 – 0,0502 mol/l

sodium sulfite standard solution 0,1 mol/l

CHEM*818078706

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

sodium sulfite standard solution 0,5 mol/l

CHEM*818078710

500 ml

1 l

Titer

0,498 – 0,502 mol/l

sodium sulfite standard solution 1 mol/l

CHEM*818078707

500 ml

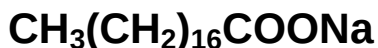
1 l

Titer

0,996 – 1,004 mol/l

SODIUM STEARATE

Sodu stearynian



M = 306.46 g/mol

CAS: 822-16-2

WE: 212-490-5

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	no data	Density:	1,02 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data	log P _(OW) :	no data

Sodium stearate pure

CHEM* 428083700

25 g	50 g	Assay	98,5 - 101,5%
100 g	250 g	Free acids or bases	passes test
500 g	750 g		
1 kg			

Sodium stearate pure p. a.

CHEM*118083700

25 g	50 g	Assay	99 - 101,5%
100 g	250 g	Free acids or bases	passes test
500 g	750 g		
1 kg			

SODIUM OXALATE

Sodu szczawian



M = 134,01 g/mol

CAS: 62-76-0

WE: 200-550-3



H: 302, 312

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	white	Explosion limits:	no data
Odor:	odorless	Density:	2,34 g/cm ³
pH:	7,0 - 8,5 (30 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	250 - 270°C	in water:	37 g/l (20°C), 63 g/l (100°C)
Auto-ignition temperature:	no data	in organic solvents:	no data

di-Sodium oxalate pure

CHEM*428085009

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	pH (2,5%, 20°C)	6,5 - 8,5
1 kg	2 kg	Heavy metals (as Pb)	max. 0,002 %
5 kg		Sulfates (SO ₄)	max. 0,02 %
		Chlorides (Cl)	max. 0,005 %
		Iron (Fe)	max. 0,002 %

di-Sodium oxalate pure p. a.

CHEM*118085000

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Loss on drying(105 ± 5°C)	max. 0,1 %
1 kg		pH (3%, 20°C)	7,0 - 8,5
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,002 %
		Zinc (Zn)	max. 0,0005 %
		Cadmium (Cd)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM OXALATE ANALYTICAL WEIGHED AMOUNT

Sodu szczawian odważka analityczna



M = 134,01 g/mol

CAS: 62-76-0

WE: 200-550-3



H: 302, 312

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	white	Explosion limits:	no data
Odor:	odorless	Density:	2,34 g/cm ³
pH:	7,0 - 8,5 (30 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	250 - 270°C	in water:	37 g/l (20°C), 63 g/l (100°C)
Auto-ignition temperature:	no data	in organic solvents:	no data

di-Sodium oxalate 0,05 mol/l analytical weighed amount

CHEM*168085200

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

SODIUM OXALATE STANDARD SOLUTION (C < 0,5 MOL/L)

Sodu szczawian roztwory mianowane



M = 134,01 g/mol

CAS: 62-76-0

WE: 200-550-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	7,0 - 8,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data

di-Sodium oxalate standard solution 0,00625 mol/l

CHEM*818095011

250 ml	500 ml	Titer	0,006225 – 0,006275 mol/l
1 l			

di-Sodium oxalate standard solution 0,01 mol/l

CHEM*818095010

250 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1 l			

di-Sodium oxalate standard solution 0,0125 mol/l

CHEM*818095008

250 ml	500 ml	Titer	0,01245 – 0,01255 mol/l
1 l			

di-Sodium oxalate standard solution 0,025 mol/l

CHEM*818095006

250 ml	500 ml	Titer	0,0249 – 0,0251 mol/l
1 l			

di-Sodium oxalate standard solution 0,05 mol/l

CHEM*818095009

250 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1 l			

di-Sodium oxalate standard solution 0,1 mol/l

CHEM*818095005

250 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l			

di-Sodium oxalate standard solution 0,2 mol/l**CHEM*818095004**

250 ml

500 ml

Titer

0,1992 – 0,2008 mol/l

1 l

di-Sodium oxalate standard solution 0,25 mol/l**CHEM*818095003**

250 ml

500 ml

Titer

0,249 – 0,251 mol/l

1 l

SODIUM OXALATE STANDARD SOLUTION ($C \geq 0,5 \text{ MOL/L}$)

Sodu szczawian roztwory mianowane



M = 134,01 g/mol

CAS: 62-76-0

WE: 200-550-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	no data
pH:	7,0 - 8,5 (20°C)	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data

di-Sodium oxalate standard solution 0,5 mol/l

CHEM*818095007

250 ml

500 ml

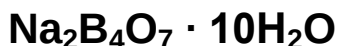
Titer

0,498 – 0,502 mol/l

1 l

SODIUM TETRABORATE DECAHYDRATE

Sodu tetraboran 10 hydrat



M = 381,37 g/mol

CAS: 1303-96-4

WE: 215-540-4

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless - white	Vapour pressure:	0,213 hPa (20°C)
Odor:	odorless	Density:	1,73 g/cm ³ (20°C)
pH:	approx 9 -10 (40 g/l H ₂ O, 20°C)	Bulk density:	approx 750 kg/m ³
Melting point:	62°C	Solubility:	
Boiling point:	1575°C	in water:	approx 49,8 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in acetone
Ignition temperature:	not applicable		

Sodium tetraborate decahydrate tech.

CHEM*327960801

500 g	750 g	Appearance	colourless crystals or white powder
1 kg	5 kg	Assay	min. 99,0 %
10 kg	15 kg	Substances insoluble in water	max. 0,02 %
25 kg		Chlorides (Cl)	max. 0,02 %
		Sulfates (SO ₄)	max. 0,05 %
		Heavy metals (as Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

Sodium tetraborate decahydrate pure

CHEM*427960801

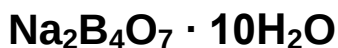
100 g	250 g	Appearance	colourless crystals or white powder
500 g	750 g	Assay	99,5 – 103,0 %
1 kg	2.5 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (4%, 20°C)	9,0 - 9,6
15 kg	25 kg	Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,002 %

Sodium tetraborate decahydrate pure p. a.**CHEM*117960802**

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	99,5 - 100,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (0,01 mol/l, H ₂ O, 25°C)	9,15 - 9,2
10 kg	15 kg	Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM TETRABORATE DECAHYDRATE ANALYTICAL WEIGHED AMOUNT

Sodu tetraboran odważka analityczna



M = 381,37 g/mol

CAS: 1303-96-4

WE: 215-540-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless - white	Vapour pressure:	0,213 hPa (20°C)
Odor:	odorless	Density:	1,73 g/cm ³ (20°C)
pH:	approx 9 -10 (40 g/l H ₂ O, 20°C)	Bulk density:	approx 750 kg/m ³
Melting point:	62°C	Solubility:	
Boiling point:	1575°C	in water:	approx 49,8 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvent:	insoluble in acetone
Ignition temperature:	not applicable		

Sodium tetraborate 0,05 mol/l analytical weighed amount
CHEM*167961006

1 szt.

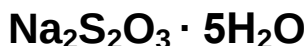
10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

SODIUM THIOSULFATE PENTAHYDRATE

Sodu tiosiarczan 5 hydrat



M = 248,18 g/mol

CAS: 10102-17-7

WE: 231-867-5

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,73 g/cm ³ (20°C)
pH:	6,0 – 7,5 (50 g/l H ₂ O w 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	48 °C	Solubility:	
Boiling point:	not applicable	in water:	700 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _(OW) :	-4,35 (obl.)

Sodium thiosulfate pentahydrate pure

CHEM*428095801

50 g	100 g	Assay	99,0 - 101,0 %
250 g	500 g	Substances insoluble in water	max. 0,01 %
1 kg	5 kg	pH (5%, 20°C)	6,0 – 7,5
10 kg	15 kg	Sulfates and sulfites (as SO ₄)	max. 0,1 %
20 kg	25 kg	Sulfides (S)	max. 0,0005 %
		Heavy metals (as Pb)	max. 0,001 %
		Magnesium (Mg)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

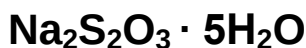
Sodium thiosulfate pentahydrate pure p. a.

CHEM*118095802

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	99,5 - 100,5 %
1 kg	5 kg	Substances insoluble in water	max. 0,005 %
10 kg	15 kg	pH (5%, 20°C)	6,0 – 7,5
20 kg	25 kg	Total nitrogen (N)	max. 0,002 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates and sulfites (as SO ₄)	max. 0,05 %
		Sulfides (S)	max. 0,0001 %
		Heavy metals (as Pb)	max. 0,0005 %
		Magnesium (Mg)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

SODIUM THIOSULFATE ANALYTICAL WEIGHED AMOUNT

Sodu tiosiarczan odważka analityczna



M = 248,18 g/mol

CAS: 10102-17-7

WE: 231-867-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	1,73 g/cm ³ (20°C)
pH:	6,0 – 7,5 (50 g/l H ₂ O w 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	48 °C	Solubility:	
Boiling point:	not applicable	in water:	700 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _(OW) :	-4,35 (obl.)

sodium thiosulfate 0,01 mol/l analytical weighed amount CHEM*168096007

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

sodium thiosulfate 0,02 mol/l analytical weighed amount CHEM*168096008

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

sodium thiosulfate 0,05 mol/l analytical weighed amount CHEM*168096009

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

sodium thiosulfate 0,1 mol/l analytical weighed amount CHEM*168096006

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

SODIUM THIOSULFATE ROZTWORY MIANOWANE

Sodu tiosiarczan roztwory mianowane



M = 158,10 g/mol

CAS: 7772-98-7

WE: 231-867-5

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odor:	odorless	Density:	not applicable
pH:	no data	Solubility:	
Melting point:	no data	in water:	soluble
Boiling point:	no data	in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

sodium thiosulfate standard solution 0,001 mol/l

CHEM*818095806

500 ml	1 l	Titer	0,000996 – 0,001004 mol/l

sodium thiosulfate standard solution 0,002 mol/l

CHEM*818095805

500 ml	1 l	Titer	0,001992 – 0,002008 mol/l

sodium thiosulfate standard solution 0,005 mol/l

CHEM*818095795

500 ml	1 l	Titer	0,00498 – 0,00502 mol/l

sodium thiosulfate standard solution 0,01 mol/l

CHEM*818095804

500 ml	1 l	Titer	0,00996 – 0,01004 mol/l

sodium thiosulfate standard solution 0,02 mol/l

CHEM*818095802

500 ml	1 l	Titer	0,01992 – 0,02008 mol/l

sodium thiosulfate standard solution 0,025 mol/l

CHEM*818095798

500 ml	1 l	Titer	0,0249 – 0,0251 mol/l

sodium thiosulfate standard solution 0,03353 mol/l

CHEM*818095803

500 ml	1 l	Titer	0,03339 – 0,03366 mol/l

sodium thiosulfate standard solution 0,05 mol/l			CHEM*818095800
500 ml	1 l	Titer	0,0498 – 0,0502 mol/l
sodium thiosulfate standard solution 0,1 mol/l			CHEM*818095801
100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l	5 l		
sodium thiosulfate standard solution 0,2 mol/l			CHEM*818095797
500 ml	1 l	Titer	0,1992 – 0,2008 mol/l
sodium thiosulfate standard solution 0,5 mol/l			CHEM*818095799
500 ml	1 l	Titer	0,498 – 0,502 mol/l
sodium thiosulfate standard solution 1 mol/l			CHEM*818095796
500 ml	1 l	Titer	0,996 – 1,004 mol/l

EDETATE DISODIUM DIHYDRATE

Sodu wersenian 2 hydrat



M = 372,24 g/mol

CAS: 6381-92-6

WE: 205-358-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 2,53 g/cm ³ (w 20°C)
pH:	4-5 (50 g/l H ₂ O, 20°C)	Bulk density:	400-500 kg/m ³
Melting point:	244-246°C	Solubility:	
Boiling point:	no data	in water:	100 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

di-Edetate disodium 2-hydrate pure

CHEM*428798102

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	98,5 - 100,5 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	pH (5%, 20°C)	4,0 – 5,0
12.5 kg	15 kg	Chlorides (Cl)	max. 0,01 %
25 kg		Sulfates (SO ₄)	max. 0,01 %
		Copper (Cu)	max. 0,002 %
		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

di-Edetate disodium 2-hydrate pure p. a.

CHEM*118798103

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	99,0 - 100,5 %
500 g	750 g	Substances insoluble in water	max. 0,005 %
1 kg	5 kg	pH (5%, 20°C)	4,0 – 5,0
15 kg	25 kg	Chlorides (Cl)	max. 0,004 %
		Sulfates (SO ₄)	max. 0,005 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

EDETATE DISODIUM ANALYTICAL WEIGHED AMOUNT

Sodu wersenian odważka analityczna



M = 372,24 g/mol

CAS: 6381-92-6

WE: 205-358-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 2,53 g/cm ³ (w 20°C)
pH:	4-5 (50 g/l H ₂ O, 20°C)	Bulk density:	400-500 kg/m ³
Melting point:	244-246°C	Solubility:	
Boiling point:	no data	in water:	100 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Edetate disodium 0,01 mol/l analytical weighed amount CHEM*168798602

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

Edetate disodium 0,02 mol/l analytical weighed amount CHEM*168798603

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

Edetate disodium 0,025 mol/l analytical weighed amount CHEM*168798604

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,025 mol/l ± 0,2 %

Edetate disodium 0,03 mol/l analytical weighed amount CHEM*168798605

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,03 mol/l ± 0,2 %

Edetate disodium 0,05 mol/l analytical weighed amount CHEM*168798600

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

Edetate disodium 0,1 mol/l analytical weighed amount CHEM* 168798606

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

EDETATE DISODIUM STANDARD SOLUTION

Sodu wersenian roztwory mianowane



M = 336,21 g/mol

CAS: 139-33-3

WE: 205-358-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	4-5 (50 g/l, H ₂ O, 20°C)	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data

Edetate disodium standard solution 0,001 mol/l

CHEM*818798107

100 ml	250 ml	Titer	0,000996 – 0,001004 mol/l
500 ml	1l		

Edetate disodium standard solution 0,005 mol/l

CHEM*818798112

100 ml	250 ml	Titer	0,00498 – 0,00502 mol/l
500 ml	1l		

Edetate disodium standard solution 0,01 mol/l

CHEM*818798102

100 ml	250 ml	Titer	0,00996 – 0,01004 mol/l
500 ml	1l		

Edetate disodium standard solution 0,015 mol/l

CHEM*818798113

100 ml	250 ml	Titer	0,01494 – 0,01506 mol/l
500 ml	1l		

Edetate disodium standard solution 0,02 mol/l

CHEM*818798103

100 ml	250 ml	Titer	0,01992 – 0,02008 mol/l
500 ml	1l		

Edetate disodium standard solution 0,025 mol/l

CHEM*818798108

100 ml	250 ml	Titer	0,0249 – 0,0251 mol/l
500 ml	1l		

Edetate disodium standard solution 0,05 mol/l

CHEM*818798106

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1l		

Edetate disodium standard solution 0,1 mol/l **CHEM*818798104**

100 ml	250 ml	Titer	0,0996 – 0,01004 mol/l
500 ml	1l		

Edetate disodium standard solution 0,2 mol/l **CHEM*818798101**

100 ml	250 ml	Titer	0,1992 – 0,2008 mol/l
500 ml	1l		

Edetate disodium standard solution 0,25 mol/l **CHEM*818798110**

100 ml	250 ml	Titer	0,249 – 0,251 mol/l
500 ml	1l		

Edetate disodium standard solution 0,5 mol/l **CHEM*818798109**

100 ml	250 ml	Titer	0,498 – 0,502 mol/l
500 ml	1l		

SODIUM CARBONATE

Sodu węglan



M = 105,99 g/mol

CAS: 497-19-8

WE: 207-838-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 2,53 g/cm ³ (w 20°C)
pH:	approx 11,5 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 1100 kg/m ³
Melting point:	approx 891°C	Solubility:	
Boiling point:	1600°C	in water:	approx 210 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol, acetone
Ignition temperature:	not applicable		

Sodium carbonate pure

CHEM*428105601

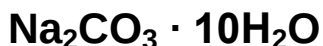
50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,5 %
750 g	1 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	Residue on roasting	max. 1,0 %
15 kg	20 kg	Chlorides (Cl)	max. 0,015 %
25 kg		Phosphates (PO ₄)	max. 0,005 %
		Sulfur całkowita (as SO ₄)	max. 0,01 %
		Heavy metals (as Pb)	max. 0,001 %
		Arsenic (As)	max. 0,0002 %
		Magnesium (Mg)	max. 0,01 %
		Potassium (K)	max. 0,04 %
		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Sodium carbonate pure p. a.**CHEM*118105602**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,8 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	Residue on roasting	max. 0,5 %
13 kg	15 kg	Total nitrogen (N)	max. 0,001 %
20 kg	25 kg	Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,002 %
		Silicate (as SiO ₂)	max. 0,003 %
		Sulfur (as SO ₄)	max. 0,003 %
		Arsenic (As)	max. 0,00005 %
		Aluminium (Al)	max. 0,003 %
		Magnesium (Mg)	max. 0,005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,02 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,0005 %

SODIUM CARBONATE DECAHYDRATE

Sodu węglan 10 hydrat



M = 286,14 g/mol

CAS: 6132-02-1

WE: 207-838-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,44 g/cm ³ (20°C)
pH:	11,0 – 12,0 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 700-900 kg/m ³
Melting point:	33°C	Solubility:	
Boiling point:	not applicable	in water:	approx 210 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol, acetone
Ignition temperature:	not applicable		

Sodium carbonate decahydrate pure

CHEM*428105704

100 g	250 g	Appearance	colourless crystals
500 g	750 g	Assay	min. 99,8 %
1 kg	2 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	Silicates (as SiO ₂)	max. 0,005 %
15 kg	25 kg	Residue on roasting	61,7 - 64,6 %
		Total nitrogen (N)	max. 0,001 %
		Chlorides (Cl)	max. 0,003 %
		Phosphates (PO ₄)	max. 0,002 %
		Sulfur (as SO ₄)	max. 0,006 %
		Heavy metals (as Pb)	max. 0,0005 %
		Arsenic (As)	max. 0,00003 %
		Aluminium (Al)	max. 0,003 %
		Potassium (K)	max. 0,01 %
		Magnesium and calcium (as Mg)	max. 0,02 %
		Iron (Fe)	max. 0,001 %

Sodium carbonate decahydrate pure p. a.**CHEM*118105603**

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 99,8 %
750 g	1 kg	Substances insoluble in water	max. 0,003 %
5 kg	15 kg	Silicates (as SiO ₂)	max. 0,001 %
25 kg		Residue on roasting	62,3 - 64,2 %
		Total nitrogen (N)	max. 0,0005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulfur (as SO ₄)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,0003 %
		Arsenic (As)	max. 0,00002 %
		Aluminium (Al)	max. 0,001 %
		Potassium (K)	max. 0,001 %
		Magnesium and calcium (as Mg)	max. 0,006 %
		Iron (Fe)	max. 0,0002 %

SODIUM CARBONATE ANALYTICAL WEIGHED AMOUNT

Sodu węglan odważka analityczna



M = 105,99 g/mol

CAS: 497-19-8

WE: 207-838-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	approx 2,53 g/cm ³ (w 20°C)
Odor:	odorless	Bulk density:	approx 1100 kg/m ³
pH:	approx 11,5 (50 g/l H ₂ O, 25°C)	Solubility:	
Melting point:	approx 891°C	in water:	approx 210 g/l (20°C)
Boiling point:	1600°C	in organic solvents:	rozp.
Auto-ignition temperature:	not applicable		w glicerynie, nierozp.
Ignition temperature:	not applicable		w acetonie, alkoholu
Explosion limits:	not applicable		

sodium carbonate 0,05 mol/l analytical weighed amount
CHEM*168105933

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

SODIUM CARBONATE STANDARD SOLUTION ($C \leq 2,25 \text{ MOL/L}$)

Sodu węglan roztwory mianowane



M = 105,99 g/mol

CAS: 497-19-8

WE: 207-838-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	11,0 – 12,0 (25°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

sodium carbonate standard solution 0,01 mol/l

CHEM*818095807

500 ml

1 l

Titer

0,00996 – 0,01004 mol/l

sodium carbonate standard solution 0,025 mol/l

CHEM*818095811

500 ml

1 l

Titer

0,0249 – 0,0251 mol/l

sodium carbonate standard solution 0,05 mol/l

CHEM*818095808

500 ml

1 l

Titer

0,0498 – 0,0502 mol/l

sodium carbonate standard solution 0,1 mol/l

CHEM*818095810

500 ml

1 l

Titer

0,0996 – 0,1004 mol/l

sodium carbonate standard solution 0,5 mol/l

CHEM*818095809

500 ml

1 l

Titer

0,498 – 0,502 mol/l

sodium carbonate standard solution 1 mol/l

CHEM*818095812

500 ml

1 l

Titer

0,996 – 1,004 mol/l

SODIUM TARTRATE DIBASIC DIHYDRATE

Sodu winian 2 hydrat



M = 230,08 g/mol

CAS: 6106-24-7

WE: 212-773-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	approx 1,81 g/cm ³
pH:	approx 8 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 460 kg/m ³
Melting point:	57°C	Solubility:	
Boiling point:	no data	in water:	290 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

sodium tartrate pure

CHEM*428106409

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 98,0 %
500 g	1 kg	Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	7 - 8,5
		Chlorides (Cl)	max. 0,002 %
		Sulfates (SO ₄)	max. 0,02 %
		Phosphates (PO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

sodium tartrate pure p. a.

CHEM*118106400

25 g	50 g	Appearance	colourless crystals
100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in water	max. 0,005 %
		pH (5%, 20°C)	7 - 8,5
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,01 %
		Phosphates (PO ₄)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SODIUM BISULFATE MONOHYDRATE

Sodu wodorosiarczan 1 hydrat



M = 138,08 g/mol

CAS: 10034-88-5

WE: 231-665-7



H: 316
P: 280, 305+351+338, 313
RID/ADR: 8, III UN: 3260



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	yellow	Dynamic viscosity:	no data
Odor:	no data	Vapour pressure:	no data
pH:	no data	Density:	2,103g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium bisulfate monohydrate pure

CHEM* 428079605

25 g	50 g	Assay	min. 98,0%
100 g	250 g	Chlorides (Cl)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
500 g	1 kg	Iron (Fe)	max. 0,001 %

Sodium bisulfate monohydrate pure p. a.

CHEM*118079606

25 g	50 g	Assay	min. 99,0%
100 g	250 g	Total nitrogen (N)	max. 0,001%
		Chlorides (Cl)	max. 0,001 %
500 g	1 kg	Phosphates (PO ₄)	max. 0,002 %
		Magnesium (Mg)	max. 0,005 %
		Lead (Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

SODIUM BISULFITE SOLUTION

Sodu wodorosiarczyny roztwory



M = 104,06 g/mol

CAS: 7631-90-5

WE: 231-548-0



H: 302, EUH031
P: 262
RID/ADR: 8, III

UN: 2693



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Dynamic viscosity:	4,3 mPa*s (20°C)
Odor:	characteristic	Vapour pressure:	40 hPa (20°C)
pH:	4,5 - 5,5 (20°C)	Density:	(20°C)
Melting point:	approx -44°C	Solubility:	
Boiling point:	approx 146°C; 146°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium bisulfite solution 30% purified

CHEM*738081646

1 l	2.5 l	Assay	min. 29,0 %
3 l	5 l	Density (20°C)	approx 1,27 g/cm ³
10 l	20 l		
30 l	60 l		
1000 l			

Sodium bisulfite solution 35-37% purified

CHEM*738081647

100 ml	500 ml	Assay	35,0 – 37,0 %
1 l	2.5 l	Density (20°C)	max. 1,34 g/cm ³
3 l	5 l		
10 l	20 l		
30 l	60 l		
1000 l			

Sodium bisulfite solution 40% purified

CHEM* 738081648

100 ml	500 ml	Assay	approx 40,0 %
1 l	2.5 l	Density (20°C)	max. 1,38 g/cm ³
3 l	5 l		
10 l			

SODIUM HYDROXIDE

Sodu wodorotlenek

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1823



Physical and chemical properties:

Character:	solid	Vapour pressure:	1,33 hPa (739°C)
Colour:	white	Density:	2,3 g/cm ³ (20°C)
Odor:	odorless	Bulk density:	~1000 kg/m ³
pH:	> 12 (1M, H ₂ O, 20°C)	Solubility:	
Melting point:	324°C	in water:	1090 g/l (20°C)
Boiling point:	1390°C	in organic solvents:	alcohol, glycerol
Explosion limits:	not applicable		

Sodium hydroxide pure

CHEM*428109251

100 g	250 g	Assay	min. 98,0 %
500 g	750 g	Sodium carbonate (Na ₂ CO ₃)	max. 1,0 %
1 kg	2 kg	Total nitrogen (N)	max. 0,0007 %
5 kg	10 kg	Chlorides (Cl)	max. 0,015 %
15 kg	18 kg	Phosphates (PO ₄)	max. 0,002 %
25 kg		Assay SiO ₂	max. 0,008 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,002 %
		Aluminium (Al)	max. 0,002 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,0015 %

Sodium hydroxide pure p. a.**CHEM*118109252**

100 g	250 g	Assay	min. 98,8 %
500 g	750 g	Sodium carbonate (Na ₂ CO ₃)	max. 0,7 %
1 kg	2 kg	Total nitrogen (N)	max. 0,0005 %
5 kg	10 kg	Chlorides (Cl)	max. 0,005 %
15 kg	20 kg	Phosphates (PO ₄)	max. 0,001 %
25 kg		Assay SiO ₂	max. 0,005 %
		Sulfates (SO ₄)	max. 0,003 %
		Heavy metals (as Pb)	max. 0,001 %
		Barium(Ba)	max. 0,0005 %
		Zinc (Zn)	max. 0,0005 %
		Aluminium (Al)	max. 0,001 %
		Cadmium (Cd)	max. 0,0005 %
		Cobalt (Co)	max. 0,0005 %
		Magnesium (Mg)	max. 0,0005 %
		Manganese (Mn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Nickel (Ni)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Argentum (Ag)	max. 0,0005 %
		Strontium (Sr)	max. 0,0005 %
		Calcium (Ca)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE

ANALYTICAL WEIGHED AMOUNT

Sodu wodorotlenek odważka analityczna

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,09 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide 0,01 mol/l analytical weighed amount CHEM*168109338

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

Sodium hydroxide 0,02 mol/l analytical weighed amount CHEM*168109339

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

Sodium hydroxide 0,1 mol/l analytical weighed amount CHEM*168109336

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

Sodium hydroxide 0,2 mol/l analytical weighed amount CHEM*168109340

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,2 mol/l ± 0,2 %

Sodium hydroxide 0,25 mol/l analytical weighed amount CHEM*168109341

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,25 mol/l ± 0,2 %

Sodium hydroxide 0,5 mol/l analytical weighed amount CHEM*168109342

1 szt.

Concentration after dilution to 1000 ml at 20°C

0,5 mol/l ± 0,2 %

Sodium hydroxide 1 mol/l analytical weighed amount CHEM*168109337

1 szt.

Concentration after dilution to 1000 ml at 20°C

1 mol/l ± 0,2 %

SODIUM HYDROXIDE SOLUTION 1%

Sodu wodorotlenek roztwór 1%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 315, 319
P: 302+352, 305+351+338
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,0095 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 1% pure

CHEM* 428109249

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	1,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
20 l		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 1% pure p. a.

CHEM*118109254

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	1,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
20 l		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 2%

Sodu wodorotlenek roztwór 2%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,0207 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 2% pure

CHEM*528109232

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	2,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
20 l		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 2% pure p. a.

CHEM*528109231

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	2,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
20 l		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 3%

Sodu wodorotlenek roztwór 3%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338
RID/ADR: 8, III

UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,0318 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 3% purified

CHEM*528109230

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	3,0 % ± 0,1 %
10 l	20 l	Density	approx 1,0318 g/cm ³ (20°C)

Sodium hydroxide solution 3% pure

CHEM*528109232

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	3,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
20 l		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 3% pure p. a.

CHEM*528109231

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	3,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
20 l		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 5%

Sodu wodorotlenek roztwór 5%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,0538 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 5% purified

CHEM*528109240

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	5,0 % ± 0,1 %
10 l	20 l	Density	approx 1,0538 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 5% pure

CHEM*528109241

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	5,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
20 l	30 l	Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %
60 l			

Sodium hydroxide solution 5% pure p. a.

CHEM*528109242

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	5,0 % ± 0,1 %
5 l	10 l	Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
20 l	30 l	Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %
60 l			

SODIUM HYDROXIDE SOLUTION 10%

Sodu wodorotlenek roztwór 10%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,1089 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 10% purified

CHEM*528109243

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	10,0 % ± 0,5 %
10 l	20 l	Density	approx 1,1089 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 10% pure

CHEM*428109252

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	10,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 10% pure p. a.

CHEM*528109244

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	10,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 15%

Sodu wodorotlenek roztwór 15%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,1641 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 15% purified

CHEM*528109253

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	15,0 % ± 0,5 %
10 l	20 l	Density	approx 1,1649 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 15% pure

CHEM*528109275

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	15,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 15% pure p. a.

CHEM*528109276

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	15,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 20%

Sodu wodorotlenek roztwór 20%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,2191 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 20% purified

CHEM*528109250

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	20,0 % ± 0,5 %
10 l	20 l	Density	approx 1,2191 g/cm ³ (20°C)
30 l	60 l		
1000 l			

Sodium hydroxide solution 20% pure

CHEM*428109250

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	20,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 20% pure p. a.

CHEM*118109251

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	20,0 % ± 0,5 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 25%

Sodu wodorotlenek roztwór 25%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,2739 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 25% purified

CHEM*528109277

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	25,0 % ± 1,0 %
10 l	20 l	Density	approx 1,2739 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 25% pure

CHEM*428109255

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	25,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 25% pure p. a.

CHEM*528109257

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	25,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 30%

Sodu wodorotlenek roztwór 30%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,3279 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 30% purified

CHEM*528109247

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	30,0 % ± 1,0 %
10 l	20 l	Density	approx 1,3279 g/cm ³ (20°C)
30 l	60 l		
1000 l			

Sodium hydroxide solution 30% pure

CHEM*528109248

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	30,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 30% pure p. a.

CHEM*528109249

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	30,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 33%

Sodu wodorotlenek roztwór 33%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,3593 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 33% pure p. a.

CHEM*528109272

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	33,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 35%

Sodu wodorotlenek roztwór 35%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,3798 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 35% purified

CHEM*528109273

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	35,0 % ± 1,0 %
10 l	20 l	Density	approx 1,3798 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 35% pure

CHEM*528109271

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	35,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 35% pure p. a.

CHEM*528109274

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	35,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 40%

Sodu wodorotlenek roztwór 40%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,43 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 40% purified

CHEM*528109254

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	40,0 % ± 1,0 %
10 l	20 l	Density	approx 1,43 g/cm ³ (20°C)
30 l	60 l		
1000 l			

Sodium hydroxide solution 40% pure

CHEM*528109255

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	40,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 40% pure p. a.

CHEM*528109252

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	40,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 45%

Sodu wodorotlenek roztwór 45%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,4779 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 45% purified

CHEM*528109264

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	45,0 % ± 1,0 %
10 l	20 l	Density	approx 1,4779 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 45% pure

CHEM*528109262

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	45,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 45% pure p. a.

CHEM*528109263

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	45,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE SOLUTION 50%

Sodu wodorotlenek roztwór 50%

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,5253 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide solution 50% purified

CHEM*528109256

1 l	2.5 l	Appearance	colourless liquid
3 l	5 l	Assay	50,0 % ± 1,0 %
10 l	20 l	Density	approx 1,5253 g/cm ³ (20°C)
30 l	60 l		

Sodium hydroxide solution 50% pure

CHEM*528109265

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	50,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,01 %
20 l	30 l	Sulfates (SO ₄)	max. 0,02 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,15 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 50% pure p. a.

CHEM*118109256

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Assay	50,0 % ± 1,0 %
5 l	10 l	Chlorides (Cl)	max. 0,005 %
20 l	30 l	Sulfates (SO ₄)	max. 0,01 %
60 l		Sodium carbonate (Na ₂ CO ₃)	max. 0,1 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE

STANDARD SOLUTION ($C \leq 0,125 \text{ MOL/L}$)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 0,01 mol/l

CHEM*810953168

100 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,02 mol/l

CHEM*810953163

100 ml	500 ml	Titer	0,01992 – 0,02008 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,05 mol/l

CHEM*810953166

100 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,1 mol/l**CHEM*810953160**

100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,125 mol/l**CHEM*810953157**

500 ml	1 l	Titer	0,1245 – 0,1255 mol/l

SODIUM HYDROXIDE (carbonate free) STANDARD SOLUTION ($C \leq 0,125 \text{ MOL/L}$)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 0,05 mol/l

CHEM*810953194

100 ml	500 ml	Titer	0,0498 – 0,0502 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,1 mol/l

CHEM*810953193

100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

SODIUM HYDROXIDE STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwory mianowane w etanolu

NaOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, II

UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	3,3% v/v(ethanol)
Colour:	colourless	top:	19% v/v(ethanol)
Odor:	odorless	dynamic viscosity:	1,078 mPa*s (ethanol)
pH:	approx 13,0 (20°C)	Vapour pressure:	60 hPa (ethanol)
Melting point:	-117°C (ethanol)	Density:	no data
Boiling point:	78°C (ethanol)	Solubility:	
Auto-ignition temperature:	425°C (ethanol)	in water:	soluble
Ignition temperature:	12°C (ethanol)	in organic solvents:	soluble
Explosion limits:			

Sodium hydroxide standard solution 0,05 mol/l in ethanol

CHEM* 810953181

250 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1l

Sodium hydroxide standard solution 0,1 mol/l in ethanol

CHEM*810953170

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1l

SODIUM HYDROXIDE 0,1 MOL/L (0,1N) STANDARD SOLUTION IN METHANOL

Sodu wodorotlenek roztwór mianowany 0,1M w etanlu

NaOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 311, 331, 370
P: 210, 233, 280, 302+352, 309, 310
RID/ADR: 3, II UN: 1993



Physical and chemical properties:

Character:	liquid	bottom:	5,5% obas (metanol)
Colour:	colourless	top:	44% obas (metanol)
Odor:	aromatic	Vapour pressure:	128 mbar(20°C) (methanol)
pH:	approx 13,0 (20°C)	Density:	no data
Melting point:	-98°C (methanol)	Solubility:	
Boiling point:	65°C (methanol)	in water:	soluble
Auto-ignition temperature:	455°C (methanol)	in organic solvents:	soluble
Ignition temperature:	11°C (methanol)		
Explosion limits:			

Sodium hydroxide standard solution 0,1 mol/l in methanol
CHEM*810953185

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1 l

SODIUM HYDROXIDE

STANDARD SOLUTION ($0,1 < C \leq 0,5 \text{ mol/L}$)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 0,2 mol/l

CHEM*810953159

500 ml	1 l	Titer	0,1992 – 0,2008 mol/l

Sodium hydroxide standard solution 0,25 mol/l

CHEM*810953161

100 ml	500 ml	Titer	0,249 – 0,251 mol/l
1 l	2,5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,3 mol/l

CHEM* 810953156

100 ml	500 ml	Titer	0,2988 – 0,3012 mol/l
1 l	2,5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,3571 mol/l

CHEM*810953169

1 l	5 l	Titer	0,3557 – 0,3585 mol/l

Sodium hydroxide standard solution 0,4 mol/l**CHEM* 810953184**

100 ml	500 ml	Titer	0,3984 – 0,4016 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,5 mol/l**CHEM*810953162**

100 ml	500 ml	Titer	0,498 – 0,502 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

SODIUM HYDROXIDE (carbonate free) STANDARD SOLUTION (0,1 < C ≤ 0,5 MOL/L)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338, 309, 310
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 0,25 mol/l

CHEM*810953192

100 ml	500 ml	Titer	0,249 – 0,251 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

Sodium hydroxide standard solution 0,5 mol/l

CHEM*810953191

100 ml	500 ml	Titer	0,498 – 0,502 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

SODIUM HYDROXIDE 0,5 MOL/L STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwór mianowany 0,5M w etanolu

NaOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 314

P: 210, 280, 301+330+331, 305+351+338

RID/ADR: 3, II

UN: 2924



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	colourless	bottom:	3,5% obas (ethanol)
Odor:	ethanol	top:	15% obas (ethanol)
pH:	approx 13,0 (20°C)	Vapour pressure:	59 hPa (ethanol)
Melting point:	-114,5°C (ethanol)	Density:	not applicable
Boiling point:	78,3°C (ethanol)	Solubility:	
Auto-ignition temperature:	425°C (ethanol)	in water:	soluble
Ignition temperature:	12°C (ethanol)	in organic solvents:	soluble

sodium hydroxide standard solution 0,5 mol/l in ethanol
CHEM*810953188

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1l

SODIUM HYDROXIDE 0,5 MOL/L STANDARD SOLUTION IN METHANOL

Sodu wodorotlenek roztwór mianowany 0,5M w metanolu

NaOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 311, 314, 331, 370
P: 210, 233, 280, 301+330+331, 302+352,
305+351+338, 309, 310
RID/ADR: 3 (3+6.1+8), II UN: 3286



Physical and chemical properties:

Character:	liquid	bottom:	5,5% obas (methanol)
Colour:	colourless	top:	44% obas (methanol)
Odor:		Vapour pressure:	128 mbar(20°C) (methanol)
pH:	approx 14 (20°C)	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	455°C (methanol)	in organic solvents:	soluble
Ignition temperature:	11°C (methanol)		
Explosion limits:			

Sodium hydroxide standard solution 0,5 mol/l in methanol

CHEM*810953186

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1 l

SODIUM HYDROXIDE

STANDARD SOLUTION ($0,5 < C \leq 1 \text{ MOL/L}$)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,041 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 1 mol/l

CHEM*810953165

100 ml

500 ml

Titer

0,996 – 1,004 mol/l

1 l

2.5 l

3 l

5 l

10 l

SODIUM HYDROXIDE (carbonate free)

ROZTWORY MIANOWANE ($0,5 < C \leq 1 \text{ MOL/L}$)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 314
P: 280, 305+351+338
RID/ADR: 8, III UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	approx 1,041 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 1 mol/l

CHEM*810953190

100 ml	500 ml
1 l	2.5 l
3 l	5 l
10 l	

Titer

0,996 – 1,004 mol/l

SODIUM HYDROXIDE 1 MOL/L (1N) STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwór mianowany w etanolu

NaOH/C₂H₅OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 314
P: 210, 280, 301+330+331, 305+351+338
RID/ADR: 3, II UN: 2924



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	colourless	bottom:	3,3% obj (ethanol)
Odor:	odorless	top:	19% obj (ethanol)
pH:	approx 13,0 (20°C)	Vapour pressure:	60 hPa (ethanol)
Melting point:	-117°C (ethanol)	Density:	no data
Boiling point:	78°C (ethanol)	Solubility:	
Auto-ignition temperature:	425°C (ethanol)	in water:	soluble
Ignition temperature:	12°C (ethanol)	in organic solvents:	soluble

Sodium hydroxide standard solution 1 mol/l in ethanol

CHEM*810953167

250 ml

500 ml

Titer

0,996 – 1,004 mol/l

1 l

SODIUM HYDROXIDE 1 MOL/L (1 N) STANDARD SOLUTION IN METHANOL

Sodu wodorotlenek roztwór mianowany 1M w metanolu

NaOH/CH₃OH

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 301, 311, 314, 331, 370
 P: 210, 233, 280, 301+330+331, 302+352,
 305+351+338, 309, 310
 RID/ADR: 3 (3+6.1+8), II UN: 3286



Physical and chemical properties:

Character:	liquid	bottom:	5,5% obas (methanol)
Colour:	colourless	top:	44% obas (methanol)
Odor:		Vapour pressure:	128 mbar (20°C)
pH:	approx 13,0 (20°C)		(methanol)
Melting point:	no data	Density:	no data
Boiling point:	no data	Solubility:	
Auto-ignition temperature:	455°C (methanol)	in water:	soluble (20°C)
Ignition temperature:	11°C (methanol)	in organic solvents:	soluble
Explosion limits:			

Sodium hydroxide standard solution 1 mol/l in methanol

CHEM*810953187

250 ml

500 ml

Titer

0,996 – 1,004 mol/l

1 l

SODIUM HYDROXIDE STANDARD SOLUTION (C > 1 MOL/L)

Sodu wodorotlenek roztwory mianowane

NaOH

M = 40,00 g/mol

CAS: 1310-73-2

WE: 215-185-5



H: 290, 314
P: 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 8, II UN: 1824



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	> 12,0 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium hydroxide standard solution 2 mol/l CHEM*810953164

250 ml	500ml	Titer	1,992 – 2,008 mol/l
1 l			

Sodium hydroxide standard solution 2,5 mol/l CHEM*810953171

250 ml	500ml	Titer	2,49 – 2,51 mol/l
1 l			

Sodium hydroxide standard solution 3 mol/l CHEM*810953158

250 ml	500ml	Titer	2,988 – 3,012 mol/l
1 l			

Sodium hydroxide standard solution 4 mol/l CHEM*810953173

250 ml	500ml	Titer	3,984 – 4,016 mol/l
1 l			

Sodium hydroxide standard solution 5 mol/l CHEM*810953174

250 ml	500ml	Titer	4,98 – 5,02 mol/l
1 l			

Sodium hydroxide standard solution 6 mol/l CHEM*810953177

250 ml	500ml	Titer	5,976 – 6,024 mol/l
1 l			

Sodium hydroxide standard solution 10 mol/l

CHEM*810953177

250 ml

500ml

Titer

9,96 – 10,04 mol/l

1 l

SODIUM BICARBONATE

Sodu wodorowęglan



M = 84,01 g/mol

CAS: 144-55-8

WE: 205-633-8

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,22 g/cm ³ (w 20°C)
pH:	7,5 – 8,6 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	270°C	Solubility:	
Boiling point:	not applicable	in water:	approx 95,5 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Sodium bicarbonate tech.

CHEM*328105306

15 kg	25 kg	Appearance	white powder
50 kg		Assay	min. 98,0 %
		Substances insoluble in water	max. 0,05 %
		Chlorides (Cl)	max. 0,02 %
		Sulfur (as SO ₄)	max. 0,02 %
		Heavy metals (as Pb)	max. 0,002 %
		Iron (Fe)	max. 0,005 %

Sodium bicarbonate pure

CHEM*428105306

100 g	250 g	Appearance	white powder
500 g	750 g	Assay	99,0 – 101,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,02 %
10 kg	15 kg	pH (5%, 20°C)	8,0 - 8,6
25 kg		Chlorides (Cl)	max. 0,01 %
		Sulfur (as SO ₄)	max. 0,01 %
		Ammonia salts (NH ₄)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Aluminium (Al)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,001 %
		Potassium (K)	max. 0,04 %
		Calcium (Ca)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

Sodium bicarbonate pure p. a.**CHEM*118105307**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	99,5 – 101,0 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	8,0 - 8,6
15 kg	20 kg	Chlorides (Cl)	max. 0,01 %
25 kg		Sulfur (as SO ₄)	max. 0,005 %
		Phosphates (PO ₄)	max. 0,002 %
		Ammonia salts (NH ₄)	max. 0,001 %
		Substancje redukujące jod (as HCOOH)	max. 0,005 %
		Arsenic (As)	max. 0,0002 %
		Heavy metals (as Pb)	max. 0,0005 %
		Magnesium (Mg)	max. 0,005 %
		Potassium (K)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SODIUM BICARBONATE SOLUTION

Sodu wodorowęglan roztwory



M = 84,01 g/mol

CAS: 144-55-8

WE: 205-633-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	7,5 – 8,6 (50 g/l, H ₂ O)	Density:	1,0022 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Sodium bicarbonate solution 0,5% pure

CHEM*428105307

1 l	Assay	0,5 % ± 0,01 %
	Chlorides (Cl)	max. 0,01 %
	Sulfur (as SO ₄)	max. 0,01 %
	Heavy metals (as Pb)	max. 0,001 %
	Iron (Fe)	max. 0,002 %

Sodium bicarbonate solution 0,5% pure p. a.

CHEM*118105308

1 l	Assay	0,5 % ± 0,01 %
	Chlorides (Cl)	max. 0,01 %
	Sulfur (as SO ₄)	max. 0,005 %
	Heavy metals (as Pb)	max. 0,0005 %
	Iron (Fe)	max. 0,001 %

SILVER NITRATE

Srebra azotan



M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9



H: 272, 314, 410

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 5.1, II

UN: 1493



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless - white	Vapour pressure:	not applicable
Odor:	odorless	Density:	4,35 g/cm ³ (20°C)
pH:	5,4 - 6,4 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 2350 kg/m ³
Melting point:	212°C	Solubility:	
Boiling point:	444°C	in water:	2150 g/l (20°C)
Auto-ignition temperature:	not applicable	in other solutions:	acetone ~4g/l, alcohol ~33g/l
Ignition temperature:	not applicable		

Silver nitrate pure

CHEM*428143219

25 g	50 g	Appearance	colourless crystals or white powder
100 g	250 g	Assay	min. 99,9 %
500 g	750 g	Moisture	max. 0,06 %
1 kg		Substances insoluble in water	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulfates (SO ₄)	max. 0,005 %
		Lead, copper, zinc (Pb+Cu+Zn)	max. 0,002 %
		Iron (Fe)	max. 0,0005 %

Silver nitrate pure p. a.

CHEM*118143221

10 g	25 g	Appearance	colourless crystals or white powder
50 g	100 g	Assay	min. 99,9 %
250 g	500 g	Moisture	max. 0,06 %
750 g	1 kg	Substances insoluble in water	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,01 %
		Lead, copper, zinc (Pb+Cu+Zn)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SILVER NITRATE ANALYTICAL WEIGHED AMOUNT

Srebra azotan odważka analityczna

AgNO₃

M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9



H: 272, 314, 410
P: 273, 280, 301+330+331, 305+351+338, 309, 310
RID/ADR: 5.1, II UN: 1493



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless -white	Vapour pressure:	not applicable
Odor:	odorless	Density:	4,35 g/cm ³ (20°C)
pH:	5,4 - 6,4 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 2350 kg/m ³
Melting point:	212°C	Solubility:	
Boiling point:	444°C	in water:	2150 g/l (20°C)
Auto-ignition temperature:	not applicable	in other solutions:	acetone ~4g/l, alcohol ~33g/l
Ignition temperature:	not applicable		

Silver nitrate 0,01 mol/l analytical weighed amount

CHEM*168143408

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,01 mol/l ± 0,2 %

Silver nitrate 0,02 mol/l analytical weighed amount

CHEM*168143409

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,02 mol/l ± 0,2 %

Silver nitrate 0,1 mol/l analytical weighed amount

CHEM*168143407

1 szt.

10 szt.

Concentration after dilution to 1000 ml at 20°C

0,1 mol/l ± 0,2 %

SILVER NITRATE SOLUTION 10%

Srebra azotan roztwór 10%



M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9



H: 272, 314, 410

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1760



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,4 - 6,4 (20°C)	Density:	1,0882 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Silver nitrate solution 10%

CHEM* 527941203

100 ml	250 ml
500 ml	1 l

Assay

10,0 +/- 0,5 %

Density (20°C)

approx 1,0882 g/cm³

SILVER NITRATE STANDARD SOLUTION (C < 0,015 MOL/L)

Srebra azotan roztwory mianowane

AgNO₃

M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,4 - 6,4 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Silver nitrate standard solution 0,001 mol/l

CHEM*804340160

250 ml	500 ml	Titer	0,000996 – 0,001004 mol/l
1 l			

Silver nitrate standard solution 0,01 mol/l

CHEM*804340160

250 ml	500 ml	Titer	0,00996 – 0,01004 mol/l
1 l	2.5 l		
3 l	5 l		

Sodium chloride standard solution 0,0125 mol/l

CHEM*804340164

100 ml	500 ml	Titer	0,01245 – 0,01255 mol/l
1 l	2.5 l		
3 l	5 l		

SILVER NITRATE STANDARD SOLUTION ($0,015 \leq C \leq 0,15 \text{ MOL/L}$)

Srebro azotan roztwory mianowane

AgNO₃

M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9

H: 412

P: 273

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,4 - 6,4 (20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Silver nitrate standard solution 0,02 mol/l

CHEM*804340163

500 ml	1 l	Titer	0,01992 – 0,02008 mol/l
2,5 l	3 l		
5 l			

Silver nitrate standard solution 0,025 mol/l

CHEM*804340168

500 ml	1 l	Titer	0,0249 – 0,0251 mol/l
2,5 l	3 l		
5 l			

Sodium chloride standard solution 0,05 mol/l

CHEM*804340166

500 ml	1 l	Titer	0,0498 – 0,0502 mol/l
2,5 l	3 l		
5 l			

Silver nitrate standard solution 0,1 mol/l

CHEM*804340162

100 ml	500 ml	Titer	0,0996 – 0,1004 mol/l
1 l	2,5 l		
3 l	5 l		

SILVER NITRATE STANDARD SOLUTION (0,3 < C < 0,6 MOL/L)

Srebro azotan roztwory mianowane

AgNO₃

M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9



H: 315, 319, 411
P: 273, 280, 302+352, 305+351+338
RID/ADR: 8, II UN: 1760



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,4 - 6,4 (20°C)	Density:	1,068 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Silver nitrate standard solution 0,5 mol/l

CHEM*804340167

100 ml	500 ml
1 l	2.5 l
3 l	5 l

Titer

0,498 – 0,502 mol/l

SILVER NITRATE STANDARD SOLUTION ($0,6 \leq C < 1,5$ MOL/L)

Srebro azotan roztwory mianowane

AgNO₃

M = 169,87 g/mol

CAS: 7761-88-8

WE: 231-853-9



H: 272, 314, 410

P: 273, 280, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8, II

UN: 1760



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odor:	odorless	Vapour pressure:	no data
pH:	5,4 - 6,4 (20°C)	Density:	approx 1,138 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Silver nitrate standard solution 1 mol/l

CHEM*804340165

100 ml	500 ml
1 l	2.5 l
3 l	5 l

Titer

0,996 – 1,004 mol/l

SILVER NITRITE*Srebro azotyn*

M = 153,87 g/mol

CAS: 7783-99-5

WE: 232-041-7



H: 271, 302, 315, 319, 410
 P: 210, 280, 305+351+338, 309, 310
 RID/ADR: 5.1, II UN: 2627

**Physical and chemical properties:**

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odor:	odorless	Density:	4,45 g/cm ³ (w 20°C)
pH:	no data	Bulk density:	no data
Melting point:	140°C	Solubility:	
Boiling point:	not applicable	in water:	3,3 g/l
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Silver nitrite pure**CHEM* 428144222**

10 g	25 g	Appearance	yellow crystals or powder
50 g	75 g	Assay	min. 99,0 %
100 g	250 g	Substances insoluble in HNO ₃	max. 0,02 %
500 g	1 kg	Sulfates (SO ₄)	max. 0,004 %
		Zinc (Zn)	max. 0,01 %
		Copper (Cu)	max. 0,01 %
		Lead (Pb)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

Silver nitrite pure p. a.**CHEM* 118144222**

10 g	25 g	Appearance	yellow crystals or powder
50 g	75 g	Assay	min. 99,8 %
100 g	250 g	Substances insoluble in HNO ₃	max. 0,01 %
500 g	1 kg	Sulfates (SO ₄)	max. 0,002 %
		Zinc (Zn)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,001 %

SILVER CHLORIDE

Srebro chlorek

AgCl

M = 143,32 g/mol

CAS: 7783-90-6

WE: 232-033-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	1 mmHg (912°C)
Odor:	odorless	Density:	5,56 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	455°C	Solubility:	
Boiling point:	approx 1550°C	in water:	1,93 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Silver chloride pure

CHEM*428146211

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Moisture	max. 0,9 %
1 kg		Substances insoluble in water	max. 0,02 %

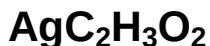
Silver chloride pure p. a.

CHEM*118146224

25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Moisture	max. 0,4 %
1 kg		Substances insoluble in water	max. 0,01 %
		Sulfates (SO ₄)	max. 0,002 %

SILVER ACETATE

Srebro octan



M = 166,92 g/mol

CAS: 563-63-3

WE: 209-254-9



H: 315, 318, 335, 400

P: 273, 280, 302+352, 304+340, 305+351+338, 313, 321

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	beige	Vapour pressure:	no data
Odor:	odorless	Density:	3,259 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	200°C	Solubility:	
Boiling point:	not applicable	in water:	10,2 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _(OW) :	-0,17

Silver acetate pure

CHEM*428157811

25 g	50 g	Appearance	white crystals or powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in HNO ₃	max. 0,05 %
1 kg		Total nitrogen (N)	max. 0,01 %

Silver acetate pure p. a.

CHEM*118157824

25 g	50 g	Assay	min. 99,5%
100 g	250 g	Sulfates (SO ₄)	max. 0,05%
500 g	750 g	Zinc (Zn)	max. 0,005 %
1 kg		Cadmium (Cd)	max. 0,005 %
		Cobalt (Co)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

SILVER SULFATE

Srebro siarczan



M = 311,79 g/mol

CAS: 10294-26-5

WE: 233-653-7



H: 318

P: 260, 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	5,45 g/cm ³ (20°C)
pH:	5 - 6 (5 g/l H ₂ O, 25°C)	Bulk density:	approx 1200 kg/m ³
Melting point:	655°C	Solubility:	
Boiling point:	1085°C/760 mmHg	in water:	8g/l (25°C); 15g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in methanol
Ignition temperature:	not applicable		

Silver sulfate pure

CHEM*428159610

25 g	50 g	Appearance	white crystals or white powder
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Nitrates (NO ₃)	max. 0,05 %
1 kg		Chlorides (Cl)	max. 0,002 %
		Lead, copper, zinc (Pb+Cu+Zn)	max. 0,01 %
		Iron (Fe)	max. 0,002 %

Silver sulfate pure p. a.

CHEM*118159622

25 g	50 g	Appearance	white crystals or white powder
100 g	250 g	Assay	min. 99,8 %
500 g	750 g	Azotany (NO ₃)	max. 0,005 %
1 kg		Chlorides (Cl)	max. 0,001 %
		Lead, copper, zinc (Pb+Cu+Zn)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

SILVER CARBONATE

Srebra węglan



M = 275.75 g/mol

CAS: 534-16-7

WE: 208-590-3



H: 318

P: 260, 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid (powder)	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odor:	odorless	Density:	6,1 g/cm ³ (20°C)
pH:	9,9 (200 g/l H ₂ O, 25°C)	Bulk density:	approx 830 kg/m ³
Melting point:	approx 220°C	Solubility:	
Boiling point:	not applicable	in water:	0,032 g/l (20°C), 0,59 g/l (100°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Silver carbonate pure

CHEM*428162329

25 g	50 g	Appearance	yellow powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in HNO ₃	max. 0,05 %
1 kg		Nitrogen (as NO ₃)	max. 0,05 %
		Sodium (Na)	max. 0,1 %

Silver carbonate pure p. a.

CHEM*118162329

25 g	50 g	Appearance	yellow powder
100 g	250 g	Assay	min. 99,5 %
500 g	750 g	Substances insoluble in HNO ₃	max. 0,01 %
1 kg		Nitrogen (as NO ₃)	max. 0,05 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,005 %
		Sodium (Na)	max. 0,03 %

STRONTIUM NITRATE

Strontium nitrate



M = 211,63 g/mol

CAS: 10042-76-9

WE: 233-131-9



H: 272

P: 210

RID/ADR: 5.1, III

UN: 1507



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	2,986 g/cm ³ (w 20°C)
pH:	5,0 – 7,0 (50 g/l H ₂ O, 25°C)	Bulk density:	approx 1000 kg/m ³
Melting point:	approx 570°C	Solubility:	
Boiling point:	approx 645°C	in water:	660g/l (18°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Strontium nitrate pure

CHEM*428188009

50 g	100 g	Appearance	white crystals
250 g	500 g	Assay	min. 99,0 %
1 kg		Loss on drying(105 ± 5°C)	max. 0,1 %
		Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	5,0 – 7,0
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,2 %
		Heavy metals (as Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,05 %
		Iron (Fe)	max. 0,0002 %

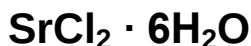
Strontium nitrate pure p. a.

CHEM*118188000

50 g	100 g	Appearance	white crystals
250 g	500 g	Assay	min. 99,0 %
1 kg		Loss on drying(105 ± 5°C)	max. 0,1 %
		Substances insoluble in water	max. 0,01 %
		pH (5%, 20°C)	5,0 – 7,0
		Chlorides (Cl)	max. 0,001 %
		Sulfates (SO ₄)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,0005 %
		Barium (Ba)	max. 0,05 %
		Magnesium (Mg)	max. 0,005 %
		Copper (Cu)	max. 0,0002 %
		Potassium (K)	max. 0,01 %
		Sód (Na)	max. 0,1 %
		Iron (Fe)	max. 0,0002 %

STRONTIUM CHLORIDE HEXAHYDRATE

Strontu chlorek 6 hydrat



M = 266,62 g/mol

CAS: 10025-70-4

WE: 233-971-6



H: 302

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,95 g/cm ³ (20°C)
pH:	approx 5 - 7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 1050 kg/m ³
Melting point:	approx 61°C	Solubility:	
Boiling point:	no data	in water:	1062 g/l (0°C), 2058 g/l (40°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Strontium chloride hexahydrate pure

CHEM* 428189000

10 g	25 g	Assay	min. 98,0%
50 g	75 g	Nitrates (NO ₃)	max. 0,003 %
100 g	250 g	Sulfates (SO ₄)	max. 0,002 %
500 g	1 kg	Barium (Ba)	max. 0,2 %
		Sodium (Na)	max. 0,02 %
		Calcium (Ca)	max. 0,1 %

Strontium chloride hexahydrate pure p. a.

CHEM* 118189000

10 g	25 g	Assay	min. 99,0%
50 g	75 g	pH (5%, 20°C)	5 - 7
100 g	250 g	Nitrates (NO ₃)	max. 0,002 %
500 g	1 kg	Sulfates (SO ₄)	max. 0,001 %
		Barium(Ba)	max. 0,1 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,05 %

STRONTIUM SULFATE

Strontu siarczan



M = 183,68 g/mol

CAS: 7759-02-6

WE: 231-850-2

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	3,96 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	1605°C	Solubility:	
Boiling point:	no data	in water:	0,0132 g/l (20°C), 0,0113 g/l (95°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Strontium sulfate pure

CHEM* 428194706

10 g	25 g	Assay	min. 98,0 %
50 g	75 g	Chlorides (Cl)	max. 0,005 %
100 g	250 g	Copper (Cu)	max. 0,005 %
500 g	1 kg	Lead (Pb)	max. 0,005 %
		Iron (Fe)	max. 0,005 %

Strontium sulfate pure p. a.

CHEM* 118194706

10 g	25 g	Assay	min. 98,5 %
50 g	75 g	Chlorides (Cl)	max. 0,003 %
100 g	250 g	Copper (Cu)	max. 0,003 %
500 g	1 kg	Lead (Pb)	max. 0,003 %
		Iron (Fe)	max. 0,003 %

STRONTIUM CARBONATE

Strontu węglan



M = 147,63 g/mol

CAS: 1633-05-2

WE: 216-643-7

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	3,7 g/cm ³ (25°C)
pH:	7-8 (0,01 g/l H ₂ O, 20°C)	Bulk density:	approx 750 kg/m ³
Melting point:	1100°C	Solubility:	
Boiling point:	no data	in water:	0,01 g/l (20°C)
Auto-ignition temperature:	no data	in other solutions:	
Ignition temperature:	no data		

Strontium carbonate pure

CHEM*428197108

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Moisture	max. 0,5 %
750 g	1 kg	Substances insoluble in HCl	max. 0,05 %
		Chlorides (Cl)	max. 0,05 %
		Iron (Fe)	max. 0,005 %
		Heavy metals (as Pb)	max. 0,05 %
		Calcium (CaCO ₃)	max. 0,5 %

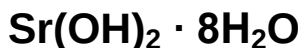
Strontium carbonate pure p. a.

CHEM*118197109

50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Moisture	max. 0,2 %
750 g	1 kg	Substances insoluble in HCl	max. 0,02 %
		Chlorides (Cl)	max. 0,01 %
		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,01 %
		Calcium (CaCO ₃)	max. 0,3 %

STRONTIUM HYDROXIDE OCTAHYDRATE

Strontu wodorotlenek 8 hydrat



M = 265,76 g/mol

CAS: 1311-10-0

WE: 242-367-1



H: 314

P: 280, 305+351+338

RID/ADR: 8, II

UN: 3262

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odor:	odorless	Density:	1,91 g/cm ³ (20°C)
pH:	12,0 – 13,0 (10 g/l H ₂ O, 20°C)	Bulk density:	no data
Melting point:	100°C	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Strontium hydroxide octahydrate pure

CHEM*428197902

100 g	250 g	Assay	min. 98,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,02 %
		Chlorides (Cl)	max. 0,01 %
		Sulfates (SO ₄)	max. 0,03 %
		Iron (Fe)	max. 0,002 %
		Heavy metals (as Pb)	max. 0,002 %
		Calcium (Ca)	max. 0,15 %
		Barium (Ba)	max. 0,15 %

Strontium hydroxide octahydrate pure p. a.

CHEM*118197901

100 g	250 g	Assay	min. 99,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,01 %
		Chlorides (Cl)	max. 0,005 %
		Sulfates (SO ₄)	max. 0,02 %
		Iron (Fe)	max. 0,001 %
		Heavy metals (as Pb)	max. 0,001 %
		Calcium (Ca)	max. 0,1 %
		Barium (Ba)	max. 0,1 %

SODIUM TRISILICATE (WATER GLASS)

Szkło wodne sodowe



M = not applicable

CAS: 1344-09-8

WE: 215-687-4



H: 315, 318, 335

P: 280, 302+352, 304+340, 305+351+338, 313, 321

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	not applicable
Odor:	odorless	Viscosity:	1,0 – 30 P (20°C)
pH:	11,5 – 13,0	Density:	1,45 – 1,48 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	110°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble
Ignition temperature:	not applicable		

Sodium trisilicate

CHEM*428246010

1 l	2.5 l	Molar fraction SiO ₂ / Na ₂ O	2,4 – 2,6
3 l	5 l	SiO ₂ + Na ₂ O	min. 39,0%
10 l	20 l	Density (20°C)	1,45 – 1,48 g/cm ³
30 l		Fe ₂ O ₃	max. 0,01 %
		CaO	max. 0,1 %
		Viscosity (20°C)	min. 1,0 P
		Substances insoluble in water:	
		- in filtrated water glass	max. 0,02 %
		- in sedimentation water glass	max. 0,1 %

TETRACHLOROETHYLENE

Tetrachloroetylen



M = 119,38 g/mol

CAS: 127-18-4

WE: 204-825-9



H: 351, 411

P: 273, 281, 308+313

RID/ADR: 6.1, III

UN: 1897



Physical and chemical properties:

Character:	liquid	Viscosity (20°C):	8,8 mPa·s
Colour:	colourless	Vapour pressure:	18,7 mbar (20°C)
Odour:	characteristic	Density:	1,62 g/cm ³ (20°C)
Melting point:	-23°C	Solubility:	
Boiling point:	121°C	in water:	0,15 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	soluble
Ignition temperature:	not applicable	log Po/w:	2,6
Explosion limits:	not applicable		

Tetrachloroethylene pure

CHEM*412759209

500 ml	1 l	Assay (GC)	min. 98,0 %
2.5 l	3 l	Water (KF)	max. 0,01 %
		Non-volatile substances	max. 0,002 %
5 l	10 l	Free acids(as HCl)	max. 0,002 %
20 l	30 l	Free bases (as NH ₃)	max. 0,003 %
60 l		Appearance	colourless, clear liquid

Tetrachloroethylene pure p.a.

CHEM*112759209

100 ml	250 ml	Assay (GC)	min. 99,5 %
500 ml	1 l	Water (KF)	max. 0,01 %
		Non-volatile substances	max. 0,001 %
2.5 l	3 l	Free acids(as HCl)	max. 0,001 %
5 l	10 l	Free bases (as NH ₃)	max. 0,002 %
20 l	30 l	Appearance	colourless, clear liquid
60 l			

Tetrachloroethylene sp.pure**CHEM*102480615**

1 l	2.5 l	Assay (GC)	min. 99,9 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Non-volatile substances	max. 0,0005 %
		UV - transmission (1cm, water):	
		290 nm	min. 15 %
		295 nm	min. 60 %
		310 nm	min. 85 %
		350 nm	min. 89 %
		400 nm	min. 95 %

TETRAHYDROFURAN

Tetrahydrofuran

C₄H₈O

M = 72,11 g/mol

CAS: 109-99-9

WE: 203-726-8



H: 225, 319, 335, EUH019
P: 210, 233, 243, 305+351+338
RID/ADR: 3, II UN: 2056



Physical and chemical properties:

Character:	liquid	top:	12% V/V
Colour:	colourless	Viscosity w (20°C):	0,486 mPa·s
Odour:	etheric	Vapour pressure:	200 mbar (20°C)
Melting point:	-108,5°C	Density:	0,889 g/cm ³ (20°C)
Boiling point:	65,5°C	Solubility:	
Auto-ignition temperature:	230°C	in water:	soluble
Ignition temperature:	-21,5°C	in organic solvents:	soluble in alcohols
Explosion limits:		log P _(OW) :	0,47
low:	1,5% V/V		

tetrahydrofuran pure

CHEM*422782003

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (GC)	min. 98,5 %
2.5 l	3 l	Density (20°C)	0,887 – 0,9 g/cm ³
5 l	10 l	Water	max. 0,1 %
20 l	30 l	Acids (as CH ₃ COOH)	max. 0,005 %
60 l	200 l	Peroxides (as H ₂ O ₂)	max. 0,04 %
		Residue on evaporation	max. 0,008 %

tetrahydrofuran pure p.a.

CHEM*112782000

50 ml	100 ml	Appearance	colourless, clear liquid
250 ml	500 ml	Assay (GC)	min. 99,5 %
1 l	2.5 l	Colour	max. 20 Hazen
3 l	5 l	Density (20°C)	0,887 - 0,89 g/cm ³
10 l	20 l	Water	max. 0,05 %
30 l	60 l	Acids (as CH ₃ COOH)	max. 0,003 %
		Peroxides (as H ₂ O ₂)	max. 0,015 %
		Residue on evaporation	max. 0,005 %

tetrahydrofuran HPLC**CHEM*612782000**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		240 nm	min. 70 %
		250 nm	min. 80 %
		260 nm	min. 90 %
		270 nm	min. 98 %
		280 nm	min. 99 %
		Fluorescence (as quinine):	
		254 nm	max. 1 ppb
		365 nm	max. 1 ppb

THIOACETAMIDE

Tioacetamid



M = 75,13 g/mol

CAS: 62-55-5

WE: 200-541-4



H: 302, 315, 319, 412

P: 201, 273, 302+352, 305+351+338, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Ciśnienie par:	no data
Odour:	characteristic	Density:	1,37 g/cm ³ (20°C)
pH:	about 5,2 (100 g/l H ₂ O, 20°C)	Bulk density:	about 600 kg/m ³
Melting point:	113 - 114°C	Solubility:	
Boiling point:	no data	in water:	163 g/l (25°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol - 264 g/l (20°C)
Ignition temperature:	no data		

thioacetamide ind.

CHEM* 118326207

5 g	10 g	Appearance	white or yellow crystals
25 g	50 g	Assay	min 99,0 %
75 g	100 g	Melting point	110 – 113 °C
250 g	500 g	Residue on roasting (as SO ₄)	max. 0,05 %
		Heavy metals(as Pb)	max. 0,001 %
		Iron (Fe)	max. 0,0005 %

THIOUREA

Tiomocznik



M = 76,11 g/mol

CAS: 62-56-6

WE: 200-543-5



H: 302, 351, 361d, 411
P: 273, 281, 308+313
RID/ADR: 9, III

UN: 3077



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	white	Vapour pressure:	<0,0001 mbar (20°C)
Odour:	odourless	Density:	1,41 g/cm ³ (20°C)
pH:	5,0 – 7,0 (50 g/l H ₂ O, 20°C)	Bulk density:	about 640 kg/m ³
Melting point:	174 - 177°C	Solubility:	
Boiling point:	no data	in water:	136 g/l (20°C)
Auto-ignition temperature:	440°C	in organic solvents:	ethanol - 37 g/l (20°C)
Ignition temperature:	no data	log P _(OW) :	-0,92

thiourea pure

CHEM*428345700

50 g	100 g	Appearance	colourless crystals or white crystalline powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Melting point	174 - 176 °C
2 kg	5 kg	Substances insoluble in water	max. 0,02 %
10 kg	13 kg	Residue on roasting (as SO ₄)	max. 0,1 %
15 kg	17 kg		
20 kg	25 kg		

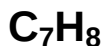
thiourea pure p.a.

CHEM*118345701

50 g	100 g	Appearance	colourless crystals or white crystalline powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Melting point	174 - 176 °C
5 kg	10 kg	Substances insoluble in water	max. 0,01 %
15 kg	25 kg	Residue on roasting (as SO ₄)	max. 0,1 %
		Se sensitivity	passes test

TOLUENE

Toluen



M = 92,14 g/mol

CAS: 108-88-3

WE: 203-625-9



H: 225, 304, 315, 336, 361d, 373
P: 210, 301+310, 302+352, 331
RID/ADR: 3, II UN: 1294



Physical and chemical properties:

Character:	liquid	top:	7,0% V/V
Colour:	colourless	Viscosity (20°C):	0,5866 mPa·s
Odour:	characteristic	Vapour pressure:	29 mbar (20°C)
Melting point:	-95°C	Density:	0,87 g/cm ³ (20°C)
Boiling point:	111°C	Solubility:	
Auto-ignition temperature:	480°C	in water:	0,5 g/l (20°C)
Ignition temperature:	4°C	in organic solvents:	acetone, glacial acetic acid, chloroform, ethanol
Explosion limits:		log P _(OW) :	2,65
low:	1,2% V/V		

toluene purified

CHEM*328370405

2.5 l	3 l	Appearance	colourless, clear liquid
5 l	10 l	Assay (GC)	min. 98,0 %
20 l	30 l	Water (KF)	max. 0,25 %
60 l	200 l	Lead (Pb)	max. 0,01 %
		Iron (Fe)	max. 0,01 %

toluene pure

CHEM*428370405

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay (GC)	min. 99,5 %
3 l	5 l	Water	max. 0,05 %
10 l	20 l	Reaction of water extract	neutral
30 l	60 l	Residue on evaporation	max. 0,002 %
200 l		Thiotoluene	brak
		Total sulphur (S)	max. 0,001 %

toluene pure p.a.**CHEM*118370406**

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay (GC)	min. 99,5 %
2.5 l	3 l	Water	max. 0,03 %
5 l	10 l	Reaction of water extract	neutral
20 l	30 l	Residue on evaporation	max. 0,001 %
60 l	200 l	Thiotoluene	brak
		Total sulphur (S)	max. 0,0005 %
		Zinc (Zn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00005 %
		Magnesium (Mg)	max. 0,00005 %
		Manganese (Mn)	max. 0,00001 %
		Copper (Cu)	max. 0,00001 %
		Nickel (Ni)	max. 0,00001 %
		Lead (Pb)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

toluene HPLC**CHEM*618370406**

1 l	2.5 l	Assay (GC)	min. 99,8 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		290 nm	min. 50 %
		300 nm	min. 80 %
		310 nm	min. 90 %
		330 nm	min. 98 %
		350 nm	min. 99 %
		Fluorescence (as quinine):	
		365 nm	max. 2 ppb

toluene GC for pesticides residue analysis**CHEM* 618370408**

500 ml	1 l	Assay (GC)	min. 99,8 %
2.5 l		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

toluene GC**CHEM*618370409**

1 l	2.5 l	Residue on evaporation	max. 3 mg/l
		Water	max. 0,03 %
		Colour	max. 10 Hazen
		GC/ECD (retention range 1,2,4-trichlorobenzene to decachlorobiphenyle individual signals (lindane)	max. 3

toluene GC standard

CHEM*618370407

25 ml

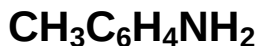
50 ml

Assay

min 99,9 %

75 ml

100 ml

p-TOLUIDINE*p-Toluidyna*

M = 107,15 g/mol

CAS: 106-49-0

WE: 203-403-1



H: 301, 311, 317, 319, 331, 351, 400

P: 210, 273, 280, 302+352, 305+351+338, 309 +310

RID/ADR: 6.1, II

UN: 1708

**Physical and chemical properties:**

Character:	solid	Explosion limits:	no data
Colour:	white	Ciśnienie par:	1,3 hPa (43°C)
Odour:	characteristic	Density:	1,05 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	43°C	Solubility:	
Boiling point:	200°C	in water:	7,5 g/l (20°C)
Auto-ignition temperature:	482°C	in organic solvents:	alcohol, ether
Ignition temperature:	87°C		

p-toluidine pure**CHEM*428376604**

10 g	25 g	Assay	min. 98,0 %
50 g	100 g	Melting point	41 – 46°C
250 g			

p-toluidine pure p.a.**CHEM*118376604**

10 g	25 g	Appearance	brown flakes
50 g	100 g	Assay (GC)	min 98,5 %
		Melting point	41 – 46 °C
250 g		Water	max. 0,3 %
		o-Toluidine + m-Toluidine (GC)	max. 1 %

TRICHLOROETHYLENE

Trichloroethylen



M = 131,39 g/mol

CAS: 79-01-6

WE: 201-167-4



H: 315, 319, 336, 341, 350, 412
P: 201, 273, 302+352, 305+351+338, 308+313
RID/ADR: 6.1, III UN: 1710



Physical and chemical properties:

Character:	liquid	Viscosity (20°C):	0,58 mPa·s
Colour:	colourless	Vapour pressure:	77 mbar (20°C)
Odour:	sweet	Density:	about 1,46 g/cm ³ (20°C)
Melting point:	-86°C	Solubility:	
Boiling point:	87°C	in water:	about 0,4 g/l (20°C)
Auto-ignition temperature:	420°C	in organic solvents:	ethanol, diethyl ether, chloroform, benzene, benzene
Ignition temperature:	32°C		
Explosion limits:			
low:	8 % V/V	log P _(OW) :	2,42
top:	10,5 % V/V		

trichloroethylene pure

CHEM*418469101

250 ml	500 ml	Appearance	colourless, clear liquid
1 l	2.5 l	Assay	min. 99,0 %
3 l	5 l	Water	max. 0,1 %
10 l	20 l	Acids	max. 0,0005 meq/g
30 l	60 l	Bases	max. 0,001 meq/g
200 l		Etanol (GC)	max. 0,5 %
		Residue on evaporation	max. 0,005 %
		Tetrachloroethylene (C ₂ Cl ₄)	max. 0,1 %
		Chlorides (Cl)	max. 0,001 %
		Copper (Cu)	max. 0,00002 %
		Nickel (Ni)	max. 0,00002 %
		Lead (Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

trichloroethylene pure p.a.**CHEM*118469108**

100 ml	250 ml	Appearance	colourless, clear liquid
500 ml	1 l	Assay	min. 99,5 %
2.5 l	3 l	Colour	max. 10 Hazen
5 l	10 l	Water	max. 0,02 %
20 l	30 l	Acids	max. 0,0001 meq/g
60 l	200 l	Bases	max. 0,0003 meq/g
		Etanol	max. 0,5 %
		Residue on evaporation	max. 0,001 %
		Tetrachloroethylene (C ₂ Cl ₄)	max. 0,05 %
		Free chlorine(Cl ₂)	passes test
		Chlorides (Cl)	max. 0,0004 %
		Heavy metals (as Pb)	max. 0,0001 %
		Chromium (Cr)	max. 0,000002 %
		Zinc (Zn)	max. 0,00001 %
		Cadmium (Cd)	max. 0,000005 %
		Cobalt (Co)	max. 0,000002 %
		Magnesium (Mg)	max. 0,00001 %
		Manganese (Mn)	max. 0,000002 %
		Copper (Cu)	max. 0,000002 %
		Nickel (Ni)	max. 0,000002 %
		Lead (Pb)	max. 0,00001 %
		Calcium (Ca)	max. 0,00005 %
		Iron (Fe)	max. 0,00001 %

trichloroethylene HPLC**CHEM*618469108**

1 l	2.5 l	Assay	min. 99,8 %
		Water (KF)	max. 0,01 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %
		UV - transmission (1cm, water):	
		280 nm	min. 50 %
		300 nm	min. 70 %
		320 nm	min. 80 %
		350 nm	min. 85 %
		400 nm	min. 98 %

TRIETHANOLOAMINE

Trietanolamina



M = 149,19 g/mol

CAS: 102-71-6

WE: 203-049-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	low:	3,6%V/V
Colour:	colourless to yellow	top:	7,2%V/V
Odour:	ammonia	Dynamic viscosity:	600 mPa*s (25°C)
pH:	10,5 (15 g/l, H ₂ O, 20°C)	Vapour pressure:	0,00005 hPa (40°C)
Melting point:	20-22°C	Density:	1,12-1,13 g/cm ³ (20°C)
Boiling point:	360°C/760 mmHg	Solubility:	
Auto-ignition temperature:	325°C	in water:	soluble
Ignition temperature:	190°C	in organic solvents:	methanol, acetone,
Explosion limits:		log P _(OW) :	-2,3

triethanolamine pure

CHEM*428484302

250 ml	500 ml	Appearance	colourless liquid darkens in the air
1 l	2.5 l	Assay	min. 98,0 %
3 l	5 l	Density (20°C)	1,12 - 1,13 g/ml
10 l	20 l	Refractive index (20°C)	1,481 - 1,486
		Water	max. 0,15 %
		Residue on roasting (as SO ₄)	max. 0,1 %

triethanolamine pure p.a.

CHEM*118484303

50 ml	100 ml	Appearance	colourless liquid darkened on the air
250 ml	500 ml	Assay	min. 99,0 %
1 l	2.5 l	Density (20°C)	1,123 - 1,128 g/ml
3 l	5 l	Refractive index (20°C)	1,482 - 1,485
10 l	20 l	Water	max. 0,1 %
30 l		Residue on roasting (as SO ₄)	max. 0,05 %
		Chlorides (Cl)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,0001 %
		Iron (Fe)	max. 0,0001 %

TRIETHYLAMINE

Trietylomina

C₆H₁₅N

M = 101,19 g/mol

CAS: 121-44-8

WE: 204-469-4



H: 225, 302, 312, 314, 332, 335
P: 210, 280, 301+330+331, 302+352,
305+351+338, 309, 310
RID/ADR: 3 (8), II UN: 1296



Physical and chemical properties:

Character:	liquid	top:	9,3% V/V
Colour:	colourless	Viscosity (20°C):	0,36 mPa·s
Odour:	characteristic	Vapour pressure:	71,98 hPa (20°C)
Melting point:	-115°C	Density:	0,73 g/cm ³ (20°C)
Boiling point:	88-90°C	Solubility:	
Auto-ignition temperature:	215°C	in water:	133 g/l (20°C)
Ignition temperature:	-11°C	in organic solvents:	soluble
Explosion limits:		log P _(OW) :	1,45
low:	1,2% V/V		

triethylamine pure

CHEM*428489307

100 ml	250 ml	Assay	min. 98,0 %
500 ml	1 l	Density (20°C)	0,725 - 0,729 g/ml
		Water	max. 0,2 %
2,5 l	3 l		
5 l	10 l		
20 l	30 l		

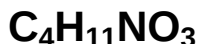
triethylamine pure p.a.

CHEM*118489308

100 ml	250 ml	Assay	min. 99,0 %
500 ml	1 l	Density (20°C)	0,725 - 0,729 g/ml
		Water	max. 0,1 %
2,5 l	3 l	Residue on roasting (as SO ₄)	max. 0,01 %
5 l	10 l		

TRIS(HYDROXYMETHYL)AMINOMETHANE

Tris(hydroxymetylo)aminometan



M = 121,14 g/mol

CAS: 77-86-1

WE: 201-064-4



H: 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Density:	1,353 g/cm ³
Colour:	colourless	Bulk density:	about 840 kg/m ³
Odour:	odourless	Solubility:	
pH:	7,2 – 9,0	in water:	800 g/l
Melting point:	170 - 173°C	in organic solvents:	methanol:
Boiling point:	219 - 220°C (10 mm Hg)		26mg/ml, acetone
Auto-ignition temperature:	no data		14.6mg/ml, ethyl
Ignition temperature:	>93,9°C		acetate: 0.5 mg/ml,
Explosion limits:	no data		cyclohexane: 0.1 mg/ml,
Vapour pressure:	no data	log P _(OW) :	chloroform: 0.05 mg/ml,
			-1,56 (Lit.)

Tris(hydroxymethyl)aminomethane pure p.a.

CHEM*118534707

10 g	25 g	Assay	min. 99,0 %
50 g	75 g	Melting point	168 - 172 °C
100 g	250 g	pH (5%, 20°C)	10,0 - 11,5
500 g	750 g	Residue on roasting (as SO ₄)	max. 0,05 %
1 kg		Heavy metals(as Pb)	max. 0,0005 %

**TRIS(HYDROXYMETHYL)AMINOMETHANE
STANDARD SOLUTION 0,01 MOL/L***Tris(hydroksymetylo)aminometan 0,01 mol/l roztwór mianowany*

M = 121,14 g/mol

CAS: 77-86-1

WE: 201-064-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	colourless	Explosion limits:	no data
Odour:	odourless	Vapour pressure:	no data
pH:	7,2 – 9,0	Density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	solubility
Auto-ignition temperature:	no data	in organic solvents:	no data

Tris(hydroxymethyl)aminomethane standard solution 0,01 mol/l**CHEM*818534708**

500 ml

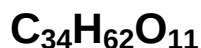
1l

Titer

0,00996 – 0,01004 mol/l

TRITON (R) X-100

Triton X-100



M = 646,37 g/mol

CAS: 9002-93-1

WE: brak



H: 302, 318

P: 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	251°C
Colour:	colourless to yellow	Explosion limits:	no data
Odour:	characteristic	Density:	1,07 g/cm ³ (20°C)
pH:	about 6 - 8 (50g /l H ₂ O, 20°C)	Bulk density:	not applicable
Melting point:	6°C	Solubility:	
Boiling point:	270°C	in water:	solubility
Auto-ignition temperature:	no data	in organic solvents:	no data

Triton (R) X-100

CHEM*498418103

50 ml	75 ml	Colour	max. 100 Hazen
100 ml	250 ml	Refractive index (20°C)	1,49 - 1,492
500 ml	750 ml	Cloud point (1%, H ₂ O)	63 - 69°C
1 l			

THYMOL

Tymol

C₁₀H₁₄O

M = 150,24 g/mol

CAS: 89-83-8

WE: 201-944-8



H: 302, 314, 411

P: 273, 301+330+331, 305+351+338, 309, 310

RID/ADR: 8,III

UN: 1759



Physical and chemical properties:

Character:	solid	Viscosity:	4,3 mm ³ /s (50°C)
Colour:	colourless	Ciśnienie par:	2,5 hPa (50°C)
Odour:	characteristic	Density:	0,97 g/cm ³ (20°C)
pH:	5 - 7 (0,8 g/l H ₂ O, 20°C)	Bulk density:	about 600 kg/m ³
Melting point:	49 - 51°C	Solubility:	
Boiling point:	233°C (1013 hPa)	in water:	0,98 g/l (25°C)
Auto-ignition temperature:	285°C	in organic solvents:	ethanol - 1000 g/l (25°C), ether - 667 g/l (25°C)
Ignition temperature:	104°C		
Explosion limits:	no data		

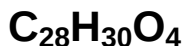
thymol pure

CHEM*428631303

5 g	10 g	Assay	min 99,0 %
25 g	50 g	Melting point	48 – 51 °C
100 g	250 g	Non-volatile substances	max. 1000 ppm
500 g			

THYMOLPHTHALEIN

Tymoloftaleina



M = 430,55 g/mol

CAS: 125-20-2

WE: 204-729-7

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odour:	characteristic	Density:	no data
pH:	no data	Bulk density:	about 400 kg/m ³
Melting point:	248-253°C	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	alcohol - 70 g/l (20°C)
Ignition temperature:	no data	log P _(OW) :	7,06 (obl.)

Thymolphthalein

CHEM*218631706

5 g	10 g	Appearance	white or yellow powder
25 g	50 g	Maximum absorpcji	592 - 596 nm
100 g		Percentage coefficient of absorption:	
		(1%; 1cm; pH 10,5)	min. 700
		Solubility in ethanol	passes test
		TLC test	passes test
		pH sensitivity:	
		colourless	8,8
		blue	10,5

THYMOLPHTHALEIN SOLUTION IN ETHANOL

Tymoloftaleina roztwór w etanolu



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	
Colour:	no data	low:	3,3% V/V (ethanol)
Odour:	ethanol	top:	19% V/V (ethanol)
pH:	no data	Viscosity (20°C):	078 mPa·s (ethanol)
Melting point:	-117°C (ethanol)	Vapour pressure:	60 hPa (20°C) (ethanol)
Boiling point:	78°C (ethanol)	Density:	no data
Auto-ignition temperature:	425°C (ethanol)	Solubility:	
Ignition temperature:	12°C(ethanol)	in water:	no data
		in organic solvents:	no data

Thymolphthalein 0,1% solution in ethanol

CHEM* 218631705

100 ml	250 ml	Assay	1 g/l
500 ml		pH sensitivity:	
		colourless	8,8
		blue	10,5

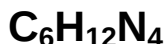
Thymolphthalein 1% solution in ethanol

CHEM* 218631706

100 ml	250 ml	Assay	10 g/l
500 ml		pH sensitivity:	
		colourless	8,8
		blue	10,5

HEXAMETHYLENETETRAMINE

Urotropina



M = 140,19 g/mol

CAS: 100-97-0

WE: 202-905-8



H: 228, 317
P: 280, 302+352
RID/ADR: 4.1, III

UN: 1328



Physical and chemical properties:

Character:	solid	Vapour pressure:	<0.01 mmHg (20°C)
Colour:	white	Density:	1,33 g/cm ³ (20°C)
Odour:	odourless	Bulk density:	about 600 kg/m ³
pH:	8,5 - 9,5 (100 g/l H ₂ O, 20°C)	Soorility:	
Melting point:	280°C	in water:	847 g/l (20°C)
Boiling point:	not applicable	in organic solvents:	ethanol, methanol, chloroform
Auto-ignition temperature:	683°C		
Ignition temperature:	250°C	log P _(OW) :	-2,13
Explosion limits:	no data		

Hexamethylenetetramine pure

CHEM*428691506

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 98,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,005 %
10 kg	15 kg	pH (10%, 20°C)	8,5 - 9,5
25 kg		Residue on roasting (as SO ₄)	max. 2,0 %
		Chlorides (Cl)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,01 %

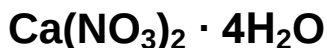
Hexamethylenetetramine pure p.a.

CHEM*118691507

50 g	100 g	Appearance	colourless crystals or white powder
250 g	500 g	Assay	min. 99,0 %
1 kg	5 kg	Substances insoluble in water	max. 0,002 %
10 kg		pH (10%, 20°C)	8,5 - 9,5
		Residue on roasting (as SO ₄)	max. 0,01 %
		Chlorides (Cl)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,005 %
		Ammonia salts (NH ₄)	max. 0,005 %
		Heavy metals(as Pb)	max. 0,001 %

CALCIUM NITRATE TETRAHYDRATE

Calcium nitrogenan 4 hydrat



M = 236,15 g/mol

CAS: 13477-34-4

WE: 233-332-1



H: 272

P: 210

RID/ADR: 5.1, III

UN: 1454



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless to white	Vapour pressure:	no data
Odour:	odourless	Density:	1,82 g/cm ³ (20°C)
pH:	approx 5,0 – 7,0 (50 g/l H ₂ O, 20°C)	Bulk density:	1000 kg/m ³
Melting point:	>130°C	Solubility:	
Boiling point:	not applicable	in water:	2660 g/l (0°C), 6600 g/l (30°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Calcium nitrate 4hydrat pure

CHEM*428745700

100 g	250 g	Appearance	colourless crystals
500 g	1 kg	Assay	min. 98,5 %
2 kg	5 kg	Substances insoluble in water	max. 0,01 %
10 kg		pH (5%, 20°C)	5,0 – 7,0
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,02 %
		Bariumium (Ba)	max. 0,01 %
		Magnesium(Mg)	max. 0,1 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,01 %
		Iron (Fe)	max. 0,001 %

Calcium nitrate 4hydrat pure p.a.**CHEM*118745700**

50 g	100 g	Appearance	colourless crystals
		Assay	min. 99,0 %
250 g	500 g	Substances insoluble in water	max. 0,005 %
1 kg	2 kg	pH (5%, 20°C)	5,0 – 7,0
		Chlorides (Cl)	max. 0,002 %
		Sulphates (SO ₄)	max. 0,005 %
		Barium (Ba)	max. 0,005 %
		Magnesium(Mg)	max. 0,05 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Strontium (Sr)	max. 0,05 %
		Iron (Fe)	max. 0,0005 %

CALCIUM CHLORIDE ANHYDROUS

Wapnia chlorek bezwodny



M = 110,99 g/mol

CAS: 10043-52-4

WE: 233-140-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	2,15 g/cm ³ (20°C)
Odour:	odourless	Bulk density:	no data
pH:	8,0 – 10,0 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	772°C	in water:	740 g/l (0°C)
Boiling point:	> 1670°C/760 mmHg	in organic solvents:	acetone, alcohol, acetic acid
Auto-ignition temperature:	not applicable	log P _(OW) :	0,05
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

calcium chloride anhydrous pure

CHEM*428748702

50 g	100 g	Appearance	white granule or white powder
250 g	500 g	Assay	min. 96,0 %
1 kg	2 kg	Sulphates (SO ₄)	max. 0,05 %
5 kg	10 kg	Heavy metals(as Pb)	max. 0,005 %
25 kg		Iron (Fe)	max. 0,005 %

calcium chloride anhydrous pure p.a.

CHEM*118748703

50 g	100 g	Appearance	white granule or white powder
250 g	500 g	Assay	min. 97,0 %
1 kg	2 kg	Sulphates (SO ₄)	max. 0,02 %
5 kg	10 kg	Heavy metals(as Pb)	max. 0,002 %
15 kg	25 kg	Iron (Fe)	max. 0,002 %

calcium chloride anhydrous for desiccator pure

CHEM*468748908

100 g	250 g	Appearance	white granule or white powder
500 g	750 g	Loss on roasting	max. 10,0 %
1 kg			

CALCIUM CHLORIDE 2 HYDRATE

Wapnia chlorek 2 hydrat



M = 147,02 g/mol

CAS: 10035-04-8

WE: 233-140-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	0,01 hPa (20°C)
Odour:	odourless	Density:	1,85 g/cm ³ (20°C)
pH:	4,5 - 8,5 (50 g/l, H ₂ O, 20°C)	Bulk density:	no data
Melting point:	176°C (decomposition)	Solubility:	
Boiling point:	> 1600°C/760 mmHg	in water:	1000 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	alkohol
Ignition temperature:	not applicable		

calcium chloride 2 hydrate pure

CHEM*428748705

50 g	100 g	Assay	99,0-103,0 %
250 g	500 g	pH (5%, 20°C)	4,5 - 8,5
750 g	1 kg	Sulphates (SO ₄)	max. 0,005 %
2 kg	5 kg	Fluorides (F)	max. 0,004 %
10 kg	15 kg	Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,0025 %
		Aluminium (Al)	max. 0,0001 %
		Copper (Cu)	max. 0,0025 %
		Lead (Pb)	max. 0,0005 %
		Iron (Fe)	max. 0,001 %

calcium chloride 2 hydrate pure p.a.

CHEM*118748706

50 g	100 g	Assay	min. 99,5 %
250 g	500 g	pH (5%, 20°C)	4,5 - 8,0
750 g	1 kg	Sulphates (SO ₄)	max. 0,005 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,003 %
		Aluminium (Al)	max. 0,0001 %
		Magnesium (Mg)	max. 0,005 %
		Lead (Pb)	max. 0,0005 %
		Sodium (Na)	max. 0,005 %
		Iron (Fe)	max. 0,0005 %

CALCIUM CHLORIDE 6 HYDRATE

Wapnia chlorek 6 hydrat



M = 219,09 g/mol

CAS: 7774-34-7

WE: 233-140-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	1,71 g/cm ³ (25°C)
pH:	4,0 – 7,5 (20 g/l H ₂ O, 20°C)	Bulk density:	850-900 kg/m ³
Melting point:	30°C	Solubility:	
Boiling point:	no data	in water:	5360 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	alkohol
Ignition temperature:	not applicable		

calcium chloride 6 hydrate pure

CHEM*428748708

100 g	250 g	Appearance	White powder
500 g	750 g	Assay	min. 97,5 %
1 kg	2 kg	Substances insoluble in water	max. 0,01 %
5 kg	10 kg	pH (5%, 20°C)	5,5 – 7,5
25 kg		Sulphates (SO ₄)	max. 0,01 %
		Heavy metals(as Pb)	max. 0,001 %
		Barium (Ba)	max. 0,01 %
		Magnesium(Mg)	max. 0,1 %
		Potassium (K)	max. 0,02 %
		Sodium (Na)	max. 0,3 %
		Iron (Fe)	max. 0,0005 %

calcium chloride 6 hydrat pure p.a.

CHEM*118748709

50 g	100 g	Appearance	colourless crystals
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in water	max. 0,005 %
2 kg	5 kg	pH (5%, 20°C)	5,5 – 7,5
		Sulphates (SO ₄)	max. 0,005 %
		Heavy metals(as Pb)	max. 0,0005 %
		Barium (Ba)	max. 0,005 %
		Magnesium(Mg)	max. 0,05 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,2 %
		Iron (Fe)	max. 0,0002 %

CALCIUM CHLORIDE ANALYTICAL WEIGHED AMOUNT

Wapnia chlorek odważka analityczna

CaCl₂

M = 110,99 g/mol

CAS: 10043-52-4

WE: 233-140-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Vapour pressure:	no data
Colour:	white	Density:	2,15 g/cm ³ (20°C)
Odour:	odourless	Bulk density:	no data
pH:	8,0 – 10,0 (100 g/l H ₂ O, 20°C)	Solubility:	
Melting point:	772°C	in water:	740 g/l (0°C)
Boiling point:	> 1670°C/760 mmHg	in organic solvents:	acetone, alcohol, kwas octowy
Auto-ignition temperature:	not applicable	log P _(OW) :	0,05
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

calcium chloride 0,05 mol/l analytical weighed amount

CHEM*168750831

1 szt.

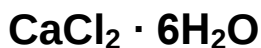
10 szt.

Concentration after dilution to 1000 ml at 20°C

0,05 mol/l ± 0,2 %

CALCIUM CHLORIDE SOLUTIONS (C ≥ 20%)

Wapnia chlorek roztwory



M = 219,09 g/mol

CAS: 7774-34-7

WE: 233-140-8



H: 319

P: 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	no data
pH:	8,0 – 10,0 (H ₂ O, 20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	solubility
Auto-ignition temperature:	not applicable	in organic solvents:	no data

calcium chloride 40%

CHEM*528748709

1 l	2.5 l	Assay	39-41 %
3 l	5 l	Substances insoluble in water	max. 0,006 %
		Acids (as HCl)	max. 0,004 %
		Sulphates (SO ₄)	max. 0,012 %
		Heavy metals(as Pb)	max. 0,0006 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,006 %
		Iron (Fe)	max. 0,0003 %

calcium chloride 60%

CHEM*528748708

1 l	2.5 l	Assay (CaCl ₂ ·6H ₂ O)	57,5 - 62,5 %
3 l	5 l	Substances insoluble in water	max. 0,006 %
		Acids (as HCl)	max. 0,004 %
10 l	20 l	Sulphates (SO ₄)	max. 0,012 %
30 l	60 l	Heavy metals(as Pb)	max. 0,0006 %
		Arsenic (As)	max. 0,0001 %
		Barium (Ba)	max. 0,006 %
		Iron (Fe)	max. 0,0003 %

CALCIUM CHLORIDE STANDARD SOLUTIONS (C < 2 MOL/L)

Wapnia chlorek roztwory mianowane



M = 110,99 g/mol

CAS: 10043-52-4

WE: 233-140-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	no data
pH:	8,0 – 10,0 (H ₂ O, 20°C)	Density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	solubility
Auto-ignition temperature:	not applicable	in organic solvents:	no data

calcium chloride standard solution 0,01 mol/l

CHEM*818748709

250 ml

500 ml

Titer

0,00996 – 0,01004 mol/l

1 l

calcium chloride standard solution 0,02 mol/l

CHEM*818748710

250 ml

500 ml

Titer

0,01992 – 0,02008 mol/l

1 l

calcium chloride standard solution 0,05 mol/l

CHEM*818748712

250 ml

500 ml

Titer

0,0498 – 0,0502 mol/l

1 l

calcium chloride standard solution 0, 1 mol/l

CHEM*818748711

250 ml

500 ml

Titer

0,0996 – 0,1004 mol/l

1 l

calcium chloride standard solution 0,25 mol/l

CHEM*818748713

250 ml

500 ml

Titer

0,249 – 0,251 mol/l

1 l

calcium chloride standard solution 0,5 mol/l

CHEM*818748714

250 ml

500 ml

Titer

0,498 – 0,502 mol/l

1 l

CALCIUM DIHYDROGENPHOSPHATE 1 HYDRATE

Wapnia diwodorofosforan hydrat



M = 234,05 g/mol

CAS: 7758-23-8

WE: 231-837-1



H: 315, 319, 336

P: 280, 305+353+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,22 g/cm ³ (18°C)
pH:	no data	Bulk density:	no data
Melting point:	100°C	Solubility:	
Boiling point:	203°C (decomposition)	in water:	2,0 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

calcium dihydrogenphosphate 1 hydrat pure

CHEM*428758609

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in HCl	max. 0,02 %
750 g	1 kg	Nitrates (NO ₃)	max. 0,01 %
2 kg	5 kg	Chlorides (Cl)	max. 0,005 %
10 kg	15 kg	Sulphates (SO ₄)	max. 0,05 %
20 kg	25 kg	Ammonia salts (NH ₄)	max. 0,02 %
		Heavy metals(as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0002 %
		Magnesium(Mg)	max. 0,2 %
		Iron (Fe)	max. 0,005 %

calcium dihydrogenphosphate 1 hydrat pure p.a.

CHEM*118758600

50 g	100 g	Appearance	white crystals or white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in HCl	max. 0,01 %
2 kg	5 kg	Total nitrogen(N)	max. 0,02 %
10 kg	15 kg	Chlorides (Cl)	max. 0,005 %
20 kg	25 kg	Sulphates (SO ₄)	max. 0,01 %
		Arsenic (As)	max. 0,0002 %
		Barium (Ba)	max. 0,01 %
		Magnesium(Mg)	max. 0,2 %
		Copper (Cu)	max. 0,002 %
		Nickel (Ni)	max. 0,002 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,005 %

CALCIUM HYDROGENPHOSPHATE ANHYDROUS

Wapnia wodorofosforan



M = 136,06 g/mol

CAS: 7757-93-9

WE: 231-826-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,89 g/cm ³
pH:	6,0 – 7,4 (25 g/l, H ₂ O)	Bulk density:	approx 900 kg/m ³
Melting point:	230°C	Solubility:	
Boiling point:	no data	in water:	0,1 g/l (25°C)
Auto-ignition temperature:	not applicable	in other solvents:	HCl, nitric acid
Ignition temperature:	not applicable	log P _(OW) :	-2,55

calcium hydrogenphosphate anhydrous pure

CHEM*428758802

100 g	250 g	Appearance	white powder
500 g	750 g	Assay	min. 98,0 %
1 kg		Substances insoluble in HCl	max. 0,1 %
		Loss on roasting (850°C)	6,5 – 8,5 %
		Chlorides (Cl)	max. 0,05 %
		Heavy metals(as Pb)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,5 %
		Arsenic (As)	max. 0,0001 %
		Iron (Fe)	max. 0,05 %

calcium hydrogenphosphate anhydrous pure p.a.

CHEM*118758803

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	99,0 - 100,5 %
750 g	1 kg	Substances insoluble w HCl	max. 0,01 %
		Nitrates (NO ₃)	max. 0,03 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,05 %
		Zinc (Zn)	max. 0,001 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,002 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,1 %
		Iron (Fe)	max. 0,005 %

CALCIUM HYDROGENPHOSPHATE 2 HYDRATE

Wapnia wodorofosforan 2 hydrat



M = 172,1 g/mol

CAS: 7789-77-7

WE: 231-826-1

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,32 g/cm ³ (w 20°C)
pH:	7,2 – 7,5 (25 g/l, H ₂ O, 25°C)	Bulk density:	approx 550 kg/m ³
Melting point:	190°C	Solubility:	
Boiling point:	not applicable	in water:	0,32 g/l (25°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in methanol
Ignition temperature:	not applicable	in other solvents:	soluble in HCl

calcium hydrogenphosphate 2 hydrat pure

CHEM*428758808

50 g	100 g	Appearance	white powder
250 g	500 g	Identity	passes test
750 g	1 kg	Assay	98,0 – 102,0 %
2 kg	5 kg	Substances insoluble in HCl	max. 0,01 %
10 kg	15 kg	Loss on roasting	24,5 - 26,5 %
20 kg	25 kg	Chlorides (Cl)	max. 0,02 %
		Sulphates (SO ₄)	max. 0,05 %
		Heavy metals(as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0005 %
		Barium (Ba)	max. 0,01 %
		Iron (Fe)	max. 0,005 %
		Calcium dihydrogenphosphate	passes test

calcium hydrogenphosphate 2 hydrat pure p.a.**CHEM*118758809**

50 g	100 g	Appearance	white powder
		Identity	passes test
250 g	500 g	Assay	99,0 – 101,0 %
750 g	1 kg	Substances insoluble w HCl	max. 0,005 %
2 kg	5 kg	Loss on roasting	24,5 - 26,5 %
		Chlorides (Cl)	max. 0,002 %
10 kg	15 kg	Sulphates (SO ₄)	max. 0,02 %
17.5 kg	25 kg	Barium (Ba)	max. 0,01 %
		Magnesium(Mg)	max. 0,1 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Iron (Fe)	max. 0,002 %
		Dihydrogenphosphate calcium	passes test

tri-CALCIUM PHOSPHATE ANHYDROUS

tri-wapnia fosforan



M = 310,18 g/mol

CAS: 7758-87-4

WE: 231-840-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	3,14 g/cm ³ (w 20°C)
pH:	6,0 - 8,0 (50 g/l H ₂ O, 25°C)	Bulk density:	200-500 kg/m ³
Melting point:	1730°C	Solubility:	
Boiling point:	no data	in water:	0,02 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

tri-calcium phosphate anhydrous pure

CHEM*428759009

100 g	250 g	Assay	90,0 – 103,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,2 %
		Loss on roasting (800°C)	max. 0,8 %
		Chlorides (Cl)	max. 0,15 %
		Fluorides (F)	max. 0,0075 %
		Heavy metals(as Pb)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,5 %
		Arsenic (As)	max. 0,0004 %
		Iron (Fe)	max. 0,04 %

tri-calcium phosphate anhydrous pure p.a.

CHEM*118759000

50 g	100 g	Assay	min. 96,0 %
250 g	500 g	Loss on roasting (900°C)	max. 0,1 %
1 kg		Chlorides (Cl)	max. 0,05 %
		Sulphates (SO ₄)	max. 0,1 %
		Zinc (Zn)	max. 0,005 %
		Cadmium (Cd)	max. 0,005 %
		Cobalt (Co)	max. 0,005 %
		Copper (Cu)	max. 0,005 %
		Nickel (Ni)	max. 0,005 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,1 %
		Iron (Fe)	max. 0,002 %

CALCIUM LACTATE 5 HYDRATE

Wapnia mleczan 5 hydrat



M = 308,3 g/mol

CAS: 5743-47-5

WE: 248-953-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	no data
pH:	6,0 – 8,0 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 300 kg/m ³
Melting point:	240°C	Solubility:	
Boiling point:	not applicable	in water:	66 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

calcium lactate 5 hydrat pure

CHEM*428770506

50 g	100 g	Assay	min. 96,0 %
250 g	500 g	Chlorides (Cl)	max. 0,01 %
750 g	1 kg	Phosphates (PO ₄)	max. 0,02 %
2 kg	5 kg	Sulphates (SO ₄)	max. 0,08 %
		Heavy metals(as Pb)	max. 0,004 %
		Arsenic (As)	max. 0,0002 %
		Iron (Fe)	max. 0,008 %

calcium lactate 5 hydrat pure p.a.

CHEM*118770506

50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Loss on roasting (120°C)	24,0 - 30,0 %
750 g	1 kg	Chlorides (Cl)	max. 0,008 %
2 kg	5 kg	Phosphates (PO ₄)	max. 0,015 %
		Sulphates (SO ₄)	max. 0,04 %
		Heavy metals(as Pb)	max. 0,002 %
		Arsenic (As)	max. 0,0001 %
		Iron (Fe)	max. 0,004 %

CALCIUM ACETATE 1 HYDRATE

Wapnia octan 1 hydrat



M = 176,18 g/mol

CAS: 5743-26-0

WE: 200-540-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	dolna:	250 – 500 g/m ³ (pył)
Colour:	white	top:	no data
Odour:	odourless	Vapour pressure:	no data
pH:	7,0 – 8,0 (10 g/l H ₂ O, 20°C)	Density:	approx 1,5 g/cm ³ (20°C)
Melting point:	150°C	Bulk density:	440-700 kg/m ³
Boiling point:	not applicable	Solubility:	
Auto-ignition temperature:	680 - 730°C	in water:	~400 g/l (20°C)
Ignition temperature:	no data	in organic solvents:	no data
Explosion limits:			

calcium acetate 1 hydrate pure

CHEM*428773906

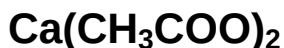
50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 98,0 %
750 g	1 kg	Substances insoluble in CH ₃ COOH	max. 0,04 %
2 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg	12 kg	Sulphates (SO ₄)	max. 0,05 %
15 kg	25 kg	Barium (Ba)	max. 0,02 %
		Zinc (Zn)	max. 0,002 %
		Magnesium(Mg)	max. 0,05 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,002 %
		Potassium (K)	max. 0,05 %
		Sodium (Na)	max. 0,05 %
		Iron (Fe)	max. 0,005 %

calcium acetate 1 hydrate pure p.a.**CHEM*118773907**

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 99,0 %
750 g	1 kg	Substances insoluble in CH ₃ COOH	max. 0,02 %
2 kg	5 kg	Chlorides (Cl)	max. 0,005 %
10 kg	15 kg	Sulphates (SO ₄)	max. 0,03 %
20 kg		Barium (Ba)	max. 0,01 %
		Zinc (Zn)	max. 0,001 %
		Magnesium (Mg)	max. 0,05 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,02 %
		Iron (Fe)	max. 0,004 %

CALCIUM ACETATE SOLUTIONS

Wapnia octan roztwory



M = 158,16 g/mol

CAS: 62-54-4

WE: 200-540-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odour:	acetic acid	Density:	not applicable
pH:	6 - 6,5 (20°C)	Bulk density:	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	dobra
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

calcium acetate 5% pure p.a.

CHEM*52877397

500 ml	1 l	Assay	4,9 – 5,1 %
2,5 l	3 l	Sodium, potassium and magnesium(Na + K + Mg)	max. 0,2 %
		Barium (Ba)	max. 0,01 %
5 l		Zinc (Zn)	max. 0,001 %
		Iron (Fe)	max. 0,05 %
		Copper (Cu + Pb)	max. 0,0015 %
		Sulphates (SO ₄)	max. 0,03 %
		Chlorides (Cl)	max. 0,005 %

calcium acetate 25% pure p.a.

CHEM*528773906

500 ml	1 l	Assay	24,0 – 26,0 %
2,5 l	3 l	Density	approx 1,13 g/cm ³
		Sodium, potassium and magnesium(Na + K + Mg)	max. 0,2 %
5 l		Barium (Ba)	max. 0,01 %
		Zinc (Zn)	max. 0,001 %
		Iron (Fe)	max. 0,05 %
		Copper (Cu + Pb)	max. 0,0015 %
		Sulphates (SO ₄)	max. 0,03 %
		Chlorides (Cl)	max. 0,005 %

CALCIUM SULFATE 0,5HYDRATE

Wapnia siarczan 0,5 hydrat



M = 145,15 g/mol

CAS: 10034-76-1

WE: 231-900-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,5 g/cm ³ (20°C)
pH:	approx 7 (200 g/l H ₂ O, 20°C)	Bulk density:	approx 600 kg/m ³
Melting point:	1450°C	Solubility:	
Boiling point:	no data	in water:	0,8 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

calcium sulfate 0,5 hydrate pure

CHEM*428779606

10g	25 g	Appearance	white powder
50 g	100 g	Loss on roasting	4,5 - 8 %
250 g	500 g	Free acids(as H ₂ SO ₄)	max. 0,04 %
1 kg		Nitrates (NO ₃)	max. 0,015 %
		Chlorides (Cl)	max. 0,015 %
		Sodium, potassium (Na+K)	max. 0,3 %
		Iron (Fe)	max. 0,003 %

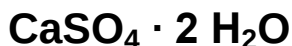
calcium sulfate 0,5hydrat pure p.a.

CHEM*118779607

10g	25 g	Appearance	white powder
50 g	100 g	Loss on roasting	4,5 - 7 %
250 g	500 g	Free acids(as H ₂ SO ₄)	max. 0,02 %
1 kg		Nitrates (NO ₃)	max. 0,01 %
		Chlorides (Cl)	max. 0,01 %
		Sodium, potassium (Na+K)	max. 0,2 %
		Iron (Fe)	max. 0,002 %

CALCIUM SULFATE 2 HYDRATE

Wapnia siarczan 2 hydrat



M = 172,17 g/mol

CAS: 10101-41-4

WE: 231-900-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,32 g/cm ³ (20°C)
pH:	approx 7 (50 g/l H ₂ O, 20°C)	Bulk density:	approx 400-600 kg/m ³
Melting point:	1450°C	Solubility:	
Boiling point:	no data	in water:	2 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

calcium sulfate 2hydrat pure

CHEM*428779708

10g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Substances insoluble in HCl	max. 0,05 %
1 kg		Nitrates (NO ₃)	max. 0,01 %
		Chlorides (Cl)	max. 0,01 %
		Free acids(as H ₂ SO ₄)	max. 0,02 %
		Heavy metals(as Pb)	max. 0,002 %
		Sodium, potassium (Na+K)	max. 0,3 %
		Iron (Fe)	max. 0,002 %

calcium sulfate 2hydrat pure p.a.

CHEM*118779709

10g	25 g	Appearance	white powder
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Chlorides (Cl)	max. 0,005 %
1 kg		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,003 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,001 %

CALCIUM OXALATE 2 HYDRATE

Wapnia szczawian dihydrat



M = 164,13 g/mol

CAS: 7236-42-2

WE: 209-260-1



H: 302, 312

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	colourless	Vapour pressure:	no data
Odour:	no data	Density:	2,2 g/cm ³ (20°C)
pH:	no data	Bulk density:	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	0,67 g/l (13°C); 1,4 g/l (95°C)
Auto-ignition temperature:	no data	in other solvents.:	
Ignition temperature:	no data		

calcium oxalate 2 hydrat pure

CHEM*428781301

10 g	25 g	Assay	min. 98,0 %
50 g	75 g	Copper (Cu)	max. 0,001%
		Zinc (Zn)	max. 0,02%
100 g	250 g	Iron (Fe)	max. 0,002%
		Sodium (Na)	max. 0,1%
500 g	1 kg	Strontium (Sr)	max. 0,1%
		Potassium (K)	max. 0,02%
		Lead (Pb)	max. 0,001%
		Magnesium(Mg)	max. 0,1%
		Barium (Ba)	max. 0,01%
		Nitrogen (N)	max. 0,08%
		Arsenic (As)	max. 0,0005%
		Sulphates (SO ₄)	max. 0,1%
		Chlorides (Cl)	max. 0,002%

calcium oxalate 2 hydrate pure p.a.**CHEM*118781301**

10 g	25 g	Assay	min. 99,0 %
50 g	75 g	Copper (Cu)	max. 0,0005%
100 g	250 g	Zinc (Zn)	max. 0,01%
500 g	1 kg	Iron (Fe)	max. 0,001%
		Sodium (Na)	max. 0,05%
		Strontium (Sr)	max. 0,05%
		Potassium (K)	max. 0,01%
		Lead (Pb)	max. 0,0005%
		Magnesium(Mg)	max. 0,05%
		Barium (Ba)	max. 0,005%
		Nitrogen (N)	max. 0,04%
		Arsenic (As)	max. 0,0003%
		Sulphates (SO ₄)	max. 0,05%
		Chlorides (Cl)	max. 0,001%

CALCIUM OXIDE

Wapnia tlenek

CaO

M = 56,08 g/mol

CAS: 1305-78-8

WE: 215-138-9



H: 318
P: 260, 280, 305+351+338, 313
RID/ADR: 8/not applicable

UN: 1910



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	approx 3,37 g/cm ³ (20°C)
pH:	12,6 (50 g/l H ₂ O, 20°C)	Bulk density:	800-1200 kg/m ³
Melting point:	2580°C	Solubility:	
Boiling point:	2850°C	in water:	1,65 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	glicerol
Ignition temperature:	not applicable		

calcium oxide pure

CHEM*428782109

25 g	50 g	Appearance	white, yellow or grey powder
100 g	250 g	Assay	min. 96,0 %
500 g	1 kg	Zinc (Zn)	max. 0,01 %
		Copper (Cu)	max. 0,01 %
		Lead (Pb)	max. 0,01 %

calcium oxide pure p.a.

CHEM*118782100

25 g	50 g	Appearance	white, yellow or grey powder
100 g	250 g	Assay	min. 98,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,5 %
		Loss on roasting	max. 10 %
		Arsenic (As)	max. 0,0003 %
		Zinc (Zn)	max. 0,002 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %

CALCIUM CARBONATE

Wapnia carbonn



M = 100,09 g/mol

CAS: 471-34-1

WE: 207-439-9

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	not applicable
Odour:	odourless	Density:	2,8 g/cm ³ (20°C)
pH:	9-10 (10 g/l, H ₂ O, 25°C)	Bulk density:	approx 400 - 700 kg/m ³
Melting point:	825°C	Solubility:	
Boiling point:	no data	in water:	14 mg/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	insoluble in alcohol
Ignition temperature:	not applicable		

calcium carbonate anhydrous pure

CHEM*428783303

50 g	100 g	Appearance	white powder
250 g	500 g	Assay	min. 98,5 %
750 g	1 kg	Substances insoluble in HCl	max. 0,02 %
2 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg	15 kg	Sulphates (SO ₄)	max. 0,1 %
25 kg		Arsenic (As)	max. 0,0005 %
		Barium (Ba)	max. 0,01 %
		Copper (Cu)	max. 0,001 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,05 %
		Sodium (Na)	max. 0,1 %
		Iron (Fe)	max. 0,003 %

calcium carbonate anhydrous pure p.a.**CHEM*118783304**

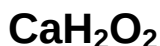
25 g	50 g	Appearance	white powder
100 g	250 g	Assay	min. 99,0 %
500 g	750 g	Substances insoluble in HCl	max. 0,005 %
1 kg	2 kg	Total nitrogen(N)	max. 0,04 %
5 kg	15 kg	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,05 %
		Arsenic (As)	max. 0,0003 %
		Barium (Ba)	max. 0,005 %
		Zinc (Zn)	max. 0,01 %
		Magnesium(Mg)	max. 0,05 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,0005 %
		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,05 %
		Strontium (Sr)	max. 0,05 %
		Iron (Fe)	max. 0,001 %

calcium carbonate FP**CHEM*428783305**

100 g	250 g	Assay	98,5 - 100,5 %
500 g	750 g	Chlorides (Cl)	max. 0,025 %
1 kg	2 kg	Sulphates (SO ₄)	max. 0,25 %
3.5 kg	5 kg	Magnesium	max. 1,0 %
12.5 kg	15 kg	Heavy metals(as Pb)	max. 0,001 %
20 kg	25 kg	Arsenic (As)	max. 0,0005 %
		Loss on drying	max. 2,0 %
		Barium compounds	passes test

CALCIUM HYDROXIDE

Wapnia wodorotlenek



M = 74,10 g/mol

CAS: 1305-62-0

WE: 215-137-3



H: 318

P: 260, 280, 305+351+338, 313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white	Vapour pressure:	no data
Odour:	odourless	Density:	2,24 g/cm ³ (20°C)
pH:	approx 12,5 (20°C)	Bulk density:	approx 400 kg/m ³
Melting point:	550 - 600°C	Solubility:	
Boiling point:	not applicable	in water:	approx 1,7 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

calcium hydroxide pure

CHEM*428785702

25 g	50 g	Appearance	white or grey powder
100 g	250 g	Assay	min. 95,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,2 %
		Calcium carbonate (CaCO ₃)	max. 4,0 %
		Heavy metals(as Pb)	max. 0,005 %

calcium hydroxide pure p.a.

CHEM*118785703

25 g	50 g	Appearance	white or grey powder
100 g	250 g	Assay	min. 96,0 %
500 g	1 kg	Substances insoluble in HCl	max. 0,03 %
		Calcium carbonate (CaCO ₃)	max. 3 %
		Chlorides (Cl)	max. 0,005 %
		Sulphates (SO ₄)	max. 0,05 %
		Zinc (Zn)	max. 0,0005 %
		Copper (Cu)	max. 0,0005 %
		Lead (Pb)	max. 0,002 %
		Iron (Fe)	max. 0,05 %

ACTIVATED CHARCOAL 1-4MM CHEM CWZ-22/W

Węgiel aktywny

C

M = 12,01 g/mol

CAS: 7440-44-0

WE: 231-153-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	black	Vapour pressure:	not applicable
Odour:	odourless	Density:	approx 2,0 g/cm ³ (20°C)
pH:	approx 6,0 (50 g/l, H ₂ O, 20°C)	Bulk density:	490 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Activated charcoal 1-4mm Chem CWZ-22/w

CHEM*118799555

500 g	1 kg	Assay moisture	2,0 %
2 kg	5 kg	Assay ash	2,5 %
		Methylene number	24 cm ³
10 kg	15 kg	Granulation	passes test

ACTIVATED CHARCOAL GRAN.1-4MM CHEM NGI/P

Węgiel aktywny

C

M = 12,01 g/mol

CAS: 7440-44-0

WE: 231-153-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	black	Vapour pressure:	not applicable
Odour:	odourless	Density:	approx 2,0 g/cm ³ (20°C)
pH:	approx 6,0 (50 g/l H ₂ O, 20°C)	Bulk density:	490 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	not applicable	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

Activated charcoalgran.1-4mm Chem NGI/p

CHEM*118799554

500 g	1 kg	Bulk density	490 kg/m ³
2 kg	5 kg	Mechanical strength	99,9 %
10 kg	15 kg	Attrition	0,12 %
		Assay moisture	1,5 %
		Assay ash	16,5 %
		Chłonność dynamiczna par benzenu	95 g/dm ³
		Chłonność statyczna par benzenu	147 g/dm ³
		Nasiąkliwość wodna	0,78 cm ³ /g
		Granulation	passes test

ACTIVATED CHARCOAL NORIT SX 2

Activated charcoal

C

M = 12,01 g/mol

CAS: 7440-44-0

WE: 231-153-3

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	black	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	not applicable
pH: approx 6,0 (zawiesina, 50 g/l H ₂ O, 20°C)		Density:	approx 2,0 g/cm ³ (20°C)
Melting point:	no data, sublimacja approx 3700°C	Bulk density:	approx 400 kg/m ³
Boiling point:	not applicable	Solubility:	
Auto-ignition temperature:	no data	in water:	insoluble
		in organic solvents:	no data

Activated charcoal Norit SX 2 pure p.a.

CHEM*118799500

100 g	250 g	Substances insoluble w HCl	max. 1,0 %
500 g	1 kg	Loss on drying(110°C)	max. 10,0 %
2 kg	5 kg	Copper (Cu)	max. 0,001 %
6 kg		Calcium (Ca)	max. 0,02 %
		Iron (Fe)	max. 0,02 %
		Liczba melasowa	max. 380

ACTIVATED CHARCOAL GRAN. CYLIND.1-4MM CHEM WD-EXTRA/W

Activated charcoal

C

M = 12,01 g/mol

CAS: 7440-44-0

WE: 231-153-3

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Ignition temperature:	no data
Colour:	black	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	not applicable
pH:	wyciagu wodnego 10,4	Density:	approx 2,0 g/cm ³ (20°C)
Melting point:	no data, sublimacja approx 3700°C	Bulk density:	454 kg/m ³
		Solubility:	
Boiling point:	not applicable	in water:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	no data

Activated charcoal 1-4mm Chem WD-extra/w

CHEM*118799553

250 g	500 g	Masa nasypowa	454 kg/m ³
1 kg	2 kg	Mechanical strength	95,9 %
5 kg	10 kg	Attrition	0,18 %
15 kg		Assay moisture	2,1 %
		Methylene number	25 cm ³
		Iodine number	997 mg/g
		pH of water extract	10,4
		Granulation	passes test

CARBON TETRACHLORIDE

Węgla czterochlorek

CCl₄

M = 153,82 g/mol

CAS: 56-23-5

WE: 200-262-8



H: 301, 311, 331, 351, 372, 412, EUH059
P: 273, 280, 302+352, 304+340, 309, 310
RID/ADR: 6.1, II UN: 1846



Physical and chemical properties:

Character:	liquid	lepkość w (20°C):	0,969 mPa·s
Colour:	colourless	Vapour pressure:	119,4 mbar (20°C)
Odour:	sweet	Density:	1,59 g/cm ³ (20°C)
Melting point:	-23°C	Solubility:	
Boiling point:	approx 77°C	in water:	0,8 g/l (20°C)
Auto-ignition temperature:	no data	in organic solvents:	soluble in ethanol, ether, benzene, chloroform
Ignition temperature:	no data		
Explosion limits:	no data	log P _(OW) :	2,64

carbon tetrachloride pure

CHEM*428804703

50 ml	100 ml	Density (20°C)	1,591 – 1,597 g/cm ³
250 ml	500 ml	Distillation range	75,5 – 77,5°C
1 l	2.5 l	Non-volatile residue	max. 0,001 %
		Free acids (as HCl)	max. 0,0004 %
		Aldehydes (as HCOH)	max. 0,0005 %
		Free chlorine(Cl ₂)	max. 0,00018 %
		Chlorides (Cl)	max. 0,0005 %
		Iodine-consuming substances (HCOH)	max. 0,0004 %
		Organic impurities	-
		Phosgene	-
		Carbon disulfide (CS ₂)	max. 0,001 %

carbon tetrachloride pure p.a.**CHEM*118804704**

50 ml	100 ml	Assay	min. 99,6 %
		Density (20°C)	1,585 - 1,595 g/cm ³
250 ml	500 ml	Free acids(as HCl) and phosgene	max. 0,0002 %
		Non-volatile matter	max. 0,0005 %
1 l	2.5 l	Water	max. 0,02 %
		Adlehydes (as CH ₂ O)	max. 0,0001 %
		Iodine – consuming substances (as HCHO)	max. 0,0002 %
		Free chlorine(Cl ₂)	max. 0,00009 %
		Chlorides (Cl)	max. 0,0001 %
		Carbon disulphide (CS ₂)	max. 0,0002 %
		Substances darkened under influence of H ₂ SO ₄	passes test
		Suitability to work with dithizone	passes test

DISTILLED WATER

Woda destylowana



M = 18,02 g/mol

CAS: 7732-18-5

WE: 231-791-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Dynamic viscosity:	0,952 mPa s
Odour:	odourless	Vapour pressure:	23 hPa (20°C)
pH:	~ 6,5 (20°C)	Density:	1,00 g/cm ³ (20°C)
Melting point:	0°C	Solubility:	
Boiling point:	100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

water destylowana sp.pure

CHEM*524912002

500 ml	1 l	Appearance	colourless clear liquid
2.5 l	3 l	Acidity or alkalinity	passes test
5 l	10 l	Phenols	passes test
20 l	30 l	Free chlorine(Cl ₂)	passes test
60 l		Chlorides (Cl)	passes test
		Nitrates (NO ₃)	max. 0,2 µg/ml
		Sulphates (SO ₄)	passes test
		Ammonia salts (NH ₄)	max. 0,2 µg/ml
		Calcium and magnesium compounds	passes test
		Heavy metals(as Pb)	passes test
		Residue on evaporation	max. 10 µg/ml
		Specific electrolytic conductivity (20°C)	max. 4,0 µS/cm

water destylowana

CHEM*524912001

500 ml	1 l	Appearance	colourless liquid
2.5 l	3 l	Acidity or alkalinity	passes test
5 l	10 l	Chlorides (Cl)	passes test
20 l	30 l	Sulphates (SO ₄)	passes test
60 l	luz	Calcium and magnesium compounds	passes test
		Heavy metals(as Pb)	passes test
		Specific electrolytic conductivity (20°C)	max. 5 µS/cm

WATER HPLC

H₂O

M = 18,02 g/mol

CAS: 7732-18-5

WE: 231-791-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Dynamic viscosity:	0,952 mPa s
Odour:	odourless	Vapour pressure:	23 hPa (20°C)
pH:	~ 6,5 (20°C)	Density:	1,00 g/cm ³ (20°C)
Melting point:	0°C	Solubility:	
Boiling point:	100°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

water do HPLC

CHEM*614912001

500 ml

1 l

2.5 l

Residue on evaporation	max. 0,0005%
Specific electrolytic conductivity (25°C)	max. 2µS/cm
Absorption (254nm, 1cm)	max. 0,001AU
Gradient test 254nm – highest	max. 2mAU
Filtering (0,2µm)	passes test

WATER DEMINERALISED (accumulator)

H₂O

M = 18,02 g/mol

CAS: 7732-18-5

WE: 231-791-2

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Dynamic viscosity:	0,952 mPa s
Odour:	odourless	Vapour pressure:	23 hPa (20°C)
pH:	~ 6,5 (20°C)	Density:	1,00 g/cm ³ (20°C)
Melting point:	0°C	Solubility:	
Boiling point:	100°C	in water:	SOLUBLE
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

water demineralised

CHEM*524911999

1 l

5 l

Specific electrolytic conductivity(20°C)

max. 10,0 µS/cm

10 l

20 l

HYDROGEN PEROXIDE SOLUTION 1%

Wodoru nadtlenek roztwór 1%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0

H: not applicable
P: not applicable
RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	approx 23,3 mmHg (30°C)
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,0022 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 1% pure

CHEM*428851943

100 ml	500 ml	Assay	1,0 % ± 0,1 %
1 l	5 l	Density (18°C)	approx 1,0022 g/cm ³
		Chlorides (Cl)	max. 0,001 %
10 l		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 1% pure p.a.

CHEM*118851947

100 ml	500 ml	Assay	1,0 % ± 0,1 %
1 l	5 l	Density (18°C)	approx 1,0022 g/cm ³
		Chlorides (Cl)	max. 0,0005 %
10 l		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 3%

Wodoru nadtlenek roztwór 3%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	approx 23,3 mmHg (30°C)
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,009 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 3% pure

CHEM*428851901

100 ml	500 ml	Assay	3,0 % ± 0,1 %
1 l	5 l	Density (18°C)	approx 1,009 g/cm ³
		Chlorides (Cl)	max. 0,001 %
10 l		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 3% pure p.a.

CHEM*118851937

100 ml	500 ml	Assay	3,0 % ± 0,1 %
1 l	5 l	Density (18°C)	approx 1,009 g/cm ³
		Chlorides (Cl)	max. 0,0005 %
10 l		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 5%

Wodoru nadtlenek roztwór 5%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 319, 332

P: 271, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,017 g/cm ³ (18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 5% pure

CHEM*428851902

500 ml	1 l	Assay	5,0 % ± 0,1 %
5 l	10 l	Density (18°C)	approx 1,017 g/cm ³
20 l	30 l	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE 5% pure p.a.

CHEM*118851938

500 ml	1 l	Assay	5,0 % ± 0,1 %
5 l	10 l	Density (18°C)	approx 1,017 g/cm ³
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 10%

Wodoru nadtlenek roztwór 10%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2984



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,035 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	in water:	soluble
Boiling point:	107°C (30 %)	in organic solvents:	ether, ethanol
Auto-ignition temperature:	not applicable		

HYDROGEN PEROXIDE SOLUTION 10% pure

CHEM*428851932

500 ml	1 l	Assay	10,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,035 g/cm ³
20 l	30 l	Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 10% pure p.a.

CHEM*118851929

500 ml	1 l	Assay	10,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,035 g/cm ³
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 15%

Wodoru nadtlenuk roztwór 15%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2984



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,054 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 15% tech.

CHEM*328851930

1 l	5 l	Assay	15,0 % ± 0,5 %
10 l	20 l	Density (18°C)	approx 1,054 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 15% pure

CHEM*428851931

500 ml	1 l	Assay	15,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,054 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 15% pure p.a.

CHEM*118851944

500 ml	1 l	Assay	15,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,054 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 18%

Wodoru nadtlenek roztwór 18%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2984



Physical and chemical properties:

Character:	liquid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odour:	sharp	Density:	approx 1,065 g/cm ³ (18°C)
pH:	2,0 – 4,0 (20°C)	Solubility:	
Melting point:	-26°C (30 %)	in water:	SOLUBLE
Boiling point:	107°C (30 %)	in organic solvents:	eter etylowy, alkohol etylowy
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

HYDROGEN PEROXIDE SOLUTION 18% pure

CHEM*428851941

500 ml	1 l	Assay	18,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,065 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 18% pure p.a.

CHEM*118851939

500 ml	1 l	Assay	18,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,065 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 20%

Wodoru nadtlenek roztwór 20%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,072 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 20% pure

CHEM*428851940

500 ml	1 l	Assay	20,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,072 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 20% pure p.a.

CHEM*118851931

500 ml	1 l	Assay	20,0 % ± 0,5 %
5 l	10 l	Density (18°C)	approx 1,072 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 25%

Wodoru nadtlenek roztwór 25%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,092 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 25% tech.

CHEM*328851932

1 l	5 l	Assay	25,0 % ± 1,0 %
10 l	20 l	Density (18°C)	approx 1,092 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 25% pure

CHEM*428851940

500 ml	1 l	Assay	25,0 % ± 1,0 %
5 l	10 l	Density (18°C)	approx 1,092 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,01 %
		Chlorides (Cl)	max. 0,001 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 25% pure p.a.

CHEM*118851931

500 ml	1 l	Assay	25,0 % ± 1,0 %
5 l	10 l	Density (18°C)	approx 1,092 g/cm ³
20 l	30 l	Residue on evaporation	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 30%

Wodoru nadtlenuk roztwór 30%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 318, 332
P: 280, 305+351+338, 313
RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	approx 18 mbar (20°C)
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,11 g/cm ³ (18°C)
Melting point:	-26°C	Solubility:	
Boiling point:	107°C	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 30% tech.

CHEM*328851934

1 l	5 l	Assay	30,0 % ± 1,0 %
10 l	20 l	Density (18°C)	approx 1,11 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 30% pure

CHEM*428851933

100 ml	250 ml	Assay	30,0 % ± 1,0 %
500 ml	1 l	Free acids(as H ₂ SO ₄)	max. 0,01 %
2.5 l	3 l	Residue on evaporation	max. 0,01 %
5 l	10 l	Total nitrogen(N)	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,001 %
60 l		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE 30% pure p.a.**CHEM*118851934**

100 ml	250 ml	Assay	30,0 % ± 1,0 %
500 ml	1 l	Free acids(as H ₂ SO ₄)	max. 0,005 %
2.5 l	3 l	Residue on evaporation	max. 0,005 %
5 l	10 l	Total nitrogen(N)	max. 0,005 %
20 l	30 l	Chlorides (Cl)	max. 0,0005 %
60 l		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE 30% sp.pure TV**CHEM*618851631**

500 ml	1 l	Assay	29,0 – 31,0 %
2.5 l	3 l	Stability	min. 96,0 %
5 l		Free acids(as H ₂ SO ₄)	max. 0,001 %
		Chlorides (Cl)	max. 0,0001 %
		Sulphates (SO ₄)	max. 0,0001 %
		Bismuth (Bi)	max. 0,000005 %
		Bor (Bo)	max. 0,000001 %
		Tin (Sn)	max. 0,00001 %
		Aluminium (Al)	max. 0,00001 %
		Phosphorus(P)	max. 0,0001 %
		Cobalt (Co)	max. 0,00001 %
		Silicon (Si)	max. 0,001 %
		Manganese (Mn)	max. 0,00001 %
		Copper (Cu)	max. 0,00001 %
		Nickel (Ni)	max. 0,00001 %
		Lead (Pb)	max. 0,00001 %
		Silver (Ag)	max. 0,00001 %
		Iron (Fe)	max. 0,00001 %

HYDROGEN PEROXIDE SOLUTION 35%

Wodoru nadtlenek roztwór 35%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 315, 318, 332, 335
 P: 280, 302+352, 305+351+338
 RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,13 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 35% tech.

CHEM*328851933

1 l	5 l	Assay	35,0 % ± 1,0 %
10 l	20 l	Density (18°C)	approx 1,13 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 35% pure

CHEM*428851934

500 ml	1 l	Assay	35,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,01 %
20 l	30 l	Residue on evaporation	max. 0,01 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION SOLUTION 35% pure p.a.**CHEM*118851936**

500 ml	1 l	Assay	35,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,005 %
		Residue on evaporation	max. 0,005 %
20 l	30 l	Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 40%

Wodoru nadtlenek roztwór 40%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 315, 318, 332, 335
 P: 280, 302+352, 305+351+338
 RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,15 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 40% pure

CHEM*428851938

500 ml	1 l	Assay	40,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,01 %
20 l	30 l	Residue on evaporation	max. 0,01 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 40% pure p.a.

CHEM*118851938

500 ml	1 l	Assay	40,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,005 %
20 l	30 l	Residue on evaporation	max. 0,005 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 45%

Wodoru nadtlenek roztwór 45%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 315, 318, 332, 335
P: 280, 302+352, 305+351+338
RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,18 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 45% pure

CHEM*428851941

500 ml

1 l

Assay	45,0 % ± 1,0 %
Free acids(as H ₂ SO ₄)	max. 0,01 %
Residue on evaporation	max. 0,01 %
Total nitrogen(N)	max. 0,005 %
Chlorides (Cl)	max. 0,001 %
Phosphates (PO ₄)	max. 0,003 %
Sulphates (SO ₄)	max. 0,001 %
Heavy metals(as Pb)	max. 0,00005 %
Arsenic (As)	max. 0,00005 %
Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 45% pure p.a.

CHEM*118851930

500 ml

1 l

Assay	45,0 % ± 1,0 %
Free acids(as H ₂ SO ₄)	max. 0,005 %
Residue on evaporation	max. 0,005 %
Total nitrogen(N)	max. 0,005 %
Chlorides (Cl)	max. 0,0005 %
Phosphates (PO ₄)	max. 0,0005 %
Sulphates (SO ₄)	max. 0,0005 %
Heavy metals(as Pb)	max. 0,00002 %
Arsenic (As)	max. 0,00005 %
Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 50%

Wodoru nadtlenek roztwór 50%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 315, 318, 332, 335
 P: 280, 302+352, 305+351+338
 RID/ADR: 5.1, II UN: 2014



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,197 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	ether, ethanol

HYDROGEN PEROXIDE SOLUTION 50% tech.

CHEM*328851931

1 l	5 l	Assay	50,0 % ± 1,0 %
10 l	20 l	Density (18°C)	approx 1,197 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 50% pure

CHEM*428851935

500 ml	1 l	Assay	50,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,01 %
20 l	30 l	Residue on evaporation	max. 0,01 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE 50% pure p.a.**CHEM*118851932**

500 ml	1 l	Assay	50,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,005 %
20 l	30 l	Residue on evaporation	max. 0,005 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00002 %

HYDROGEN PEROXIDE SOLUTION 60%

Wodoru nadtlenek roztwór 60%



M = 34,01 g/mol

CAS: 7722-84-1

WE: 231-765-0



H: 302, 315, 318, 332, 335
 P: 280, 302+352, 305+351+338
 RID/ADR: 5.1, II UN: 2015



Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	colourless	Explosion limits:	not applicable
Odour:	sharp	Vapour pressure:	no data
pH:	2,0 – 4,0 (20°C)	Density:	approx 1,24 g/cm ³ (18°C)
Melting point:	-26°C (30 %)	Solubility:	
Boiling point:	107°C (30 %)	in water:	SOLUBLE
Auto-ignition temperature:	not applicable	in organic solvents:	no data

HYDROGEN PEROXIDE SOLUTION 60% tech.

CHEM*328851935

1 l	5 l	Assay	60,0 % ± 1,0 %
10 l	20 l	Density (18°C)	approx 1,24 g/cm ³
30 l	60 l		

HYDROGEN PEROXIDE SOLUTION 60% pure

CHEM*428851939

500 ml	1 l	Assay	60,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,01 %
20 l	30 l	Residue on evaporation	max. 0,01 %
		Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates (PO ₄)	max. 0,003 %
		Sulphates (SO ₄)	max. 0,001 %
		Heavy metals(as Pb)	max. 0,00005 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00005 %

HYDROGEN PEROXIDE SOLUTION 60% pure p.a.**CHEM*118851935**

500 ml	1 l	Assay	60,0 % ± 1,0 %
5 l	10 l	Free acids(as H ₂ SO ₄)	max. 0,005 %
		Residue on evaporation	max. 0,005 %
20 l	30 l	Total nitrogen(N)	max. 0,005 %
		Chlorides (Cl)	max. 0,0005 %
		Phosphates (PO ₄)	max. 0,0005 %
		Sulphates (SO ₄)	max. 0,0005 %
		Heavy metals(as Pb)	max. 0,00002 %
		Arsenic (As)	max. 0,00005 %
		Iron (Fe)	max. 0,00002 %

YAMADA UNIVERSAL INDICATOR

Yamady wskaźnik

M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Ignition temperature:	approx 23°C
Colour:	green	Explosion limits:	no data
Odour:	ethanol	Vapour pressure:	no data
pH:	7,8 - 10	Density:	approx 0,9 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	solubility
Auto-ignition temperature:	approx 425°C	in organic solvents:	solubility

Yamada universal indicator

CHEM*298871800

10 ml	25 ml	Thymol blue	passes test
50 ml	100 ml	Methyl red	passes test
250 ml	500 ml	Bromothymol blue	passes test
		Phenolphthalein	passes test
		pH = 4	red
		pH = 5	orange
		pH = 6	yellow
		pH = 7	green
		pH = 8	blue
		pH = 9	indigo
		pH = 10	violet

BROMOCRESOL GREEN

Zieleń bromokrezolowa



M = 698,04 g/mol

CAS: 76-60-8

WE: 200-972-8

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	white or yellow	Vapour pressure:	no data
Odour:	characteristic	Density	no data
pH:	3,8 – 4,5	Bulk density:	approx 350 kg/m ³
Melting point:	217 - 218°C	Solubility:	
Boiling point:	no data	in water:	6 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	alcohol approx 30 g/l
Ignition temperature:	not applicable		

Bromocresol Green

CHEM*218988104

1 g	5 g	Appearance	white or orange powder
10 g	25 g	Molar absorptivity coefficient:	
50 g	100 g	E (pH 3,4; 420÷440 nm)	min. 12300
		E (pH 5,8; 580÷620 nm)	min. 31000
		Solubility in ethanol	passes test
		TLC test	passes test
		pH sensitivity:	
		yellow	3,8
		blue	5,4

BROMOCRESOL GREEN 0,1% (WATER / ALKOHOL)

Zieleń bromokrezolowa roztwór 0,1% (etanol)



M = not applicable

CAS: not applicable

WE: not applicable



H: 225

P: 210

RID/ADR: 3, III

UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	no data	Viscosity w temp. 20°C:	no data
Odour:	ethanol	Vapour pressure:	no data
pH:	neutral	Density	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	soluble
Ignition temperature:	no data		

Bromocresol Green 0,1% (water/alcohol)

CHEM* 218988106

50 ml

100 ml

Assay

approx 1 g/l

250 ml

500 ml

pH sensitivity:

yellow

3,8

blue

5,4

MALACHITE GREEN

Zieleń malachitowa



(C.I. 42000)

M = 418,51 g/mol

CAS: 2437-29-8

WE: 219-441-7



H: 302, 318, 361d, 410
P: 273, 280, 281, 305+351+338, 308+313
RID/ADR: 6.1, III UN: 2811



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	green	Vapour pressure:	no data
Odour:	characteristic	Density:	no data
pH:	2,5-3,5 (10 g/l H ₂ O, 20°C)	Bulk density:	approx 400 - 500 kg/m ³
Melting point:	approx 159°C	Solubility:	
Boiling point:	no data	in water:	110 g/l (24°C)
Auto-ignition temperature:	no data	in organic solvents:	ethanol -
Ignition temperature:	167°C		60 g/l (24°C)

malachite green

CHEM*128994700

5 g	10 g	Appearance	green crystals
25 g	50 g	Molar absorptivity coefficient:	
100 g	250 g	E (610÷620 nm; water)	min.. 55000
500 g	1 kg	Moisture	max. 10,0 %
2 kg	5 kg	TLC test	passes test
10 kg	13 kg	Residue on roasting	max. 2,5 %
25 kg		Suitability for staining biological material	passes test

MALACHITE GREEN SOLUTION 3% IN ETHANOL

Zieleń malachitowa roztwór 3% w etanolu

$C_{25}H_{26}N_2O_4/C_2H_5OH$

M = not applicable

CAS: not applicable

WE: not applicable



H: 225, 411
P: 210, 280, 303+361+353
RID/ADR: 3, III UN: 1993



Physical and chemical properties:

Character:	liquid	Explosion limits:	no data
Colour:	no data	Viscosity (20°C):	no data
Odour:	ethanol	Vapour pressure:	no data
pH:	neutral	Density	no data
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	soluble
Ignition temperature:	no data		

malachite green 3% in ethanol
CHEM* 128994701

50 ml

100 ml

Assay

approx 30 g/l

250 ml

500 ml

1l

LEWATIT MONOPLUS M500 (BED ANION EXCHANGE)

Lewatit MonoPlus M 500

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odour:	characteristic	Density	1,08 g/cm ³ (20°C)
pH:	< 9 (10% w/w)	Bulk density:	690 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble in colt
Auto-ignition temperature:	>250°C	in organic solvents:	no data
Ignition temperature:	not applicable		

BED ANION EXCHANGE Lewatit MonoPlus M500

CHEM*524911997

1 l	2 l	Grain size	0,61 ± 0,05 mm min.90 %
5 l	10 l	Bulk density	670 kg/m ³ (±5%)
25 l		Coefficient of uniformity	max. 1,1
		Gravity	1,08 ca. g/cm ³
		Assay water	50 – 60 %
		Total exchange capacity	min.. 1,2 eq/l
		Expansion Cl ⁻ -> OH ⁻	max. 22 %
		Stability (pH range)	0 - 14
		Appearance	yellow

LEWATIT MONOPLUS S100 (BED KATION EXCHANGE)

Lewatit MonoPlus S 100

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	brown	Vapour pressure:	no data
Odour:	odourless	Density	1,28 g/cm ³ (20°C)
pH:	no data	Bulk density:	800-900 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	>250°C	in organic solvents:	no data
Ignition temperature:	not applicable		

BED KATION EXCHANGE Lewatit MonoPlus S100

CHEM*524911998

1 l	2 l	Grain size 0,58 ± 0,05 mm	min. 90 %
5 l	10 l	Bulk density	820 kg/m ³ (±5%)
25 l		Coefficient of uniformity	max. 1,1
		Gravity	1,28 ca.
		Assay water	42 – 48 %
		Total exchange capacity	min.. 2,0 eq/l
		Expansion Na ⁺ → H ⁺	8 ca. %
		Stability (pH)	0 - 14
		Appearance	brown

LEWATIT S1467 (BED KATION EXCHANGE)

LEWATIT S1467

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	brown	Vapour pressure:	no data
Odour:	odourless	Density	1,28 g/cm ³ (20°C)
pH:	7 (10% w/w)	Bulk density:	820 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble in cold water
Auto-ignition temperature:	>250°C	in organic solvents:	no data
Ignition temperature:	not applicable		

BED KATION EXCHANGE Lewatit S1467

CHEM*524911996

1 l	2 l	Grain size	0,6 ± 0,05 mm min. 90 %
5 l	10 l	Bulk density	820 kg/m ³ (±5%)
25 l		Coefficient of uniformity	max. 1,1
		Gravity	1,28 ca. g/cm ³
		Assay water	42 – 48 %
		Total exchange capacity	min.. 2,0 eq/l
		Expansion Na ⁺ → H ⁺	8 ca. %
		Stability (pH)	0 - 14
		Appearance	brown

BED EXCHANGE IONAC NM-91

IONAC NM-91

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	brown/black	Vapour pressure:	no data
Odour:	characteristic	Density	1,2 g/cm ³ (20°C)
pH:	6 -9 (10% w/w)	Bulk density:	approx 740 g/l
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble in cold water
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	not applicable		

BED EXCHANGE Ionac NM-91

CHEM*524911995

1 l	2 l	Grain size <0,3 mm	max. 2,0 % v/v
5 l	10 l	Grain size >1,2 mm	max. 5,0 % v/v
25 l		Bulk density	740 kg/m ³ (±5%)
		Gravity	1,2 ca. g/cm ³
		Assay water	50-60 %
		Expansion $H^+/OH^- \rightarrow Ca^{2+}, Mg^{2+}/Cl^-, SO_4^{2-}$	max. 20 vol. %
		Stability (zakres pH)	0 - 14
		Appearance	brown/black

SILICON DIOXIDE (SILICA GEL) 2-7MM

Żel szerokoporowaty 2-7 mm



M = 60,09 g/mol (bezwodny)

CAS: 7631-86-9

WE: 231-545-4

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless,	Vapour pressure:	no data
Odour:	odourless	Density	no data
pH:	no data	Bulk density:	500-650 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

silica gel 2-7mm

CHEM*159078900

50 g	100 g	Bulk density	500 - 650 kg/m ³
250 g	500 g	Moisture (150°C, 3h)	max. 2,0 %
750 g	1 kg	The ability of adsorption of water (24h, 80% relative humidity)	min.. 5,0 %
2 kg	5 kg	Granulation	2 - 7 mm
10 kg	15 kg	Mechanical strength	min.. 85,0 %
17 kg	20 kg	Dynamic activity(100% relative humidity)	min. 70,0 %
25 kg			

SILICA GEL 2-7MM

Żel wąskoporowaty 2-7mm

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	colourless	Vapour pressure:	no data
Odour:	odourless	Density	no data
pH:	no data	Bulk density:	650-800 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

Silicon Dioxide (Silica gel) 2-7mm

CHEM*159078901

250 g	500 g	Bulk density	650 - 800 kg/m ³
750 g	1 kg	Moisture	max. 10,0 %
2 kg	5 kg	Granulation	2 - 7 mm
10 kg	15 kg	Mechanical strength	min. 92,0 %
20 kg	25 kg	Dynamic activity	
		at 40% relative humidity	min. 16,0 %
		at 100% relative humidity	min. 35,0 %

SILICA GEL ORANGE (COBALT FREE) 3-7MM

Żel wskaźnikowy 3-7mm bez kobaltu (pomarańczowy)

M = not applicable

CAS: not applicable

WE: not applicable

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	orange	Vapour pressure:	no data
Odour:	odourless	Density	no data
pH:	no data	Bulk density:	650-800 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in other solvents:	HF
Ignition temperature:	not applicable		

Silica gel orange (cobalt free)

CHEM*159055810

100 g	250 g	Bulk density	650 - 800 kg/m ³
500 g	750 g	Moisture	max. 3,0 %
		Granulation	3 - 7 mm
1 kg	2 kg	Dynamic activity	
		at 40% relative humidity	min. 20,0 %
5 kg	10 kg	Static activity	
		at 20% relative humidity	8,0 – 13,0 %
15 kg	17.5 kg	at 35% relative humidity	13,0 – 20,0 %
20 kg		at 50% relative humidity	20,0 – 25,0 %

SILICA GEL WITH MOISTURE INDICATOR (WITH COBALT) 1-4 MM

Żel wskaźnikowy z kobaltem 1-4mm

SiO₂

M = not applicable

CAS: not applicable

WE: not applicable



H: 350i

P: 201, 281, 308+313

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	blue	Vapour pressure:	no data
Odour:	odourless	Density	no data
pH:	no data	Bulk density:	650 - 850 kg/m ³
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	insoluble
Auto-ignition temperature:	not applicable	in other solvents:	no data
Ignition temperature:	not applicable		

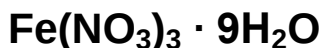
Silica gel with moisture indicator (with cobalt) 1-4 mm

CHEM*159078902

250 g	500 g	Bulk density	650 - 850 kg/m ³
750 g	1 kg	Moisture (150°C, 3h)	max. 1,0 %
2 kg	5 kg	Granulation	1 - 4 mm
10 kg	15 kg	The ability of adsorption of water (24h at 80% relative humidity)	min. 20,0 %

IRON (III) NITRATE 9 HYDRAT

Żelaza (III) azotan 9hydrat



M = 404,00 g/mol

CAS: 7782-61-8

WE: 233-899-5



H: 272, 315, 319
P: 302+352, 305+351+338
RID/ADR: 5.1, III UN: 1466



Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	violet	Vapour pressure:	no data
Odour:	nitric acid	Density	1,68 g/cm ³ (20°C)
pH:	approx 1,3 (100 g/l H ₂ O, 20°C)	Bulk density:	approx 900 kg/m ³
Melting point:	47°C	Solubility:	
Boiling point:	not applicable	in water:	solubility (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

iron (III) nitrate 9 hydrat pure

CHEM*429040700

10 g	25 g	Appearance	violet crystals
50 g	100 g	Assay	min. 98,0 %
250 g	500 g	Chlorides (Cl)	max. 0,002 %
1 kg		Sulphates (SO ₄)	max. 0,01 %
		Zinc (Zn)	max. 0,002 %
		Manganese (Mn)	max. 0,02 %
		Copper(Cu)	max. 0,005 %
		Lead (Pb)	max. 0,005 %

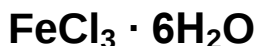
iron (III) nitrate 9 hydrat pure p.a.

CHEM*119040701

10 g	25 g	Appearance	violet crystals
50 g	100 g	Assay	min. 99,0 %
250 g	500 g	Chlorides (Cl)	max. 0,0005 %
1 kg		Sulphates (SO ₄)	max. 0,005 %
		Zinc (Zn)	max. 0,001 %
		Manganese (Mn)	max. 0,02 %
		Copper(Cu)	max. 0,005 %
		Lead (Pb)	max. 0,001 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,005 %
		Calcium (Ca)	max. 0,005 %

IRON (III) CHLORIDE 6 HYDRATE

Żelaza (III) chlorek 6 hydrat



M = 270,32 g/mol

CAS: 10025-77-1

WE: 231-729-4



H: 302, 315, 318
P: 280, 302+352, 305+351+338, 313
RID/ADR: 8, III UN: 3260



Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	yellow-brown	Vapour pressure:	no data
Odour:	chlorine	Density	1,82 g/cm ³
pH:	approx 1,8 (10 g/l, H ₂ O, 25°C)	Bulk density:	600-1200 kg/m ³
Melting point:	37°C	Solubility:	
Boiling point:	280-285°C (lit.)	in water:	920 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable	log P _(OW) :	-4 (24°C)

iron (III) chloride 6 hydrat pure

CHEM*429041803

50 g	100 g	Assay	min.. 99,0 %
250 g	500 g	Sulphates (SO ₄)	max. 0,03 %
750 g	1 kg	Lead (Pb)	max. 0,01 %
		Copper(Cu)	max. 0,01 %
2 kg	5 kg		
10 kg	15 kg		
20 kg	15 kg		

iron (III) chloride 6 hydrat pure p.a.

CHEM*119041804

50 g	100 g	Assay	min.. 99,0 %
250 g	500 g	Sulphates (SO ₄)	max. 0,02 %
750 g	1 kg	Arsenic (As)	max. 0,0005 %
		Lead (Pb)	max. 0,005 %
2 kg	5 kg	Copper(Cu)	max. 0,005 %
10 kg	15 kg		
25 kg			

IRON (III) CHLORIDE SOLUTIONS

(C < 25%)

Żelaza (III) chlorek roztwory

FeCl₃

M = 162,23 g/mol

CAS: 7705-08-0

WE: 231-729-4



H: 315, 318
P: 264, 280, 302+352, 305+351+338
RID/ADR: 8, III UN: 2582



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	yellow	Explosion limits:	no data
Odour:	no data	Vapour pressure:	no data
pH:	no data	Density	approx 1,182 g/cm ³ (20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data

iron (III) chloride approx 20% purified

CHEM*529041510

100 ml	250 ml
500 ml	1 l
2.5 l	3 l
5 l	10 l
20 l	40 l
60 l	

Assay

approx 20,0 %

Density (20°C)

approx 1,182 g/cm³

IRON (III) CHLORIDE SOLUTIONS

(C ≥ 25%)

Żelaza (III) chlorek roztwory



M = 162,23 g/mol

CAS: 7705-08-0

WE: 231-729-4



H: 302, 315, 318
P: 280, 302+352, 305+351+338, 313
RID/ADR: 8, III UN: 2582



Physical and chemical properties:

Character:	liquid	Ignition temperature:	no data
Colour:	yellow	Explosion limits:	no data
Odour:	no data	Vapour pressure:	no data
pH:	no data	Density	(20°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	no data	in organic solvents:	no data

iron (III) chloride approx 30% purified

CHEM*529041509

100 ml	250 ml	Assay	approx 30,0 %
500 ml	1l	Density (20°C)	approx 1,291 g/cm ³
2.5 l	3 l		
5 l	10 l		
20 l	40 l		
60 l			

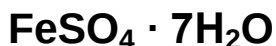
iron (III) chloride approx 40% purified

CHEM*529041508

100 ml	250 ml	Assay	approx 40,0 %
500 ml	1l	Density (20°C)	approx 1,417 g/cm ³
2.5 l	3 l		
5 l	10 l		
20 l	40 l		
60 l	luz		

IRON (II) SULPHATE 7 HYDRATE

Żelaza (II) siarczan 7 hydrat



M = 278,02 g/mol

CAS: 7782-63-0

WE: 231-753-5



H: 302, 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	green	Vapour pressure:	no data
Odour:	odourless	Density	1,89 g/cm ³ (20°C)
pH:	3,0 – 4,0 (50 g/l H ₂ O, 20°C)	Bulk density:	600 kg/m ³
Melting point:	64°C	Solubility:	
Boiling point:	300°C	in water:	approx 400 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

iron (II) sulphate 7 hydrat purified

CHEM*529028406

5 kg	15 kg	Appearance	green crystals
25 kg		Assay	min. 95,0 %
		Copper(Cu)	max. 0,01 %
		Lead (Pb)	max. 0,2 %
		Iron (III)	max. 0,5 %

iron (II) sulphate 7 hydrat pure

CHEM*429028406

100 g	250 g	Appearance	green crystals
500 g	750 g	Assay	99,0 - 104,5 %
1 kg	2 kg	Substances insoluble in water	max. 0,02 %
5 kg	10 kg	pH (5%, 20°C)	3,0 - 4,0
15 kg	25 kg	Chlorides (Cl)	max. 0,01 %
		Arsenicic (As)	max. 0,0005 %
		Zinc (Zn)	max. 0,05 %
		Manganese (Mn)	max. 0,1 %
		Copper(Cu)	max. 0,005 %
		Lead (Pb)	max. 0,01 %
		Iron Fe (III)	max. 0,2 %

iron (II) sulphate 7 hydrat pure p.a.**CHEM*119028407**

50 g	100 g	Appearance	green crystals
250 g	500 g	Assay	99,5 - 104,5 %
1 kg	2 kg	Substances insoluble in water	max. 0,01 %
5 kg		pH (5%, 20°C)	3,0 - 4,0
		Total nitrogen(N)	max. 0,001 %
		Chlorides (Cl)	max. 0,001 %
		Phosphates(PO ₄)	max. 0,001 %
		Arsenic (As)	max. 0,0002 %
		Zinc (Zn)	max. 0,005 %
		Magnesium (Mg)	max. 0,005 %
		Manganese (Mn)	max. 0,05 %
		Copper(Cu)	max. 0,0025 %
		Lead (Pb)	max. 0,005 %
		Potassium (K)	max. 0,005 %
		Sodium (Na)	max. 0,01 %
		Calcium (Ca)	max. 0,01 %
		Iron Fe (III)	max. 0,025 %

IRON (II) SULPHATE 30% SOLUTION

Żelaza (II) siarczan 30%



M = 151,95 g/mol

CAS: 7720-78-7

WE: 231-753-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Colour:	green	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	no data
pH:	3,0 – 4,0 (20°C)	Density	(18°C)
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

iron (II) sulphate 30% solution

CHEM*529028408

500 ml	1 l	Assay	30 ± 1%
2.5 l	3 l		
5 l	10 l		
20 l	30 l		
30 l			

IRON (II) SULPHATE STANDARD SOLUTION ($C \leq 2 \text{ MOL/L}$)

Żelaza (II) siarczan roztwory mianowane

FeSO₄

M = 151,91 g/mol

CAS: 7720-78-7

WE: 231-753-5

H: not applicable

P: not applicable

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	liquid	Ignition temperature:	not applicable
Colour:	green	Explosion limits:	not applicable
Odour:	odourless	Vapour pressure:	no data
pH:	3,0 – 4,0 (20°C)	Density	not applicable
Melting point:	no data	Solubility:	
Boiling point:	no data	in water:	soluble
Auto-ignition temperature:	not applicable	in organic solvents:	no data

iron (II) sulphate standard solution 0,05 mol/l

CHEM*819028407

100 ml	250 ml	Titer	0,0498 – 0,0502 mol/l
500 ml	1 l		

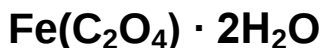
iron (II) sulphate standard solution 0,1 mol/l

CHEM*819028408

100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1 l		

IRON (II) OXALATE 2 HYDRATE

Żelaza (II) szczawian 2 hydrat



M = 179,89 g/mol

CAS: 6047-25-2

WE: 208-217-4



H: 302, 312

P: 262

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	no data
Colour:	yellow	Vapour pressure:	no data
Odour:	no data	Density	2,28 g/cm ³
pH:	no data	Bulk density:	no data
Melting point:	150°C	Solubility:	
Boiling point:	no data	in water:	no data
Auto-ignition temperature:	no data	in organic solvents:	no data
Ignition temperature:	no data		

iron (II) oxalate 2 hydrat pure

CHEM*429049200

25 g	50 g	Assay	min.. 98,0 %
100 g	250 g	Chlorides (Cl)	max. 0,01 %
500 g	750 g	Heavy metals(as Pb)	max. 0,02 %
		Sulphates (SO ₄)	max. 0,2 %
1 kg			

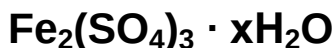
iron (II) oxalate 2 hydrat pure p.a.

CHEM*119049209

25 g	50 g	Assay	min.. 99,0 %
100 g	250 g	Chlorides (Cl)	max. 0,005 %
500 g	750 g	Heavy metals(as Pb)	max. 0,01 %
		Sulphates (SO ₄)	max. 0,1 %
1 kg			

IRON (III) SULPHATE HYDRAT

Iron (III) sulfate hydrate



M = 399,88 g/mol (bezwodny)

CAS: 15244-10-7

WE: 233-072-9



H: 302, 315, 319

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	yellow	Vapour pressure:	no data
Odour:	odourless	Density	~ 2,97 g/cm ³ (20°C)
pH:	2,5 - 3,8	Bulk density:	~ 850 kg/m ³
Melting point:	~ 300°C	Solubility:	
Boiling point:	no data	in water:	256 g/l (20°C)
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		

iron (III) sulphate hydrat pure

CHEM* 429048800

25 g	50 g	Assay [as Fe ₂ (SO ₄) ₃]	~75 %
100 g	250 g	Chlorides (Cl)	max. 0,02 %
500 g	1 kg	Zinc (Zn)	max. 0,2 %
2 kg	5 kg	Iron Fe (II)	max. 0,2 %
10 kg	15 kg		
25 kg			

iron (III) sulphate hydrat pure p.a.

CHEM*119048800

25 g	50 g	Assay [as Fe ₂ (SO ₄) ₃]	~75 %
100 g	250 g	Substances insoluble in H ₂ SO ₄	max. 0,025 %
500 g	1 kg	Nitrate (NO ₃)	max. 0,02 %
2 kg	5 kg	Chlorides (Cl)	max. 0,01 %
10 kg	15 kg	Copper(Cu)	max. 0,005 %
25 kg		Potassium (K)	max. 0,01 %
		Sodium (Na)	max. 0,05 %
		Iron Fe (II)	max. 0,1 %

IRON (III) OXIDE RED

Żelaza (III) tlenek



M = 159,69 g/mol

CAS: 1309-37-1

WE: 215-168-2



H: 315, 319, 335

P: 302+352, 305+351+338

RID/ADR: not applicable UN: not applicable

Physical and chemical properties:

Character:	solid	Explosion limits:	not applicable
Colour:	red/brown	Vapour pressure:	no data
Odour:	odourless	Density	5,24 g/cm ³
pH:	approx 5 (40 g/l H ₂ O, 20°C)	Bulk density:	approx 700 kg/m ³
Melting point:	1565°C	Solubility:	
Boiling point:	decomposition	in water:	insoluble
Auto-ignition temperature:	not applicable	in other solvents:	HCl, H ₂ SO ₄
Ignition temperature:	not applicable		

iron (III) oxide red pure

CHEM*429049607

100 g	250 g	Assay	min. 96,0 %
500 g	1 kg	Loss on roasting	max. 0,5 %
5 kg	10 kg	Substances insoluble in water	max. 1,0 %
15 kg	25 kg	Phosphates(PO ₄)	max. 0,3 %
		Sulphates (SO ₄)	max. 0,5 %
		Manganese (Mn)	max. 0,25 %

iron (III) oxide red pure p.a.

CHEM*119049608

100 g	250 g	Moisture	max. 0,5 %
500 g	1 kg	Loss on roasting	max. 0,25 %
5 kg	10 kg	Substances insoluble in water	max. 0,5 %
		Phosphates(PO ₄)	max. 0,15 %
		Sulphates (SO ₄)	max. 0,25 %
		Manganese (Mn)	max. 0,1 %

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