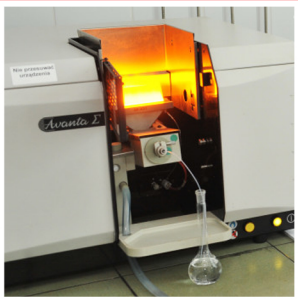
FIRMA CHEMPUR®

CATALOGUE
2011-2014













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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

CH_3CHO

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_2O, 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 | 250 ml | 500 ml | 1 l

Assay (GC)	min. 99,0 %
Residue on evaporation	max. 0,01 %
Lead (Pb)	max. 0,001 %
Iron (Fe)	max. 0,001 %

acetaldehyde pure p. a. — CHEM*421002709

50 ml | 100 ml | 250 ml | 500 ml | 1 l

Assay (GC)	min. 99,5 %
Residue on evaporation	max. 0,005 %
Lead (Pb)	max. 0,0005 %
Iron (Fe)	max. 0,0005 %

ACETANILIDE

Acetanilid

C_8H_9NO

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
100 g | 250 g
500 g | 1 kg

Appearance	colourless crystals
Assay	min. 98,5 %
Melting point	113 - 116°C
Residue on ignition	max. 0,05%

acetanilide pure p. a. **CHEM*111009706**

25 g | 50 g
100 g | 250 g
500 g | 1 kg

Appearance	colourless crystals
Assay	99,0 - 100,5 %
Melting point	113 - 115°C
Acidity (as CH_3COOH)	max. 0,05%
Residue on ignition	max. 0,03%

ACETONE

Aceton

CH_3COCH_3

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 | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	transparent
Density (20°C)	approx 0,791 g/cm^3
Acidity	max. 0,005 %
Water	max. 0,6 %
Beginning of the distillation	56,0 ^{o}C
End of distillation	56,4 ^{o}C
Solubility in water	total
Non-volatile residue	max. 0,001 %

acetone pure — CHEM*421024803

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay C_3H_6O	min. 99,0 %
Alcohols CH_3OH and C_2H_5OH	max. 0,05 %
Non-volatile residue	max. 0,001 %
Acidity (as CH_3COOH)	max. 0,003 %
Alkalinity (as NH_3)	max. 0,001 %
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_3H_6O	min. 99,5 %
1 l	2.5 l	Organic substances insoluble in water	passes test
3 l	5 l	Alcohols CH_3OH i C_2H_5OH	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_3COOH)	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_3COOH)	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 %
2.5 l		Non-volatile matter	max. 0,0005 %
		Water (KF)	max. 0,2 %
		Acidity (as CH_3COOH)	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 %
2.5 l		Non-volatile matter	max. 0,0005 %
		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

Acetonitryl

CH_3CN

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	log P_{OW}:	-0,34
Ignition temperature:	2°C	Vapor density:	1,42
Explosion limits:		Critical temperature:	274,7°C
bottom:	3% v/v	Critical pressure:	4,83 MPa
top:	16% v/v	Refractive index (20°C):	1,344
viscosity (20°C):	0,357 mPa·s		

acetonitrile pure p. a. **CHEM*111026402**

500ml | 1 l | 2.5 l | 3 l | 5 l | 20 l | 60 l

Assay	min. 99,5 %
Residue on evaporation	max. 0,001 %
Water	max. 0,1 %
Acidity (as CH_3COOH)	max. 0,005meq/g
Heavy metals (as Pb)	max. 0,00001 %
Iron (Fe)	max. 0,00001 %

acetonitrile HPLC **CHEM*611026403**

500ml | 1 l | 2.5 l

Assay (GC)	min. 99,9 %
Non-volatile matter	max. 0,0005 %
Water (KF)	max. 0,02 %
Acidity (as CH_3COOH)	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 %
2.5 l		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)	
		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

$C_{22}H_{23}N_3O_9$

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_2O, 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%

$NH_3 \cdot H_2O$

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%

$NH_3 \cdot H_2O$

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%

$NH_3 \cdot H_2O$

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%

$NH_3 \cdot H_2O$

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%

$NH_3 \cdot H_2O$

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 irrirating	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
1 l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l

Assay NH_3	24 – 28 %
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 30-32%

Amoniak, roztwór 30-32%

$NH_3 \cdot H_2O$

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 5 l

Assay NH_3	30,0 – 32,0 %
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 5 l

Assay NH_3	30,0 – 32,0 %
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

$NH_3 \cdot H_2O$

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

ammonium hydroxide standard solution 2 mol/l **CHEM*801349638**

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

AMMONIUM HYDROXIDE STANDARD SOLUTIONS (3 ≤ C ≤ 5 MOL/L)

Amoniak, roztwory mianowane (3 ≤ C ≤ 5 MOL/L)

$NH_3 \cdot H_2O$

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 | 2.5 l | 3 l | 5 l

Titer 2,988 – 3,012 mol/l

ammonium hydroxide standard solution 5 mol/l **CHEM*801349642**

500 ml | 1 l | 2.5 l | 3 l | 5 l

Titer 4,98 – 5,02 mol/l

AMMONIUM NITRATE

Amonu azotan

NH_4NO_3

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, ammonium hydroxide; ethanol, acetone
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium nitrate pure **CHEM*421369900**

50 g	100 g
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
20 kg	

Assay	min. 99,0 %
Arsenic (As)	max. 0,0001 %
Calcium (Ca)	max. 0,005 %
Nitrite (NO_2)	max. 0,0008 %
Iron (Fe)	max. 0,001 %
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^{o}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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
20 kg	

Assay	min. 99,5 %
Arsenic (As)	max. 0,00005 %
Magnesium (Mg)	max. 0,001 %
Calcium (Ca)	max. 0,003 %
Nitrite (NO_2)	max. 0,0004 %
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^{o}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

$C_6H_5COONH_4$

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_2O, 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 250g 500g 750g 1kg

Assay	min. 97 %
Reaction	passes test
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 250g 500g 750g 1kg

Assay	98-100,5 %
Reaction	passes test
pH (5%, 20^{o}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

NH_4Cl

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; (250°C): 67 hPa
Colour:	white		
Odor:	odorless	Density:	1,53 g/cm^3 (20°C)
pH:	4,5–5,5 (50 g/l H_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
Residue on ignition (as SO_4)	max. 0,05 %
Sulphates (SO_4)	max. 0,01 %
Phosphates (PO_4)	max. 0,002 %
Iron (Fe III)	max. 0,001 %
Calcium (Ca)	max. 0,004 %
Magnesium (Mg)	max. 0,0025 %
Heavy metals (as Pb)	max. 0,002 %
Organic substances	passes test
pH (5%, 20^{o}C)	4,5 - 6

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

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	99,5 %
Substances insoluble in water	max. 0,005 %
Residue on ignition (as SO_4)	max. 0,05 %
Nitrate (NO_3)	max. 0,0006 %
Sulphates (SO_4)	max. 0,002 %
Phosphates (PO_4)	max. 0,001 %
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)

NH_4Cl

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

$(NH_4)_2Cr_2O_7$

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 H_2O, 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/cm^3 (20°C)
Bulk density:	1300 kg/m^3
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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 20 kg | 25 kg

Assay	min. 99,0 %
Loss on drying	max. 3 %
Chlorides (Cl)	max. 0,01 %
Sulphates (SO_4)	max. 0,05 %

ammonium dichromate pure p. a. **CHEM*111379307**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 25 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	3,0 - 4,0
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%

$(NH_4)_2Cr_2O_7$

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 20 l

Assay	15,0 ± 0,5 %
Chlorides (Cl)	max. 0,0005 %
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

$(NH_4)_2Cr_2O_7$

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 ≤ 0,1 MOL/L STANDARD SOLUTION

Amonu dichromian ≤ 0,1M roztwór mianowany

$(NH_4)_2Cr_2O_7$

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

$(NH_4)_2Cr_2O_7$

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

$(NH_4)_2Cr_2O_7$

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

NH_4F

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 $P_{O/W}$:	-4,5
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium fluoride pure **CHEM*421381400**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 96%
Chlorides (Cl)	max. 0,01%
Sulphates (SO_4)	max. 0,01%
Heavy metals (as Pb)	max. 0,002%
Iron (Fe)	max. 0,005%
Ammonium hydrogen difluoride($NH_4F \cdot HF$)	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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98%
Chlorides (Cl)	max. 0,002%
Sulphates (SO_4)	max. 0,005%
Heavy metals (as Pb)	max. 0,001%
Iron (Fe)	max. 0,001%
Ammonium hydrogen difluoride($NH_4F \cdot HF$)	max. 1,0%
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

NH_4F

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 $P_{O/W}$:	-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

$(NH_4)H_2PO_4$

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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,5 %
Substances insoluble in water	max.0,01 %
pH (5%, 20^{o}C)	4,0÷4,5
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

$(NH_4)_2HPO_4$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	7,8-8,2
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

$(NH_4)_3PO_4 \cdot 3H_2O$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0%
Ammonium hydroxide (NH_3)	23,5 - 25%
Substances insoluble in water	max. 0,01%
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0%
Ammonium hydroxide (NH_3)	23,5-25%
Substances insoluble in water	max. 0,005%
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

$NH_4Al(SO_4)_2 \cdot 12H_2O$

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_2O; 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 alcohl
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium aluminium sulfate dodecahydrate pure **CHEM*421354601**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 96,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,004 %
Iron (Fe, III)	max. 0,001 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

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

AMMONIUM TETRACHLOROCUPRATE(II) DIHYDRATE

Amonu miedzi (II) chlorek 2hydrat hydrate

$(NH_4)_2[CuCl_4] \cdot 2H_2O$

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 | 100 g | 250 g | 500 g | 1 kg

Assay	min. 98,0 %
Sulphates (SO_4)	max. 0,01 %
Iron (Fe)	max. 0,005 %

ammonium tetrachlorocuprate(II) dihydrate pure p. a. **CHEM*111362201**

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min. 99,0 %
Sulphates (SO_4)	max. 0,005 %
Iron (Fe)	max. 0,002 %

AMMONIUM MOLYBDATE TETRAHYDRATE

Ammonium molybdate 4 hydrat

$(NH_4)_6Mo_7O_{24} \cdot 4H_2O$

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_2O; 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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,03 %
Chlorides (Cl)	max. 0,002 %
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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
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%

$(NH_4)_6Mo_7O_{24}$

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 ≤ C < 0,2 MOL/L)

Amonu molibdenian roztwory mianowane

$(NH_4)_6Mo_7O_{24}$

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 | 1 l

Titer 0,0996 – 0,1004 mol/l

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

Amonu molibdenian rozwory mianowane

$(NH_4)_6Mo_7O_{24}$

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 | 1 l — Titer 0,498 – 0,502 mol/l

ammonium molybdate standard solution 1 mol/l **CHEM*811390001**

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

AMMONIUM FORMATE

Amonu mrówczan

CH_5NO_2

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_2O; 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		
Ignition temperature:	no data	in organic solvent:	no data

ammonium formate pure **CHEM*421390407**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	6,4-7,2
Residue on ignition (as SO_4)	max. 0,03 %
Chlorides (Cl)	max. 0,005 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	6,4-7,0
Residue on ignition (as SO_4)	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,005 %
Heavy metals (as Pb)	max. 0,0005 %
Iron (Fe)	max. 0,0005 %

AMMONIUM PERSULFATE

Amonu nadsiarczan

$(NH_4)_2S_2O_8$

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_2O; 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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 97,0 %
Substances insoluble in water	max. 0,02 %
Residue on ignition	max. 0,1 %
Chlorides i chlorates (Cl)	max. 0,005 %
Heavy metals (as Pb)	max. 0,002 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Acidity (as H_2SO_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

CH_3COONH_4

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 20 kg

Assay	97,0 – 102,0 %
Substances insoluble in water	max. 0,01 %
Residue on ignition (as SO_4)	max. 0,02 %
Chlorides (Cl)	max. 0,001 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	97,0 – 100,0 %
pH (5%,20^{o}C)	6,7 - 7,3
Substances insoluble in water	max. 0,0025 %
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

NH_4SCN

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_2O, 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		
Ignition temperature:	not applicable	in organic solvent:	no data

ammonium thiocyanate pure **CHEM*421395809**

10g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 20 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	4,5 - 6,0
Residue on ignition (as SO_4)	max. 0,05 %
Iodine consuming substances	max. 0,005 %
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 | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	4,5 - 6,0
Residue on ignition (as SO_4)	max. 0,02 %
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

NH_4SCN

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_2O, 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

NH_4SCN

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

$(NH_4)_2SO_4$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 97,0 %
Substances insoluble in water	max. 0,01 %
Residue on ignition	max. 0,06 %
Acidity (H_2SO_4)	max. 0,05 %
Chlorides (Cl)	max. 0,002 %
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^{o}C)	4,0 – 6,0

ammonium sulfate pure p. a. **CHEM*111397200**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,005 %
Residue on ignition	max. 0,02 %
Chlorides (Cl)	max. 0,001 %
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^{o}C)	5,0 – 6,0

AMMONIUM SULFATE STANDARD SOLUTIONS

Amonu siarczan roztwory mianowane

$(NH_4)_2SO_4$

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

ammonium sulfate standard solution 0,5 mol/l **CHEM*801397203**

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

ammonium sulfate standard solution 1 mol/l **CHEM*801397202**

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

AMMONIUM OXALATE MONOHYDRATE

Amonu szczawian 1 hydrat

$(NH_4)_2C_2O_4 \cdot H_2O$

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_2O,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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,8 %
Substances insoluble in water	max. 0,005 %
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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Ammonium hydroxide (NH_3)	min. 30,0 %
Substances insoluble in water	max. 0,01 %
Residue on ignition (as SO_4)	max. 0,2 %
Chlorides (Cl)	max. 0,002 %
Sulphates (SO_4)	max. 0,01 %
Arsenic (As)	max. 0,001 %
Iron (Fe)	max. 0,001 %
Heavy metals (as Pb)	max. 0,002 %

ammonium carbonate pure p. a. **CHEM*111403608**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Ammonium hydroxide (NH_3)	min. 31,0 %
Substances insoluble in water	max. 0,005 %
Residue on ignition (as SO_4)	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,005 %
Arsenic (As)	max. 0,0005 %
Iron (Fe)	max. 0,0005 %
Heavy metals (as Pb)	max. 0,001 %

AMMONIUM L-TARTRATE

Amonu winian L(+)

$(NH_4)_2C_4H_4O_6$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Residue on ignition	max. 0,1 %
Chlorides (Cl)	max. 0,01 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Residue on ignition	max. 0,05 %
pH (5%, 20^{o}C)	5,0 – 7,0
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

$NH_4F \cdot HF$

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:	approx700 kg/m^3
pH:	approx. 3,5 (50 g/l H_2O, 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 $P_{O/W}$:	-4,5
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium hydrogen difluoride purified **CHEM*321381400**

3 kg 5 kg 10 kg 25 kg

Assay	min. 90,0 %
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 250 g 500 g 750 g 1 kg 2 kg 3 kg 5 kg 10 kg 15 kg 20 kg 25 kg

Assay	min. 93,0 %
Residue on ignition (as SO_4)	max. 0,05 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,05 %
Zinc (Zn)	max. 0,001 %
Copper (Cu)	max. 0,001 %
Lead (Pb)	max. 0,001 %
Iron (Fe)	max. 0,005 %
Appearance	colourless crystals

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

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 95,0 %
Residue on ignition (as SO_4)	max. 0,02 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,01 %
Zinc (Zn)	max. 0,0001 %
Copper (Cu)	max. 0,0001 %
Lead (Pb)	max. 0,0005
Iron (Fe)	max. 0,001 %
Appearance	colourless crystals

AMMONIUM BICARBONATE

Amonu wodorowęglan

$(NH_4)HCO_3$

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_2O, 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 $P_{O/W}$:	-2,4
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

ammonium bicarbonate pure **CHEM*421403709**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	98,0 – 101,0 %
Tar substances	passes test
Iron (Fe)	max. 0,0005 %
Calcium (Ca)	max. 0,005 %
Heavy metals (as Pb)	max. 0,001 %
Arsenic (As)	max. 0,0001 %
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, 250 g, 500 g, 1 kg, 5 kg, 10 kg	
Assay	min. 99,0 %
Cobalt (Co)	max. 0,0005 %
Substances insoluble in water	max. 0,005 %
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

$(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$

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_2O 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		
Ignition temperature:	not applicable	in organic solvent:	no data

ammonium iron(II) sulfate hexahydrate pure **CHEM*421366004**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	98,0 – 101,0 %
Substances insoluble in H_2SO_4	max. 0,01 %
Chlorides (Cl)	max. 0,005 %
Phosphates (PO_4)	max. 0,005 %

ammonium iron(II) sulfate hexahydrate pure p. a. **CHEM*111366001**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,01 %
Iron (Fe, III)	max. 0,01 %
Chlorides (Cl)	max. 0,002 %
Phosphates (PO_4)	max. 0,003 %
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

$(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$

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_2O, 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		
Ignition temperature:	not applicable	in organic solvent:	no data

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

$(NH_4)_2Fe(SO_4)_2$

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 | 1 l — Titer 0,00996 – 0,01004 mol/l

ammonium iron (II) sulfate 0,05 mol/l **CHEM*811366002**

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

ammonium iron (II) sulfate 0,1 mol/l **CHEM*811366000**

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

ammonium iron (II) sulfate 0,125 mol/l **CHEM*811366003**

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

ammonium iron (II) sulfate 0,25 mol/l **CHEM*811366001**

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

$NH_4Fe(SO_4)_2 \cdot 12H_2O$

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_2O, 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 250g 500g 750g 1kg

Assay	97,0 – 102,0 %
Substances insoluble in water	max. 0,015 %
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 100 g 250g 500g 750g 1kg

Assay	98-101 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	min. 1,3
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

$C_7H_{14}O_2$

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_2O (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 | 500 ml | 1 l | 5 l

Assay	min. 98,0 %
Density (20°C)	0,873 - 0,876 g/cm^3
Water	max. 0,25 %
Acidity (as CH_3COOH)	max. 0,02 %
Residue on evaporation	max. 0,01 %
Organic substances	passes test

amyl acetate pure p. a. **CHEM*111435400**

100 ml | 250 ml | 500 ml | 1 l

Assay	min. 98,5 %
Density (20°C)	0,874 - 0,876 g/cm^3
Water	max. 0,2 %
Acidity (as CH_3COOH)	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

$C_6H_5NH_2$

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_2O, 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 $P_{O/W}$:	0,94
Explosion limits:			
bottom:	1,3% v/v		

aniline pure **CHEM*421458307**

50 ml | 100 ml | 250 ml | 500 ml | 1 l

Assay (GC)	min. 99,5 %
Density (20°C)	1,022-1,025 g/cm^3
Water	max. 0,3 %
Residue on ignition (as SO_4)	max. 0,01 %

aniline pure p. a. **CHEM*111458308**

50 ml | 100 ml | 250 ml | 500 ml | 1 l

Assay (GC)	min. 99,7 %
Density (20°C)	1,022-1,023 g/cm^3
Water	max. 0,2 %
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Form	liquid
Colour	yellow
Odor	acetic
Density (20°C)	approx. 1,1 g/cm^3
Appearance	clear liquid
Assay HCl	approx 15,0 %

ANTIMONY (III) CHLORIDE

Antymonu (III) chlorek

$SbCl_3$

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 | 50 g | 100 g | 250 g | 500 g | 750 g

Assay	min. 99,0 %
Arsenic (As)	max. 0,02 %
Lead (Pb)	max. 0,005 %
Iron (Fe)	max. 0,002 %

antimony (III) chloride pure p. a. **CHEM*111482500**

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g

Assay	min. 99,0 %
Sulphates (SO_4)	max. 0,005 %
Arsenic (As)	max. 0,01%
Copper (Cu)	max. 0,001 %
Lead (Pb)	max. 0,003 %
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

Sb_2O_3

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 | 50 g | 100 g | 250 g | 500 g | 750 g

Appearance	white powder
Assay	min. 98,0 %
Chlorides (Cl)	max. 0,1%
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 | 50 g | 100 g | 250 g | 500 g | 750 g

Appearance	white powder
Assay	min. 99,0 %
Chlorides (Cl)	max. 0,05%
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 | 200 ml | 250 ml | 500 ml | 1 l | 2,5 l

Refractive index (20°C) 1,522-1,530

BARIUM NITRATE

Baru azotan

$Ba(NO_3)_2$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
Chlorides (Cl)	max. 0,005 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0%
Substances insoluble in water	max. 0,01%
Chlorides (Cl)	max. 0,002%
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

$BaCl_2$

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 | 100 g | 250 g | 500 g | 1 kg

Assay	99,0 ÷102,0 %
Iron (Fe)	max. 0,001 %
Calcium (Ca)	max. 0,2 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min. 99,0 %
Iron (Fe)	max. 0,0002 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$BaCl_2 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	99,0 ÷ 102,0 %
Iron (Fe)	max. 0,001 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Iron (Fe)	max. 0,0002 %
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)	max. 0,0005 %
Strontium (Sr)	max. 0,01 %
Appearance	white crystals

BARIUM CHLORIDE
ANALYTICAL WEIGHED AMOUNT

Baru chlorek odważka analityczna

$BaCl_2 \cdot 2H_2O$

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_2O, 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

$BaCl_2$

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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay 5,0 ± 0,1 %
Density approx 1,0434 g/cm^3

barium chloride 10% **CHEM*811579107**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay 10,0 ± 0,5 %
Density approx 1,0921 g/cm^3

barium chloride 20% **CHEM*811579106**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay 20,0 ± 0,5 %
Density approx 1,2031 g/cm^3

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

Baru chlorek, roztwory mianowane

$BaCl_2$

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 MOL/L)

Baru chlorek, roztwory mianowane

$BaCl_2$

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

$BaCrO_4$

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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,2 %
Chlorides (Cl)	max. 0,1 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,1 %
Chlorides (Cl)	max. 0,05 %
Carbonate (CO_3)	max. 0,05 %
Iron (Fe)	max. 0,003 %
Soluble chromate (as CrO_3)	max. 0,05 %
Appearance	yellow, crystalline powder

BARIUM ACETATE

Baru octan

$Ba(CH_3COO)_2$

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_2O)	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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,04 %
Acidity (CH_3COOH)	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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0%
Substances insoluble in water	max. 0,02%
Acidity (CH_3COOH)	max. 0,1%
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

$BaSO_4$

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_2O)	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 | 500 g | 750 g | 1 kg | 3 kg | 5 kg | 10 kg

Iron (Fe)	max. 0,01%
Heavy metals (as Pb)	max. 0,005%
Arsenic (As)	max. 0,0003%
Barium salts soluble in water	passes test
Phosphates (PO_4)	max. 0,01%
Chlorides (Cl)	max. 0,01%
Nitrate (NO_3)	max. 0,01%
Acidity (as H_2SO_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 | 250 g | 500 g | 750 g | 1 kg

Substances soluble in HCl	max. 0,15 %
Alkalinity	passes test
Acidity (H_2SO_4)	max. 0,01 %
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

BaS_2O_3

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 in ethanol
Ignition temperature:	not applicable		

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

$BaCO_3$

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_2O, 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 | 500 g | 750 g | 1 kg | 2 kg | 10 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,1 %
Hydroxides and carbonate soluble in water	max. 0,05 %
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 | 500 g | 750 g | 1 kg | 2 kg | 10 kg | 25 kg

Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,02 %
Hydroxides and carbonate soluble in water	max. 0,02 %
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

$Ba(OH)_2 \cdot 8H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 95,0 %
Carbonate (as $BaCO_3$)	max. 3 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0 %
Carbonate (as$BaCO_3$)	max. 2 %
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

$Ba(OH)_2$

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 1l Titer 0,0498 – 0,0502 mol/l

barium hydroxide standard solution 0,1 mol/l **CHEM*811599401**

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

BARIUM HYDROXIDE
STANDARD SOLUTIONS (0,3 < C ≤ 0,6 MOL/L)

Baru wodorotlenek roztwory mianowane

$Ba(OH)_2$

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, 1l	Titer	0,498 – 0,502 mol/l

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

Baru wodorotlenek roztwory mianowane

$Ba(OH)_2$

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
1l		

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	Maximum of absorption (methanol)	min. 648 nm
25 g	50 g		
75 g	100 g		

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 | 250 ml | 500 ml | 1 l

Assay of alcohol	passes test
Assay of stain	passes test

BENZALDEHYDE

Benzaldehyd

C_7H_6O

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_2O, 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		
Explosion limits:		log P($_{o/w}$):	1,48
bottom:	1,4 % v/v		

benzaldehyde pure — CHEM*421615306

50 ml | 100 ml | 250 ml | 500 ml | 1 l

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

benzaldehyde pure p.a. — CHEM*111615307

50 ml | 100 ml | 250 ml | 500 ml | 1 l

Assay (GC)	min. 99,0 %
Nitrobenzene ($C_6H_5NO_2$)	max. 0,001 %
Acids (as benzoic acid)	max. 1,0 %
Lead (Pb)	max. 0,0001 %
Potassium (K)	max. 0,002 %
Sodium (Na)	max. 0,002 %
Iron (Fe)	max. 0,0001 %

BENZENE

Benzen

C_6H_6

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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay	min. 99,5 %
Temperature of crystallization	min. 5 °C
Water	max. 0,1 %
pH of water extract	neutral
Residue on evaporation	max. 0,005 %
Darkening substances under the influence H_2SO_4	passes test
Tiofen (C_4H_4S)	max. 0,0005 %
Total sulfur (S)	max. 0,001 %

benzene pure p.a. — CHEM*111625000

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	min. 99,7 %
Colour	max. 10 Hazen
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_2SO_4	passes test
Tiofen (C_4H_4S)	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

$C_6H_5CH_2OH$

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 | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay (GC)	min. 97,0 %
Colour	max. 20Hazen
Refractive index	1,537 – 1,543
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay (GC)	min. 99,5 %
Colour	max. 10Hazen
Refractive index	1,538 – 1,541
Acidity (asbenzoic 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, C_{6-11}, 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		
Melting point:	<-20°C	Density:	max. 0,775 g/cm^3 (20°C)
Boiling point:	63-100°C	Solubility:	
Auto-ignition temperature:	310°C	in water:	insoluble
Ignition temperature:	-7°C	in organic solvent:	soluble
Explosion limits:			

Hydrocarbons, C6-11 hydrotreated dearomatized CHEM*757651425

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

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

2, 2’ - BIPYRIDYL

2,2'-bipirydyl

$C_{10}H_8N_2$

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_2O, 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
7,5g 10g
15g 25g
50g

Appearance	crystalline white powder
Assay	99,5 – 101,0%
Melting point	min. 69 °C
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

$Bi(NO_3)_3 \cdot 5H_2O$

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_2O, 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 | 100g | 250g | 500g | 1 kg

Appearance	colourless, crystalline powder or small crystals
Assay	min. 98,0 %
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 | 50g | 100g | 250g | 500g | 1 kg

Appearance	colourless, crystalline powder or small crystals
Assay	min. 99,0 %
Substances insoluble in HNO_3	max. 0,003 %
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

$4BiNO_3(OH)_2 \cdot BiO(OH)$

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_2O, 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 50g 100g 250g 500g 1 kg

Appearance	white powder
Assay Bi	71,0 – 74,0 %
Loss on drying (105°C)	max. 3,0 %
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 50g 100g 250g 500g 1 kg

Appearance	white powder
Assay (Bi_2O_3)	79,0 – 82,0 %
Substances insoluble in HNO_3	max. 0,005 %
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

$C_{19}H_{10}Br_4O_5S$

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 $P_{O/W}$:	6,77
Ignition temperature:	no data		

Bromophenol Blue ind. **CHEM*121840408**

5 g | 10 g | 25 g | 50 g | 100 g

Solubility in ethanol	passes test
TLC test	passes test
pH range	passes test
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

$C_{19}H_{10}Br_4O_5S/C_2H_5OH$

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	Assay	approx 1 g/l
250 ml	500 ml		

BROMOTHYMOL BLUE

Błękit bromotymolowy

$C_{27}H_{28}Br_2O_5S$

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 | 25 g | 50 g | 100 g

Solubility in alcohol	total
Sensitivity to change of pH	passes test
TLC test	passes test
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

$C_{27}H_{28}Br_2O_5S/C_2H_5OH$

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 | 250 ml | 500 ml

Assay	approx 1 g/l
Colour change:	
pH 5,8	yellow
pH 7,6	blue

Bromothymol Blue solutiom 0,5% in ethanol **CHEM*211841412**

50 ml | 100 ml | 250 ml | 500 ml

Assay	approx 5 g/l
Colour change:	
pH 5,8	yellow
pH 7,6	blue

Bromothymol Blue solution 1% in ethanol **CHEM*211841413**

50 ml | 100 ml | 250 ml | 500 ml

Assay	approx 10 g/l
Colour change:	
pH 5,8	yellow
pH 7,6	blue

Bromothymol Blue solution 1,5% in ethanol **CHEM*211841414**

50 ml | 100 ml | 250 ml | 500 ml

Assay	approx 15 g/l
Colour change:	
pH 5,8	yellow
pH 7,6	blue

METHYLENE BLUE

Błękit metylenowy

$C_{16}H_{18}ClN_3S$

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_2O, 20°C)	Solubility:	
Melting point:	approx 180°C with decomposition	in water:	approx 50 g/l (20°C)
		in organic solvent:	alcohol 15 g/l, chloroform
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

methylene blue ind. **CHEM*121854808**

5 g | 10 g | 25 g | 50 g | 100 g | 250 g | 500 g

Assay	min. 82,0 %
Loss on drying (110°C)	8,0 – 16,0 %
Maximum of absorption (H_2O)	663 - 667 nm
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

$C_{16}H_{18}ClN_3S/C_2H_5OH$

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

$C_{16}H_{18}ClN_3S$

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 | 250 ml | 500ml | 1l — Assay — approx 0,1 g/l

methylene blue solution 0,1% **CHEM*121854810**

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

methylene blue solution 0,5% **CHEM*121854812**

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

methylene blue solution 1% **CHEM*121854809**

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

THYMOL BLUE

Błękit tymolowy

$C_{27}H_{30}O_5S$

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 $P_{O/W}$:	7,21
Ignition temperature:	no data	Thermal decomposition:	220°C
Vapor pressure:	no data		

thymol blue ind. CHEM*211872506

5 g | 10 g | 25 g | 50 g | 100 g | 250 g | 500 g

Solubility in alcohol	passes test
TLC test	passes test
Sensitivity to change pH	passes test
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

$C_{27}H_{30}O_5S/C_2H_5OH$

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: (etanol)	approx 425°C		

thymol blue solution 0,1% in ethanol **CHEM*211872507**

100 ml 250 ml 500 ml

Assay	approx 1 g/l
Colour change:	
pH 1,2	purple
pH 2,8	brownish
pH 7,8	green-yellow
pH 9,5	blue

BROMINE

Brom

Br_2

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 250 ml 500 ml 1 l

Assay	min. 98,5 %
Non-volatile matter	max. 0,05 %
Chlorine (Cl)	max. 0,2 %
Jodine (I)	max. 0,01 %
Sulfates (SO_4)	max. 0,01 %

bromine pure p.a. **CHEM*111923600**

50 ml 100 ml 250 ml 500 ml 1 l

Assay	min. 99,0 %
Non-volatile matter	max. 0,02 %
Chlorine (Cl)	max. 0,02 %
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

Br_2 (mixture $KBrO_3$ 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

Br_2

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

Br_2

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**

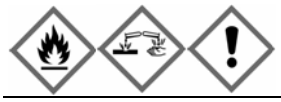
50 ml	100 ml	Assay bromine	approx 4,0 %
250 ml	500 ml		
1 l			

1 - BUTANOL

1-Butanol

$CH_3(CH_2)_3OH$

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_2O (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	Viscosity15°C:	3,379 mPa·s
top:	11,3% v/v		

butanol-1 purified **CHEM*322032302**

2.5 l | 3 l | 5 l | 10 l | 20 l | 60 l | 200 l

Assay $C_4H_{10}O$	min. 98,0 %
Distillation	
- start	min. 116°C
- end	max. 123°C
- 96% (V/V)	116 - 119°C
Aldehydes and ketones (as C_3H_7CHO)	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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay $C_4H_{10}O$	min. 99,0 %
Colour	max.10 Hazen
Density (20°C)	0,809 - 0,811 g/cm^3
Acids (as CH_3COOH)	max. 0,004 %
Aldehydes and ketones (as C_3H_7CHO)	max. 0,07 %
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**
1l	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

$C_4H_{10}O$

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_2O (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	Viscosity15°C:	4,2 mPa·s
top:	9,8% v/v		

2 - butanol pure **CHEM*422032700**

250ml	0,5l	Assay $C_4H_{10}O$	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_2SO_4	passes test
		Residue on evaporation	max. 0,002%
		Carbonyl compounds (as C_3H_7CHO)	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

C_4H_8O

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	viscosity20°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_2O, 20°C)	Solubility:	
Melting point:	-86°C	in water:	275 g/l H_2O (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_3COOH)	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_3COOH)	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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 60 l | 200 l

Assay	min. 99,5 %
Water	max. 0,05 %
Density (20°C)	0,805 - 0,807 g/cm^3
Acidity (as CH_3COOH)	max. 0,001 %
Colour	max. 10 Hazen
Non-volatile matter	max. 0,002 %

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

$C_6H_{14}O_2$

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	Viscosity20°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 $P_{O/W}$:	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 %
		Colour	max. 10 Hazen
5 l	10 l	Acids (as CH_3COOH)	max. 0,005 %
		Density	0,899 – 0,904 g/cm^3
20 l	60 l	Appearance	colourless, clear liquid

DIETHYLENE GLYCOL BUTYL ETHER

2-(2-butoksyetoksy)etanol

$C_8H_{18}O_3$

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 $P_{O/W}$:	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 %
		Colour	max. 15 Hazen
5 l	10 l	Acids (as CH_3COOH)	max. 0,01 %
		Density	0,952 – 0,957 g/cm^3
20 l	60 l	Appearance	colourless, clear liquid

n-BUTYL ACETATE

n-butylu octan

$CH_3COO(CH_2)_3CH_3$

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 | 5 l | 10 l | 20 l | 60 l | 200 l

Estrers (as butyl acetate)	min. 85,0 %
Density (20°C)	0,868 - 0,877 g/cm^3
Water	max. 0,15 %
Acidity (asCH_3COOH)	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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 60 l | 200 l

Assay	min. 98,0 %
Density (20°C)	0,876 - 0,882 g/cm^3
Water	max. 0,1 %
Acidity (as CH_3COOH)	max. 0,01 %
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_3COOH)	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

$C_7H_7ClNNaO_2S \cdot 3H_2O$

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_2O, 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 | 500 g | 1 kg

Assay (iodometry)	min. 98,0 %
Substances insoluble in C_2H_5OH	max. 2,0 %
pH (5%, 20^{o}C)	8,0 – 10,0

chloramine T trihydrate pure p. a. **CHEM*112256603**

50 g | 100 g | 250 g | 500 g | 1 kg

Assay (iodometry)	min. 99,0 %
Substances insoluble in C_2H_5OH	max. 1,5 %
pH (5%, 20^{o}C)	8,0 – 10,0

chloramine T **CHEM*522256602**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 7 kg | 10 kg | 15 kg | 20 kg

Assay (iodometry)	min. 97,0 %
Substances insoluble in C_2H_5OH	max. 2,5 %

CHLORAMINE T SOLUTION 3%

Chloramina T 3%

$C_7H_7ClNNaO_2S$

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 | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	3,0 ± 0,1 %
pH (20^{o}C)	8,0 – 10,0

CHLORAMINE T SOLUTION 6%

Chloramina T 6%

$C_7H_7ClNNaO_2S$

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
2.5 l	3 l
5 l	10 l
20 l	

Assay	6,0 ± 0,1 %
pH (20^{o}C)	8,0 – 10,0

CHLOROBENZENE

Chlorobenzen

C_6H_5Cl

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 | 5 l | 10 l | 20 l | 60 l

Appearance	colourless, clear liquid
Assay	min. 98,0 %
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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear liquid
Assay	min. 99,0 %
Colour	max. 30 Hazen
Density (20°C)	1,106 - 1,108 g/cm^3
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
500 ml	1 l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	

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

CHLOROFORM

Chloroform

$CHCl_3$

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 amylen) **CHEM*322344304**

5 l | 10 l | 20 l | 60 l | 200 l

Assay	min. 98,0 %
Stabilizer	0,0045 ÷ 0,0055 %
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 amylen) **CHEM*422344304**

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 60 l | 200 l

Assay	min. 98,0 %
Stabilizer	0,0045 ÷ 0,0055 %
Water	max. 0,02 %
Residue on evaporation	max. 0,002 %
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 impuities	passes test
Organic substances carbonizable with H_2SO_4	passes test
Free acids and fosgen (as HCl)	max. 0,0001 %
Appearance	colourless, clear liquid

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

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 60 l | 200 l

Assay	min. 98,5 %
Stabilizer	0,0045 ÷ 0,0055 %
Water	max. 0,015 %
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_2SO_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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay	min. 98,0 %
Stabilizer	0,6 - 1 %
Water	max. 0,02 %
Residue on evaporation	max. 0,002 %
Chlorides (Cl)	max. 0,0001 %
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 impuities	passes test
Organic substances carbonizable with H_2SO_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 | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay	min. 98,5 %
Stabilizer	0,6 - 1 %
Water	max. 0,015 %
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/ml
Fosgen	passes test
Metalic impuities	passes test
Organic substances carbonizable with H_2SO_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
Assay	min. 98,5 %
Stabilizer	0,6 - 1 %
Water	max. 0,015 %
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 impuities	passes test
Organic substances carbonizable with H_2SO_4	passes test
Free acids and fosgen (as HCl)	max. 0,0001 %
Appearance	colourless, clear liquid

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l

chloroform sp .pure (stabilized with ethanol)	CHEM*102480614
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_3CO)	max. 0,005 %
Fosgen	passes test
Useful to work with dithizne	passes test
Substancje ciemniejące pod wpływem H_2SO_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 impuities	passes test
Chlorides (Cl)	max. 0,0001 %

1 l | 2.5 l

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

1 l | 2.5 l

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

$CrCl_3 \cdot 6H_2O$

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 | 50 g | 75 g | 100 g | 250 g | 500 g

Assay	min. 95,0 %
Sulfates (SO_4)	max. 0,1 %
pH (5%, 20^{o}C)	2 – 3,5
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 | 50 g | 75 g | 100 g | 250 g | 500 g

Assay	min. 98,0 %
Sulfates (SO_4)	max. 0,05 %
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. 0,03 %
Calcium (Ca)	max. 0,05 %
Iron (Fe)	max. 0,01 %

CHROMIUM (VI) OXIDE

Chromu (VI) tlenek

CrO_3

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 | 1 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,2 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,25 %
Precipitated substances with NH_4OH	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_2SO_4)	passes test
250 ml	500 ml	Potassium dichromate ($K_2Cr_2O_7$)	passes test
1 l	5 l		

CYCLOHEXANE

Cykloheksan

C_6H_{12}

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 | 20 l | 60 l | 200 l

Assay	min. 98,5 %
Colour	max. 30 Hazen
Water	max. 0,1 %
Residue on evaporation	max. 0,005 %
Substances darkening under the influence of H_2SO_4	passes test
Appearance	colourless, clear liquid

cyclohexane pure CHEM*412564208

1 l | 2.5 l | 250 ml | 500 ml | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay	min. 99,0 %
Colour	max. 10 Hazen
Water	max. 0,05 %
Residue on evaporation	max. 0,003 %
Substances darkening under the influence of H_2SO_4	passes test
Appearance	colourless, clear liquid

cyclohexane pure p. a.			**CHEM*112564208**
100 ml	250 ml	Assay	min. 99,5 %
500 ml	1 l	Colour	max. 10 Hazen
		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_2SO_4	passes test
		Density (15^oC)	0,5 – 2 g/cm^3
20 l	30 l	Appearance	colourless, clear liquid
60 l			

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

$C_6H_{12}O$

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_2O, 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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	min. 97,5 %
Refractive index (20°C)	1,463 - 1,467
Appearance	colourless, clear liquid

cyclohexanol pure p. a. **CHEM*112570107**

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	min. 99,0 %
Temperature of crystallization	min. 22°C
Water	max. 0,2 %
Acidity (asCH_3COOH)	max. 0,01 %
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

$C_6H_{10}O$

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
1 l | 2.5 l
3 l | 5 l
10 l | 20 l

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

cyclohexaneon pure p. a. **CHEM*112571505**

50 ml | 100 ml
250 ml | 500 ml
1 l | 2.5 l
3 l | 5 l
10 l | 20 l

Assay	min. 99,5 %
Density (20°C)	0,945 - 0,948 g/cm^3
Colour	max. 10 Hazen
Non-volatile residue	max. 0,02 %
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_2SO_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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	soft metal
Antimony (Sb)	max. 0,04 %
Arsenic (As)	max. 0,04 %
Lead (Pb)	max. 0,05 %
Copper (Cu)	max. 0,02 %
Iron (Fe)	max. 0,01 %

ZINC NITRATE HEXAHYDRATE

Cynku azotan 6hydrat

$Zn(NO_3)_2 \cdot 6H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Free acid (as HNO_3)	max. 0,04 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
Ammonia (NH_3)	max. 0,01 %
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

$Zn(NO_3)_2$

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

$ZnCl_2$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 15 kg | 25 kg

Assay	min. 98,0 %
Oxychlorides (as ZnO)	max. 2,4 %
Cadmium (Cd)	max. 0,001 %
Copper (Cu)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water with HCl	max. 0,005 %
Total nitrogen (N)	max. 0,002 %
Sulfates (SO_4)	max. 0,002 %
Oxychlorides (asZnO)	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%

$ZnCl_2$

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 | 1 l | 2.5 l | 5 l

Assay	5,0 ± 0,1 %
Density	approx 1,0441 g/ml

ZINC CHLORIDE SOLUTION 10%

Cynku chlorek 10%

$ZnCl_2$

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 | 1 l | 2.5 l | 5 l

Assay	10,0 ± 0,5 %
Density	approx 1,0889 g/cm^3

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

Cynku chlorek, roztwory mianowane

$ZnCl_2$

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

$ZnCl_2$

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

$Zn(CH_3COO)_2 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	6,0 – 7,0
Total nitrogen (N)	max. 0,002 %
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

$ZnSO_4 \cdot 7H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 3 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	99,0 - 100,5 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	4,4 - 5,6
Total nitrogen (N)	max. 0,002 %
Chlorides (Cl)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 3 kg

Assay	99,5 - 100,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	4,4 - 5,6
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

$ZnSO_4$

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 | 1 l Titer 0,00996 – 0,01004 mol/l

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

Cynku siarczan roztwory mianowane

$ZnSO_4$

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 1 l Titer 0,01992 – 0,02008 mol/l

Zinc sulfate standard solution 0,05 mol/l **CHEM*802657503**

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

Zinc sulfate standard solution 0,1 mol/l **CHEM*802657502**

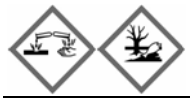
100 ml 500 ml 1 l Titer 0,0996 – 0,1004 mol/l

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

Cynku siarczan roztwory mianowane

$ZnSO_4$

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

$C_{36}H_{70}O_4Zn$

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 | 50 g | 75 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0%
Free acid	passes test
Lead (Pb)	max. 0,005%
Sodium, potassium, calcium (Na, K, Ca)	max. 0,1%
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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 99,0 %
Iron (Fe)	max. 0,001 %
Calcium (Ca)	max. 0,05 %
Sodium (Na)	max. 0,05 %
Lead (Pb)	max. 0,04 %
Copper (Cu)	max. 0,0008 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 10 kg

Assay	min. 99,5 %
Iron (Fe)	max. 0,0005 %
Calcium (Ca)	max. 0,001 %
Sodium (Na)	max. 0,001 %
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

$SnCl_2$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Assay	min. 97,0%
Substances insoluble in HCl	max. 0,05%
Sulfates (SO_4)	max. 0,01%
Arsenic (As)	max. 0,0002%
Heavy metals (Pb+Cu+Zn+Ni+Co+Mn)	max. 0,05%
Sodium, potassium, calcium (Na+K+Ca)	max. 0,05%
Iron (Fe)	max. 0,01%
Appearance	white powder

Tin (II) chloride pure p. a. **CHEM*112620001**

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,02%
Sulfates (SO_4)	max. 0,005%
Arsenic (As)	max. 0,0001%
Heavy metals (Pb+Cu+Zn+Ni+Co+Mn)	max. 0,02%
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

$SnCl_2 \cdot 2H_2O$

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_2O, 20°C)	Solubility:	
Melting point:	38°C	in water:	1187 g/l (20°C)
Boiling point:	652°C (1013hPa)	in organic so lvents:	no data
Explosion limits:	not applicable		

Tin (II) chloride dihydrate pure **CHEM*422620409**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,01 %
Sulfates (SO_4)	max. 0,01 %
Arsenic (As)	max. 0,0001 %
Heavy metals (Pb+Cu+Zn+Co+Ni+Mn)	max. 0,05 %
Sodium, potassium, calcium (Na+K+Ca)	max. 0,05 %
Iron (Fe)	max. 0,01 %

Tin (II) chloride dihydrate pure p. a. **CHEM*112620409**

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,005 %
Sulfates (SO_4)	max. 0,0025 %
Arsenic (As)	max. 0,00005 %
Heavy metals (Pb+Cu+Zn+Co+Ni+Mn)	max. 0,01 %
Sodium, potassium, calcium (Na+K+Ca)	max. 0,002 %
Iron (Fe)	max. 0,002 %

ERIOCHROME BLACK T

Czerń eriochromowa T

$C_{20}H_{12}N_3NaO_7S$

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_2O, 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
25 g	50 g
100 g	250 g
500 g	

Residue on roasting (as Na_2SO_4)	max. 20,0 %
Absorption coefficient	
$\alpha^{1\%}_{1cm}$ (pH 10,0; λ = 580 - 640 nm)	min. 400
Mg - snsitivity	min. 0,00001 g/ml
Loss on drying	max. 5,0 %
TLC test	passes test

ALIZARIN RED S

Czerwień alizarynowa S

$C_{14}H_7NaO_7S$

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_2O, 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

$C_{19}H_{14}O_5S$

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 | 7,5 g | 10 g | 15 g | 25 g | 50 g

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

CONGO RED

Czerwień Kongo

$C_{32}H_{22}N_6Na_2O_6S_2$

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_2O, 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_2O)	497 – 500 nm
15 g	25 g	Coefficient of maximum absorption P -/+ 15 nm	0,99 - 1,04
		Loss on drying (110°C)	max. 5%
		TLC test	passes test

CRESOL RED

Czerwień krezolowa

$C_{15}H_{15}N_3O_2$

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 | 7,5 g | 10 g | 15 g | 25 g | 50 g

Appearance	green powder
Molar coefficient of absorption	
E (pH 5,0; 435 nm)	min. 18500
E (pH 9,2; 575 nm)	min. 45500
Solubility in water	passes test
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

$C_{15}H_{15}N_3O_2$

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 | 25 g | 50 g | 100 g

Solubility in ethanol	passes test
TLC test	passes test
Moisture	max. 5,0 %
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

$C_{15}H_{15}N_3O_2/C_2H_5OH$

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 (ethanol)
pH:	no data		
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 (ethanol)	in water:	no data
		in organic solvents:	no data

Explosion limits:

Methyl Red 0,1% in ethanol **CHEM*212725701**

100 ml | 250 ml | 500 ml | 1 l

Assay	0,09 - 0,11 %
pH sensitivity	4,4 - 6,2

METHYL RED SODIUM SALT

Czerwień metylowa sól sodowa

$C_{15}H_{14}N_3NaO_2$

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_2O, 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 | 25 g | 50 g | 100 g

Appearance	brown powder
Molar coefficient of absorption:	
E (pH 6,2; 420÷450 nm)	min. 14000
E (pH 4,4; 510÷540 nm)	min. 28000
pH sensitivity	passes test
Solubility in water	passes test
TLC test	passes test
Residue on roasting (as Na_2SO_4)	max. 40, 0 %

NEUTRAL RED

Czerwień obojętna

$C_{15}H_{17}ClN_4$

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_2O, 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 | 25 g | 50 g | 100 g

Assay	min. 50,0 %
Maximum absorption (50% ethanol)	539 - 544 nm
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

$C_{15}H_{17}ClN_4/C_2H_5OH$

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 (ethanol)
pH:	no data		
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 (ethanol)	in water:	no data
		in organic solvents:	no data

Explosion limits:

Neutral Red 0,1% in ethanol **CHEM*212727002**

50 ml | 100 ml | 250 ml | 500 ml | 1 l

Assay	0,09 - 0,11 %
pH sensitivity:	6,8 - 8,0

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_2O
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
1l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l

Ignition temperature	13ºC
Auto-ignition temperature	365ºC
Density (20°C)	0,802 g/cm^3
Strenght	91,7 ÷ 92,3%
Residue on evaporation	max. 0,25 g/l

DENATURATED ALCOHOL - RRK12 FLUID

Denaturat - płyn 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	1l	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

$ClCH_2CH_2Cl$

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:	charactristic	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 ..... DMSO
Ignition temperature:	13°C		
Explosion limits:			
bottom:	6,2% v/v	log $P_{(w/o)}$:	1,48

1,2 -dichloroethane purified — CHEM*323192004

5 l | 10 l | 20 l | 30 l

Appearance	colourless, klarowna liquid
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
Assay (GC)	min. 99,5 %
Density (20°C)	1,246 - 1,255 g/cm^3
Water	max. 0,03 %
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

CH_2Cl_2

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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	min. 99,5 %
Colour	max. 10 Hazen
Water (KF)	max. 0,02 %
Free acid (as HCl)	max. 0,001 %
Free halogens	passes test
Non-volatile matter	max. 0,001 %

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 | 2.5 l

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

DIETHANOLOAMINE

Dietanolamina

$C_4H_{11}O_2N$

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_2O)	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		

diethanoloamine pure **CHEM*423261704**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	min. 96,0 – 103,0 %
Density (20°C)	1,085 - 1,1 g/cm^3
Refractive index (20°C)	1,476 - 1,479
Residue on roasting (as SO_4)	max. 0,1 %

The product may be crystallized. Crystallization does not affect product quality.

diethanoloamine pure p.a. **CHEM*113261705**

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	min. 99,0 – 101,0 %
Density (20°C)	1,095 - 1,098 g/cm^3
Refractive index(20°C)	1,4765 - 1,4775
Residue on roasting (as SO_4)	max. 0,05 %

The product may be crystallized. Crystallization does not affect product quality.

DIETHYLAMINE

Dietyloamina

$(C_2H_5)_2NH$

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_2O, 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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay	99,0 -107,0 %
Density (20°C)	0,704 –0,708 g/cm^3
Refractive index (20°C)	1,3840-1,3860
Boiling point (95%)	54-57°C
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 | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Assay	99,0 -105,0 %
Density (20°C)	0,704 –0,708 g/cm^3
Refractive index(20°C)	1,3840-1,3860
Boiling point (95%)	55-56°C
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

$(C_6H_5)_2NH$

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		
pH:	no data	Density:	1,16 g/cm^3 (160°C)
Melting point:	52 - 55°C	Solubility:	
Boiling point:	302°C	in water:	0,05 g/l (25°C)
Auto-ignition temperature:	640°C	in organic solvent:	ethanol - 450 g/l (20°C)
Ignition temperature:	150°C		

diphenylamine pure — CHEM*423360507

10 g | 25 g | 50 g | 75 g | 100 g | 250 g

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

diphenylamine pure p.a. — CHEM*113360508

10 g | 25 g | 50 g | 75 g | 100 g | 250 g

Appearance	colourless – yellow crystals or scales
Assay	min. 99,0 %
Melting point	min. 52°C
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

$C_{13}H_{12}N_4O$

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, benzene, chloroform
Ignition temperature:	no data		

1,5-diphenylcarbazone pure p.a. **CHEM*113371904**

1 g | 5 g | 10 g | 25 g | 50 g

Appearance	orange, crystaline powder
Assay	40,0 – 50,0 %
Solubility in ethanol	passes test
Hg(II) sensitivity	min. 0,000001 g/cm^3
Melting point	153 – 158^{o}C
Residue on roasting (as SO_4)	max. 0,1 %

DIPHENYLCARBAZONE SOLUTION 2% IN ETHANOL

Difenylokarbazon, roztwór 2% w etanolu

$C_{13}H_{12}N_4O/C_2H_5OH$

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
250 ml 500 ml

Appearance	orange solution
Assay	1,0 % ± 0,1 %

1,5-Diphenylcarbazide

1,5-difenylokarbazyd

$(C_6H_5NHNH)_2CO$

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-diphenylcarbazide pure p.a. **CHEM*113372202**

1 g | 5 g | 10 g | 25 g | 50 g

Appearance	white or pink crystaline powder
Solubility in ethanol	passes test
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%
Diphenylocarbazone and other organic impurities	passes test

N,N-DIMETHYLOFORMAMIDE

N,N-Dimetyloformamid

C_3H_7NO

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:	solube
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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay	min. 99,0 %
Density (20°C)	0,946 - 0,95 g/cm^3
Water (KF)	max. 0,1 %
Residue on evaporation	max. 0,02 %

n,n-dimethyloformamide pure p.a. — CHEM*113551200

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	min. 99,8 %
Colour	max. 10 Hazen
Density (20°C)	0,948 - 0,95 g/cm^3
Water (KF)	max. 0,05 %
Acids (as CH_3COOH)	max. 0,003 %
Base (as C_2H_7N)	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

$C_4H_8N_2O_2$

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 | 50 g | 75 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in C_2H_5OH	max. 0,05 %
Residue on roasting (as SO_4)	max. 0,1 %

dimethylglyoxime pure p.a. — CHEM*113554406

10 g | 25 g | 50 g | 75 g | 100 g | 250 g | 500 g

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in C_2H_5OH	max. 0,02 %
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

$(CH_3)_2SO$

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 | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay	min. 99,0 %
Water (KF)	max. 0,3 %

dimethyl sulfoxide pure p.a. — CHEM*113635509

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	min. 99,7 %
Density (20°C)	1,099 - 1,101 g/cm^3
Refractive index (20°C)	1,478 - 1,479
Water (KF)	max. 0,2 %

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

$C_4H_8O_2$

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_2O, 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
500 ml	1 l	Refractive index (20°C)	1,419 - 1,425
2.5 l	3 l	Free acid (as CH_3COOH)	max. 0,01 %
5 l	10 l	Peroxides (as H_2O_2)	max. 0,015 %
20 l	60 l	Residue on evaporation	max. 0,01 %

1,4 dioxane pure p.a. — CHEM*112923006

50 ml	100 ml	Density (20°C)	1,032 - 1,034 g/cm^3
250 ml	500 ml	Refractive index (20°C)	1,420 - 1,424
1 l	2.5 l	Water	max. 0,2 %
3 l	5 l	Free acid (as CH_3COOH)	max. 0,005 %
10 l	20 l	Acetal	max. 0,5 %
60 l		Peroxides (as H_2O_2)	max. 0,005 %
		Residue on evaporation	max. 0,005 %

DITHIZONE

Ditizon

$C_6H_5NHNHCSN=NC_6H_5$

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

$C_{20}H_8Br_4O_5$

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
100 g	250 g	Sensitivity	passes test
		Residue on roasting	max. 0,1%

EOSIN Y SOLUTION IN ETHANOL

Eozyna Y roztwór w etanolu

$C_{20}H_8Br_4O_5/C_2H_5OH$

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 | 500 ml | 1 l — Assay approx 1 g/l

eosin Y solution 1% in ethanol **CHEM*243768300**

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

EOSIN Y soluble in water

Eozyna żółtawa rozpuszczalna w wodzie

$C_{20}H_6Br_4Na_2O_5$

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_2O, 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

$C_{20}H_6Br_4Na_2O_5$

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

$NH_2CH_2CH_2OH$

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:	ethnol, 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

$(C_2H_5)_2O$

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, ethanol, benzene, sulfuric acid
Explosion limits:			
bottom:	1,7% v/v		

diethyl ether pure p. a. CHEM*113842106

100 ml | 200 ml | 250 ml | 500 ml | 1 l | 2.5 l | 200 l

Appearance	colourless clear liquid
Identity	passes test
Assay	min. 99,5 %
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_3COOH)	max. 0,00022 %
Aldehydes	passes test
Ethanol	max. 0,1 %
Methanol	max. 0,02 %
Peroxides (as H_2O_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÷60ºC

Eter naftowy 40÷60ºC

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÷60ºC pure — CHEM*413846904

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Density (20°C)	0,640 - 0,670 g/cm^3
Start of distilation	min. 40°C
End of distilation	max. 60°C
pH of water extract	neutral
Residue on evaporation	max. 0,002%
Aromatic hydrocarbons	max. 0,002%
Sulphur	passes test
Non-volatile matter	passes test

Petroleum ether boiling range 40÷60ºC pure p. a. — CHEM*113846900

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Density (20°C)	0,640 - 0,665 g/cm^3
Start of distilation	min. 40°C
End of distilation	max. 60°C
pH of water extract	neutral
Residue on evaporation	max. 0,001%
Aromatic hydrocarbons	max. 0,001%
Sulphur	passes test
Non-volatile matter	passes test

Petroleum ether boiling range 40÷60ºC GC for pesticide analysis — CHEM*613846901

500 ml | 1 l | 2.5 l

Water	0,02%
Acidity	max. 0,0005 meq/g
Residue on evaporation	max. 0,0005%

Petroleum ether boiling range 40÷60ºC 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÷90ºC

Eter naftowy 60÷90ºC

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÷90ºC pure — CHEM*413846905

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 20 l | 60 l | 200 l

Boiling point	60 ÷ 90°C
pH of water extract	neutral
Residue on evaporation	max. 0,002 %
Aromatic hydrocarbons	max. 0,002 %

Petroleum ether boiling range 60÷90ºC pure p. a. — CHEM*113846901

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 20 l

Boiling point	60 ÷ 90°C
pH of water extract	neutral
Residue on evaporation	max. 0,001 %
Aromatic hydrocarbons	max. 0,001 %

Petroleum ether boiling range 60÷90ºC **CHEM*757651422**

100 ml	250 ml
500 ml	1 l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	200 l

Boiling point	60 ÷ 90°C
pH of water extract	neutral
Residue on evaporation	max. 0,004 %
Aromatic hydrocarbons	max. 0,002 %

ETHYLBENZENE

Etylobenzen

C_8H_{10}

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		
Explosion limits:		log $P_{O/W}$:	3,15
bottom:	1,0% v/v		

ethylbenzene pure **CHEM*423904709**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	min. 99,5 %
Colour	max. 15 Hazen
Density (20°C)	0,866 - 0,868 g/cm^3
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 | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Appearance	colourless liquid
Assay	min. 99,9 %
Colour	max. 10 Hazen
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%

C_2H_5OH

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%

C_2H_5OH

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%

C_2H_5OH

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/cm^3

ethanol solution 40% pure p. a. **CHEM*113964802**

500 ml	Assay	min. 40,0 % v/v
	Density (20°C)	approx 0,947 g/cm^3

ETHANOL SOLUTION 50%

Etanol 50%

C_2H_5OH

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)	approx0,93 g/cm^3
	Aldehydes	max. 0,0005 %
	Methanol	max. 0,05 %
	Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 60%

Etanol 60%

C_2H_5OH

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)	approx0,909 g/cm^3
	Aldehydes	max. 0,0005 %
	Methanol	max. 0,05 %
	Higher alcohols	max. 0,001 %

ETHANOL SOLUTION 70%

Etanol 70%

C_2H_5OH

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 | 500 ml | 1 l

Assay	min. 70,0 % v/v
Density (20°C)	approx 0,885 g/cm^3
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 | 500 ml | 1 l

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

ETHANOL SOLUTION 75%

Etanol 75%

C_2H_5OH

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 | 5 l

Assay	min. 75,0 % v/v
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 | 5 l

Assay	min. 75,0 % v/v
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%

C_2H_5OH

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%

C_2H_5OH

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 | 500ml | 1 l | 5 l

Appearance	colourless, clear liquid
Assay	min. 96,0 %(V/V)
Density (20°C)	max. 0,808 g/cm^3
Refractive index (20°C)	max. 1,364
Acids (as CH_3COOH)	max. 0,003 %
Aldehydes (as CH_3CHO)	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 %
Furfurol	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, 500ml, 1 l	
Assay	min. 96,0% (V/V)
Density (20ºC)	approx 0,808 g/cm³
Water	3,1 - 4,9%
Aldehydes (as CH_3CHO)	max. 0,001%
Acids (as CH_3COOH)	max. 0,003%
Higher alcohols	max. 0,001%
Methanol (CH_3OH)	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, 500ml, 1 l, 5 l, 10 l	
Appearance	colourless, clear liquid
Assay	min. 96,0 %(V/V)
Density (20°C)	max. 0,808 g/cm^3
Refractive index (20°C)	max. 1,364
Acids (as CH_3COOH)	max. 0,002 %
Aldehydes (as CH_3CHO)	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_3CHO)	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%

C_2H_5OH

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 | 500 ml | 1 l | 5 l

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_3COOH)	max. 0,001 %
Bases (as NH_3)	max. 0,0003 %
Aldehydes (as CH_3CHO)	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 | 500 ml | 1 l | 5 l

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_3COOH)	max. 0,001 %
Bases (as NH_3)	max. 0,0003 %
Aldehydes (as CH_3CHO)	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_3COOH)	max. 0,001 %
Bases (as NH_3)	max. 0,0003 %
Aldehydes (as CH_3CHO)	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%

C_2H_5OH

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 500 ml

Assay	min. 99,9% (V/V)
Density (20ºC)	approx 0,790 g/cm^3
Water	max. 0,1%
Aldehydes (as CH_3CHO)	max. 0,0005%
Acids (as CH_3COOH)	max. 0,001%
Higher alcohols	max. 0,0005%
Methanol (CH_3OH)	max. 0,05%
Carbonyl compounds (as CH_3CHO)	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

$C_4H_8O_2$

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_3COOH)	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_3COOH)	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_3COOH)	max. 0,005 %
200 l		Non volatile matter	max. 0,0025 %
		Organic fouling	passes test
		H_2SO_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

$C_{12}H_8N_2 \cdot H_2O$

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 | 25 g | 50 g | 100 g

Assay	min. 99,5 %
Melting point	117 - 120°C
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

$C_{12}H_8N_2 \cdot HCl \cdot H_2O$

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 | 25 g | 50 g | 100 g | 200 g | 250 g

Assay	min. 99,5 %
Appearance	white or yellow powder
Water	max. 8,0 %
Residue on roasting (as SO_4)	max. 0,2 %
Fe (II) sensitivity	min. 0,0000001 g/ml
Redox test	passes test

PHENOL

Fenol

C_6H_5OH

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:	charactristic	in water:	7,6%
pH:	approx 5 (50g/l, H_2O, 20°C)	in organic solvents:	ethanol, diethyl ether, glicerol, chloroform, benzene
Melting point:	41°C		
Boiling point:	180 - 182°C	Critical temperature:	419°C
Auto - ignition temperature:	605°C	Critical pressure:	6,13 MPa
Ignition temperature:	75°C	Refractive index (41°C):	1,5418
Explosion limits:		Viscosity (45°C):	4,036 mPa·s
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

$C_{20}H_{14}O_4$

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 | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 20 kg

Appearance	white or yellow powder
Molar absorptivity coefficient:	
E (pH 9,8; 540÷560 nm)	min. 21000
Solubility in ethanol	passes test
pH sensitivity	passes test
TLC test	passes test
Residue on roasting	max. 0,2 %

PHENOLPHTHALEIN ETHANOL SOLUTION

Fenoloftaleina roztwór alkoholowy

$C_{20}H_{14}O_4/C_2H_5OH$

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
500 ml 1 l

Assay	0,09 - 0,11 %
Colour	max. 50 Hazen
pH sensitivity	passes test

phenolphthalein solution 0,2% ind. **CHEM*274145132**

100 ml 250 ml
500 ml 1 l

Assay	0,19 - 0,21 %
Colour	max. 50 Hazen
pH sensitivity	passes test

phenolphthalein solution 0,5% ind. **CHEM*274145135**

100 ml 250 ml
500 ml 1 l

Assay	0,49 - 0,51 %
Colour	max. 50 Hazen
pH sensitivity	passes test

PHENOLPHTHALEIN 1% SOLUTION IN ETHANOL

Fenoloftaleina roztwór 1% in ethanol

$C_{20}H_{14}O_4/C_2H_5OH$

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 | 500 ml | 1 l

Assay	0,9 – 1,1 %
Colour	max. 50 Hazen
pH sensitivity	passes test

PHENOLPHTHALEIN 2% SOLUTION IN ETHANOL

Fenoloftaleina roztwór 2% in ethanol

$C_{20}H_{14}O_4/C_2H_5OH$

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 | 500 ml | 1 l

Assay	1,9 – 2,1 %
Colour	max. 90 Hazen
pH sensitivity	passes test

FERROIN INDICATOR SOLUTION 1/40mol/kg

Ferroiny siarczan roztwór 1/40 molarny

$[Fe(C_{12}H_8N_2)_3]SO_4$

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_2O, 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_2SO_4 solution	1,05 - 1,06
1 l		Redox test	passes test
		Absorption spectrum	passes test

CRYSTAL VIOLET

Fiolet krystaliczny

$C_{25}H_{30}ClN_3$

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_2O, 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 maxium absorption P*15 nm	0,98 - 1,25

FLUORESCEIN

Fluoresceina

$C_{20}H_{12}O_5$

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 | 25 g | 50 g | 100 g | 250 g | 500 g

Appearance	brown powder
Percentage coefficient of absorption (1%; 1cm; 490 ± 5 nm; water + Na_2CO_3)	min. 1800
Loss on drying	max. 3,0 %
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 | 25 g | 50 g | 100 g | 500 g

Appearance	brown powder
Percentage coefficient of absorption (1%; 1cm; 490 ± 5 nm; water + Na_2CO_3)	min. 2200
Loss on drying	max. 2,0 %
Solubility in ethanol	passes test
Residue on roasting (as SO_4)	max. 0,3 %
Resorcinol	max. 3,0 %

FLUORESCEIN SOLUTION IN ETHANOL

Fluoresceina roztwór w etanolu

$C_{20}H_{12}O_5/C_2H_5OH$

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 | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Assay	1,0 ± 0,1 %
Density	approx 1,0019 g/cm^3 (18°C)

formaldehyde solution 1% pure p. a. — CHEM*114321739

500 ml | 1 l | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Assay	1,0 ± 0,1 %
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, methanol, n-butanol, n-propanol
Ignition temperature:	no data		
Explosion limits:			

formaldehyde solution 3% pure — CHEM* 424321741

1 l | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
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 | 5 l | 10 l

Appearance	colourless, clear liquid
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 | 5 l | 10 l

Appearance	colourless, clear liquid
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 | 5 l | 10 l

Appearance	colourless, clear liquid
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 | 5 l | 10 l | 20 l

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

formaldehyde solution 5% pure p. a. — CHEM*114321738

1 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	5,0 ± 0,1 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	10,0 ± 0,5 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	10,0 ± 0,5 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	15,0 ± 0,5 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	15,0 ± 0,5 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	20,0 ± 0,5 %
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 | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	20,0 ± 0,5 %
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 10 l

Appearance	colourless, clear liquid
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 10 l

Appearance	colourless, clear liquid
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	log P_{OW}:	-1,0
Explosion limits:			
bottom:	7% v/v		
top:	73% v/v		

formaldehyde solution 36-38% purified **CHEM*324321733**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear liquid
Assay	36,0 – 38,0 %
Organic acids (as HCOOH)	max. 0,08 %
Iron (Fe)	max. 0,0008 %

formaldehyde solution 36-38% pure **CHEM*424321733**

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear liquid
Assay	36,0 – 38,0 %
Density	1,07 – 1,09 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 36-38% pure p. a. **CHEM*114321734**

100 ml	250 ml
500 ml	1 l
2.5 l	3 l
5 l	10 l
20 l	30 l

Appearance	colourless, clear liquid
Assay	36,0 – 38,0 %
Density	1,07 – 1,09 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 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
Colour:	colourless
Odor:	sharp
pH:	approx 3 - 4 (20°C)
Melting point:	-118°C
Boiling point:	96 - 98°C
Auto - ignition temperature:	approx 300°C
Ignition temperature:	approx 62°C
Explosion limits:	
bottom:	7% v/v
top:	73% v/v
Vapor pressure:	approx 1,36 hPa (200C)
Density:	1,092 g/cm^3 (20°C)
Solubility:	
in water:	soluble
in organic solvents:	ethanol, diethyl ether, methanol, n-butanol, n-propanol

formaldehyde solution 40% pure — CHEM*424321737

500 ml | 1 l | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Assay	40,0 ± 1,0 %
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 | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Assay	40,0 ± 1,0 %
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 | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Formaldehyde	approx 4,0 %
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 | 3 l | 5 l | 10 l

Appearance	colourless, clear liquid
Formaldehyde	approx 10,0 %
Di-sodium hydrogenphpsphate anhydrous	passes test
Sodium dihydrogenposphate anhydrous	passes test

D-(−)-FRUCTOSE

D-fruktoza

$C_6H_{12}O_6$

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
Colour:	colourless – white
Odor:	odorless
pH:	approx 5-6 (100 g/l H_2O, 20°C)
Melting point:	approx 105°C
Boiling point:	no data
Auto - ignition temperature:	no data
Ignition temperature:	no data
Explosion limits:	
bottom:	no data
top:	no data
Vapor pressure:	no data
Density:	approx 1,65 g/cm^3 (20°C)
Bulk density:	approx 700-800 kg/m^3
Solubility:	
in water:	500 g/l (20°C)
in organic solvents:	acetone

D-(−)-Fructose pure — CHEM*444366102

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 25 kg

Identity	passes test
Water	max. 0,5 %
Acidity	passes test
Residue on roasting (as SO_4)	max. 0,1 %
Specific rotation	-93,5 ÷ -91,0 °
Chlorides (Cl)	max. 0,005 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Identity	passes test
Water	max. 0,2 %
Acidity	passes test
Residue on roasting (as SO_4)	max. 0,05 %
Specific rotation	-93,5 ÷ -91,0 °
Chlorides (Cl)	max. 0,002 %
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

$C_{20}H_{20}ClN_3$

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_2O, 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 | 25 g | 50 g | 100 g

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

GLYCERIN

Gliceryna

$C_3H_8O_3$

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 | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay	min. 98,0 %
Water	max. 2 %
Acids (as CH_3COOH)	max. 0,002 %
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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	98,5 – 100,0 %
Water	max. 1,5 %
Acids (as CH_3COOH)	max. 0,001 %
Aldehydes i substances reducing	passes test
Esters (as glycerol tributyrate)	max. 0,1 %
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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	99,5 – 100,0 %
Water	max. 0,5 %
Acids (as CH_3COOH)	max. 0,001 %
Aldehydes and substances reducing	passes test
Esters (as glycerol tributyrate)	max. 0,08 %
Organic halogenated	max. 0,0005 %
Sulfated ash	max. 0,005 %
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

$C_3H_8O_3$

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 $P_{(O/W)}$:	-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 impurites)	max. 1,5 %
		Refractive index (20°C)	1,470 - 1,475
		Relative density25/25	1,2615 - 1,2635
		Assay water	0,5 %

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

100 ml	250 ml
500 ml	1 l
2.5 l	3 l
5 l	10 l
20 l	30 l

Acidity/Alkalinity *	passes test
Aldehydes*	passes test
Assay */**	min 99,7 %
Chlorides*	passes test
Chlorinated compounds*	passes test
Colour	max. 10 Hazen
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 impurites)	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%

$C_3H_8O_3$

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

$C_9H_{14}O_6$

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
Colour:	colourless
Odor:	rancid
pH:	5,0 - 6,0 (50 g/l H_2O, 20°C)
Melting point:	3°C
Boiling point:	258-260°C
Auto - ignition temperature:	432°C
Ignition temperature:	138°C
Explosion limits:	
bottom:	1,05% v/v
top:	7,73% v/v
Dynamic viscosity:	~23 mPa*s (20°C)
Vapour pressure:	<0,1 mbar (20°C)
Density:	1,16 g/cm^3 (20°C)
Solubility	
in water:	64 g/l (20°C)
in organic solvents:	no data
log $P_{(w/o)}$:	0,25
Factor of bioconcentration:	0,2

Glyceryl triacetate pure — CHEM*424435806

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Assay	min 98,0 %
Density (20°C)	1,158 - 1,164 g/cm^3
Free acids (as CH_3COOH)	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 | 2.5 l | 3 l | 5 l | 10 l

Assay	min 99,0 %
Density (20°C)	1,159 - 1,163 g/cm^3
Free acids (as CH_3COOH)	max. 0,02 %
Refractive index(20°C)	1,431 - 1,433
Residue on roasting	max. 0,006 %

DIETHYLENE GLYCOL

Glikol dietylenowy

$C_4H_{10}O_3$

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
Colour:	colourless
Odor:	odorless
pH:	6 - 8 (200 g/l H_2O)
Melting point:	6,5°C
Boiling point:	244,8°C
Auto - ignition temperature:	225°C
Ignition temperature:	124°C
Explosion limits:	
bottom:	2% v/v
top:	12% v/v
Viscosity w temp. 20°C:	35,7 mPa·s
Vapour pressure:	0,03 hPa (20°C)
Density:	1,12 g/cm^3 (20°C)
Solubility	
in water:	soluble
in organic solvents:	soluble
log $P_{O/W}$:	-1,98

diethylene glycol pure — CHEM*424465108

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay (GC)	min. 98,0 %
Density (20°C)	1,115 - 1,118 g/cm^3
Refractive index	1,446 - 1,448
Water	max. 0,5 %

diethylene glycol pure p. a. — CHEM*114465109

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay (GC)	min. 98,5 %
Density (20°C)	1,116 - 1,118 g/cm^3
Refractive index	1,446 - 1,448
Water	max. 0,2 %
Residue on roasting	max. 0,003 %
Free acids (as CH_3COOH)	max. 0,001 %
Heavy metals (as Pb)	max. 0,0001 %

ETHYLENE GLYCOL

Glikol etylenowy

$C_2H_6O_2$

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 | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay (GC)	min. 98,0 %
Density (20°C)	1,111 - 1,115 g/cm^3
Water	max. 0,5 %
Free acids (as CH_3COOH)	max. 0,002 %
Residue on roasting	max. 0,05 %
Appearance	colourless, liquid

Ethylene glycol pure **CHEM*424466303**

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay (GC)	min 98,5 %
Density (20°C)	1,111 - 1,115 g/cm^3
Water	max. 0,3 %
Free acids (as CH_3COOH)	max. 0,001 %
Residue on roasting	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Heavy metals (as Pb)	max. 0,0005 %
Iron (Fe)	max. 0,0001 %
Appearance	colourless, oily liquid

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

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay (GC)	min 99,0 %
Density (20°C)	1,113 - 1,115 g/cm^3
Water	max. 0,2 %
Free acids (as CH_3COOH)	max. 0,001 %
Residue on roasting	max. 0,005 %
Chlorides (Cl)	max. 0,0005 %
Sulfates (SO_4)	max. 0,002 %
Heavy metals (as Pb)	max. 0,0001 %
Iron (Fe)	max. 0,00005 %
Appearance	colourless, liquid

ETHYLENE GLYCOL SOLUTIONS
c < 25%

Glikol etylenowy roztwory

$C_2H_6O_2$

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 | 5 l | 10 l | 20 l | 30 l | 60 l

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

Ethylene glycol 20% purified **CHEM*324466302**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

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

ETHYLENE GLYCOL SOLUTIONS
c ≥ 25%

Glikol etylenowy roztwory

$C_2H_6O_2$

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, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	30,0 ± 1,0 %
Density (20°C)	1,037 g/cm^3
Appearance	colourless, oily liquid
Freezing temperature	approx -16°C

Ethylene glycol 40% purified **CHEM*324466304**

2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	40,0 ± 1,0 %
Density (20°C)	1,051 g/cm^3
Appearance	colourless, oily liquid
Freezing temperature	approx -26°C

Ethylene glycol 50% purified **CHEM*324466301**

2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	50,0 ± 1,0 %
Density (20°C)	1,064 g/cm^3
Appearance	colourless, oily liquid
Freezing temperature	approx -36°C

Ethylene glycol 60% purified **CHEM*324466309**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay (GC)	60,0 ± 1,0 %
Density (20°C)	1,0765 g/cm^3
Appearance	colourless, oily liquid

ETHYLENE GLYCOL SOLUTION WITH CORROSION INHIBITOR

Glikol etylenowy z inhibitorem korozji, roztwory

$C_2H_6O_2$

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, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	30,0 ± 1,0 %
Density (20°C)	1,037 g/cm^3
Appearance	colourless, oily liquid
Freezing temperature	approx -16°C

Ethylene glycol 40% with corrosion inhibitor **CHEM*324466310**

2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	40,0 ± 1,0 %
Density (20°C)	1,051 g/cm^3
Appearance	colourless, oily liquid
Freezing temperature	approx -26°C

Ethylene glycol 60% with corrosion inhibitor **CHEM*324466314**

2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay (GC)	60,0 ± 1,0 %
Density (20°C)	1,0765 g/cm^3
Appearance	colourless, liquid

PROPYLENE GLYCOL

Glikol propylenowy

$C_3H_8O_2$

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_2O, 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 $P_{O/W}$:	no data
Explosion limits:			
bottom:	2,4% v/v		

Propylene Glycol purified **CHEM*324489006**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear oily liquid
Assay	min. 98,5 %
Density (20°C)	1,035 - 1,04 g/cm^3
Water	max. 0,5 %
Residue on roasting	max. 0,01 %

Propylene Glycol pure **CHEM*424489006**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear oily liquid
Assay	min. 99,5 %
Colour	max. 10 Hazen
Density (20°C)	1,035 - 1,04 g/cm^3
Water	max. 0,2 %
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

$Al(NO_3)_3 \cdot 9H_2O$

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_2O, 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 | 500 g | 1 kg

Appearance	colourless crystals
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	98,5 – 101,0 %
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

$AlCl_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,5 %
Heavy metals (Ni+Pb+Cu+Cr+Zn)	max. 0,015 %
Iron (Fe)	max. 0,03 %

Aluminum chloride pure p. a. **CHEM*114534802**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Sulfates (SO_4)	max. 0,01 %
Lead (Pb)	max. 0,0005 %
Sodium (Na)	max. 0,001 %
Calcium (Ca)	max. 0,002 %
Iron (Fe)	max. 0,001 %

ALUMINUM CHLORIDE HEXAHYDRATE

Glinu chlorek 6 hydrat

$AlCl_3 \cdot 6H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 98,0 %
Sulfates (SO_4)	max. 0,01 %
Lead (Pb)	max. 0,005 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
pH (5%, 25°C)	2,5÷3,5
Sulfates (SO_4)	max. 0,005 %
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

$AlK(SO_4)_2 \cdot 12H_2O$

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_2O, 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, 100 g, 250 g, 500 g, 750 g, 1 kg, 3 kg, 5 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,004 %
Ammonia salt (NH_4)	max. 0,01 %
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, 100 g, 250 g, 500 g, 750 g, 1 kg, 2 kg, 3 kg

Assay	min. 99,5 %
pH (5%, 20°C)	3 - 3,5
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,0005 %
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%

$AlK(SO_4)_2$

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 1 l

Assay	10,0 % ± 0,5 %
Chlorides (Cl)	max. 0,0005 %
Iron (Fe)	max. 0,001 %

ALUMINUM SULFATE OCTADECAHYDRATE

Glinu siarczan 18 hydrat

$Al_2(SO_4)_3 \cdot 18H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	98,0 – 107,0 %
Substances insolublein water	max. 0,05 %
Chlorides (Cl)	max. 0,01 %
Ammonia salt (NH_4)	max. 0,02 %
Heavy metals (as Pb)	max. 0,002 %
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, 100 g, 250 g, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg	Assay	99,0 – 106,0 %
	Substances insoluble in water	max. 0,02 %
	pH (5 %, 20°C)	2,5 - 3,5
	Chlorides (Cl)	max. 0,002 %
	Ammonia salt (NH_4)	max. 0,005 %
	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, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg, 25 kg	Assay	98,0 – 106,0 %
	pH (5 %, 20°C)	2,9 - 3,5
	Ammonia salt (NH_4)	passes test
	Potassium (K) + Calcium (Ca)	max. 0,8 %
	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%

$Al_2(SO_4)_3$

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%

$Al_2(SO_4)_3$

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

Al_2O_3

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white, crystalline powder
Assay	min 96,0 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white, crystalline powder
Assay	min 98,5 %
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

$Al(OH)_3$

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:	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_2O, 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 | 500 g | 750 g | 1 kg | 15 kg

Appearance	white, crystalline powder
Assay (Al_2O_3)	63,0 – 67,0 %
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 | 500 g | 750 g | 1 kg | 15 kg

Appearance	white, crystalline powder
Assay (Al_2O_3)	min. 64,0 %
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%

$Al(OH)_3$

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

$C_6H_{12}O_6$

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_2O, 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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Substances insoluble in water	max. 0,01 %
Loss on drying (105 ± 5°C)	max. 0,5 %
Acids (as CH_3COOH)	max. 0,05 %
Residue on roasting (as SO_4)	max. 0,05 %
Chlorides (Cl)	max. 0,01 %
Sulfates i sulfites (as SO_4)	max. 0,01 %
Arsenic (As)	max. 0,0004 %
Iron (Fe)	max. 0,001 %
Lead (Pb)	max. 0,001 %
Spcific rotation (20°C, 10%, H_2O)	+52,5 ÷ +53,3 °

D-(+)-Glucose pure p. a. **CHEM*114595600**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 20 kg

Substances insoluble in water	max. 0,005 %
Loss on drying (105±5°C)	max. 0,2 %
Acids (as CH_3COOH)	max. 0,015 %
Starch	passes test
Residue on roasting (as SO_4)	max. 0,02 %
Chlorides (Cl)	max. 0,0025 %
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_2O)	+52,5 ÷ +53 °

GLUTARALDEHYDE 25% SOLUTION

Glutarowy aldehyd 25%

$C_5H_8O_2$

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
2.5 l	3 l	pH (20^{o}C)	3,2 - 4,2
5 l		Methanol	max. 0,3%

HEXANE

Heksan

C_6H_{14}

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+31O, 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 %
250 ml	500 ml	Water	max. 0,01 %
		Free acids (as CH_3COOH)	max. 0,002 %
1 l	2.5 l	Residue on evaporation	max. 0,001 %
		Substances darkening under the influence of H_2SO_4	max. 10 Hazen
3 l	5 l	Tiophene (C_4H_4S)	passes test
10 l	20 l	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

C_6H_{14}

M = 86,18 g/mol CAS: not applicable WE: not applicable



H: 225, 304, 315, 336, 361F, 373, 411
P: 210, 240, 273, 301+33O+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

C_6H_{14}

M = 86,18 g/mol CAS: not applicable WE: not applicable



H: 225, 304, 315, 336, 361F, 373, 411
P: 210, 240, 273, 301+33O+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 (15ºC)	0,665 – 0,685g/cm³
500 ml	1 l	Boiling point	64 ÷ 70ºC
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

C_7H_{16} **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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear liquid
Colour	max. 20 Hazen
Density (20°C)	0,69 - 0,71 g/cm^3
Boiling point	92 ÷ 99 °C
Refractive index (20°C)	1,39 - 1,401
Water	max. 0,01 %
Sulphur (S)	max. 0,005 %

n-heptan pure p. a. — CHEM*114704700

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay		min. 99,5%
Density (15^{o}C)		0,5 – 2,0 g/cm^3
Density (20ºC)		ok. 0,688 g/cm³
Aromatic substances		max. 0,0005%
Insoluble substances		max. 0,00005%
Water		max. 0,01%
Refractive index	1,385 – 1,389	
Free acids (as CH_3COOH)		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

$H_4N_2 \bullet H_2SO_4$

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	insoluble in ethanol

Hydrazinium sulfate pure **CHEM*424758400**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals or white crystalline powder
Assay	min. 98,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals or white powder
Assay (iodometric)	min. 99,0 %
Insoluble substances in water	max. 0,005 %
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

$H_4N_2 \bullet H_2O$

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		
Ignition temperature:	no data	log $P_{O/W}$:	-3,8
Explosion limit:		Viscosity (25°C):	1,50 mPa s
Top:	100% v/v	Refractive index:	1,43

Hydrazine monohydrate pure CHEM*424759836

1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	38,0 – 42,0 %
Chlorides (Cl)	max. 0,0001%
Sulfates (SO_4)	max. 0,0001%
Inorganic residue	max. 0,002%
Sodium (Na)	max. 0,0001%
Iron (Fe)	max. 0,0001%
Refractive index	1,371 – 1,375
Appearance	colourless liquid

HYDROQUINONE

Hydrochinon

$C_6H_4(OH)_2$

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_2O, 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 | 50 g | 75 g | 100 g | 250 g | 500 g

Assay	min. 99,0 %
Melting point	172 ÷ 175°C

8-HYDROXYQUINOLINE

8-Hydroksychinolina

C_9H_7NO

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 | 25 g | 50 g | 75 g | 100 g | 250 g

Appearance	white - yellow powder or crystals
Assay	min. 99,5 %
Melting point	72,5 - 74,0°C
Substances insoluble in C_2H_5OH	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

$HONH_3Cl$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
pH (5%, 20°C)	2,5 - 3,5

Hydroxylamine hydrochloride pure p. a. **CHEM*114792204**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Insoluble substances in ethanol	passes test
pH (5%, 20°C)	2,5 - 3,5
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% ≤ c <10%

Hydroksyloaminy chlorowodorek roztwory

$HONH_3Cl$

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 1 l Assay 1,0 % ± 0,1 %

Hydroxylamine hydrochloride 2% **CHEM*524792205**

250 ml 500 ml 1 l Assay 2,0 % ± 0,1 %

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

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 20 l

$Na_2O + SiO_2$	min. 31,0 %
Molar module	2,5 ± 0,1
EDTA	min. 0,8 %
Density (20°C)	1,31 – 1,35 g/cm^3

ISOAMYL ALCOHOL

Izoamylowy alkohol

$C_5H_{12}O$

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_2O, 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 $P_{O/W}$:	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_3COOH)	max. 0,01 %
20 l	30 l	Furfural	max. 0,003 %
60 l	200 l	Residue on evaporation	max. 0,005 %
		H_2SO_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_3COOH)	max. 0,01 %
10 l	20 l	Furfurol	max. 0,0001 %
60 l	200 l	Residue on evaporation	max. 0,003 %
		H_2SO_4 test	passes test

ISOAMYL ACETATE

Izoamylu octan

$C_7H_{14}O_2$

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_2O (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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay (GC)	min. 98,0 %
Density (20°C)	0,870 - 0,874 g/cm^3
Free acids (as CH_3COOH)	max. 0,02 %
Non-volatile matter	max. 0,005 %
Water (KF)	max. 0,5 %

Isoamyl acetate pure p. a. — CHEM*114858509

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Assay (GC)	min. 99,0 %
Density (20°C)	0,870 - 0,874 g/cm^3
Free acids (as CH_3COOH)	max. 0,01 %
Non-volatile matter	max. 0,003 %
Water (KF)	max. 0,5 %

ISOBUTYL ALCOHOL

Izobutylowy alkohol

$(CH_3)_2CHCH_2OH$

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 | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay (GC)	min. 98,5 %
Density (20°C)	0,801 - 0,805 g/cm^3
Water	max. 0,2 %
Residue on evaporation	max. 0,001 %

Isobutyl alcohol pure p. a. CHEM*114861002

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay (GC)	min. 99,0 %
Density (20°C)	0,801 - 0,802 g/cm^3
Water	max. 0,1 %
Residue on evaporation	max. 0,0005 %

DIISOBUTYL PHTHALATE

Di-izobutylu ftalan

$C_{16}H_{22}O_4$

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
Auto-ignition temperature:	approx 400°C		acetone, benzene
Ignition temperature:	170°C	log $P_{O/W}$:	4,11 (20°C)

Diisobutyl phthalate pure **CHEM*423145001**

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Water	approx 0,3 %
Colour (Hazen)	min. 60
Ignition temperature	max. 170°C
Esters (as diisobutyl phthalate)	min. 99,0 %
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 | 500 ml | 1 l | 5 l | 10 l | 20 l

Water	approx 0,15 %
Colour (Hazen)	min. 60
Ignition temperature	max. 170°C
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

C_8H_{18}

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:	odorles	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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	min. 97,0 %
Water	max. 0,05 %
Refractive index	1,390 - 1,392

isooctane pure p. a. **CHEM*114872906**

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay (GC)	min. 99,0 %
Residue on evaporation	max. 0,002 %
Water	max. 0,05 %
Barium (Ba)	max. 0,0005 %
Boron (B)	max. 0,0005 %
Chromium (Cr)	max. 0,0005 %
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_3COOH)	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

$C_6H_{12}O$

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
1 l | 2.5 l
3 l | 5 l
10 l | 20 l

Assay (GC)	min. 99,0 %
Residue on evaporation	max. 0,005 %
Water	max. 0,2 %
Colour	max. 15 as Hz
Density (20°C)	0,8 - 0,803 g/cm^3
Free acids(as CH_3COOH)	max. 0,02 %

isopropylacetone pure p. a. **CHEM*114879507**

50 ml | 100 ml
250 ml | 500 ml
1 l | 2.5 l
3 l | 5 l
10 l | 20 l

Assay (GC)	min. 99,0 %
Residue on evaporation	max. 0,005 %
Water	max. 0,1 %
Colour	max. 15 as Hz
Density (20°C)	0,798 - 0,802 g/cm^3
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 CH_3COOH)	max. 0,008 %

ISOPROPYL ACETATE

Izopropylu octan

$C_5H_{10}O_2$

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_2O
Explosion limits:		in organic solvents:	soluble

Isopropyl acetate pure — CHEM*414893705

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay	min. 99,0 %
Density (25°C)	0,871-0,873 g/cm^3
Water	max. 0,1 %
Free acids(as CH_3COOH)	max. 0,01 %
Non-volatile residue	max. 0,004 %

Isopropyl acetate pure p. a. — CHEM*114893705

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay	min. 99,5 %
Density (25°C)	0,871-0,873 g/cm^3
Water	max. 0,05 %
Free acids(as CH_3COOH)	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

I_2

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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 20 kg

Assay	min. 99,5 %
Non-volatile matter	max. 0,02 %
Chlorine and bromine (as Cl)	max. 0,01 %

crystalline iodine sublimate pure p. a. CHEM*114912407

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg

Assay	min. 99,8 %
Non-volatile matter	max. 0,01 %
Chlorine and bromine (as Cl)	max. 0,005 %

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

I_2

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

$Cd(NO_3)_2 \cdot 4H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 98,5 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
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

$CdCl_2 \cdot 2{,}5\ H_2O$

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		
Ignition temperature:	not applicable	in organic solvents:	acetone

Cadmium chloride hemi(pentahydrate) pure **CHEM*424968708**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$Cd(CH_3COO)_2 \bullet 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Appearance	colourless crystals
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
Total nitrogen (N)	max. 0,006 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$CdSO_4 \bullet 8/3\ H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
pH (5%, 20^{o}C)	4,5 – 6,0
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

$CdC_2O_4 \bullet H_2O$

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 | 25 g | 50 g | 100 g | 250 g

Assay	min. 99%
Chlorides (Cl)	max. 0,001%
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	brown powder
Assay	min. 99,0 %
Substances insoluble in H_2SO_4	max. 0,1 %
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

$CdCO_3$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0 %
Substances insoluble w HCl	max. 0,02 %
Chlorides (Cl)	max. 0,03 %
Sulphates (SO_4)	max. 0,02 %
Iron (Fe)	max. 0,01 %
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

$Co(NO_3)_2 \cdot 6H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,01%
Chlorides (Cl)	max. 0,01%
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005%
Chlorides (Cl)	max. 0,005%
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

$CoCl_2$

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 $P_{O/W}$:	0,85
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

cobalt chloride pure **CHEM*425123406**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Water (KF)	max. 2,0 %
Appearance	blue powder

cobalt chloride pure p. a. **CHEM*115123407**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Water (KF)	max. 1,0 %
Appearance	blue powder

COBALT (II) CHLORIDE HEXAHYDRATE

Kobaltu (II) chlorek 6 hydrat

$CoCl_2 \cdot 6H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	98,0 – 102,0 %
Substances insoluble in water	max. 0,01%
Sulphates (SO_4)	max. 0,01%
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	99,0 – 101,0 %
Substances insoluble in water	max. 0,005%
Total nitrogen (N)	max. 0,005%
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

$CoSO_4 \cdot 7H_2O$

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_2O, 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, 250 g, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg

Assay	98,5 – 102,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (as Cl)	max. 0,01 %
Zinc (Zn)	max. 0,01 %
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, 100 g, 250 g, 500 g, 750 g, 1 kg

Assay	99,5 – 102,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (as Cl)	max. 0,002 %
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

Co_3O_4

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay Co	min. 70,5 %
Nickel (Ni)	max. 0,3 %
Iron (Fe)	max. 0,05 %
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

Co_2O_3

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/cm³ (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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay Co	min. 70 %
Nickel (Ni)	max. 0,03 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,01 %

COBALT (II) HYDROXIDE

Kobaltu (II) wodorotlenek

$Co(OH)_2$

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/cm³ (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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay Co	min. 50,0 %
Substances insoluble in HCl	max. 0,1 %
Total nitrogen (N)	max. 0,02 %
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)

C_8H_{10}

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		
Explosion limits:		log $P_{O/W}$:	3,12 - 3,2
bottom:	1,1 % v/v		

xylene purified **CHEM*325208607**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless liquid
Water	max. 0,05 %
pH of water extract	neutral
Total sulphur	max. 0,0005 %
Thioxene	passes test
Residue on evaporation	max. 0,003 %
Colouration with H_2SO_4	passes test

xylene pure **CHEM*425208607**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless liquid
Hydrocarbons C_8	min. 98,0%
Density (20°C)	0,855 - 0,87 g/cm^3
Boiling point	137 - 141 °C
Water	max. 0,02 %
pH of water extract	neutral
Total sulphur	max. 0,0005 %
Thioxene	passes test
Residue on evaporation	max. 0,0025 %

xlene pure p. a. **CHEM*115208603**

50 ml	100 ml
250 ml	500 ml
1l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l
200 l	

Appearance	colourless liquid
Hydrocarbons C_8	min. 98,5 %
Colour	max. 10 Hazen
Density (20°C)	0,86 - 0,866 g/cm^3
Boiling point	137 - 140 °C
Water	max. 0,02 %
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

H_3NO_3S

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg

Assay	min. 98,0 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,1%
Iron (Fe)	max. 0,01 %

Sulfamic acid pure p. a. **CHEM*115255203**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	99,3 - 100,3 %
Substances insoluble in water	max. 0,01 %
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)

$C_2H_5NO_2$

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_2O, 20°C)	Bulk density:	approx 1000 kg/m^3
Melting point:	240°C, >250°C	Solubility:	
		in water:	approx 225 g/l (20°C)
Boiling point:	not applicable	in other solvents:	HCl
Auto-ignition temperature:	no data		
Ignition temperature:	no data		

Glycine pure p. a. **CHEM*115275608**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystalline powder
Assay	98,5 - 101,0 %
Appearance of 10% solution	passes test
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,005 %

L-ASCORBIC ACID

Kwas L(+) askorbinowy

$C_2H_5NO_2$

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_2O, 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 $P_{O/W}$:	-2,15
Ignition temperature:	380°C		
Explosion limits:	no data		

L-Ascorbic acid pure **CHEM*425291508**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals or crystalline powder
Assay	min. 98,0 %
Specific rotation	(25°C, 10%, H_2O) +20,5 ÷ +21,5 °
Residue on roasting (as SO_4)	max. 0,2 %
Oxalic acid ($H_2C_2O_4$)	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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals or crystalline powder
Assay	min. 99,0 – 100,0 %
Identity	passes test
Specific rotation	(25°C, 10%, H_2O) +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 ($H_2C_2O_4$)	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

HNO_3

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 to1000 ml at 20°C	0,1 mol/l ± 0,2 %

NITRIC ACID 0,1%

Kwas azotowy roztwór 0,1%

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	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 | 1l

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%

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	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%

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	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%

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	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%

HNO_3

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%

HNO_3

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 20 l

Assay	10,0 ± 0,5 %
Density	approx 1,0543 g/cm^3

Nitric acid solution 10% pure **CHEM*425296035**

1l 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**

1l 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%

HNO_3

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 | 20 l

Assay	15,0 ± 0,5 %
Density	approx 1,0842 g/cm^3

Nitric acid solution 15% pure **CHEM*425296044**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	15,0 ± 0,5 %
Density	approx 1,0842 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 15% solution pure p. a. **CHEM*115296047**

1l | 5 l | 5 l | 10 l | 20 l | 30 l

Assay	15,0 ± 0,5 %
Density	approx 1,0842 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 20%

Kwas azotowy roztwór 20%

HNO_3

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 20 l

Assay	20,0 ± 0,5 %
Density	approx 1,115 g/cm^3

Nitric acid solution 20% pure **CHEM*425296048**

1l 2.5 l 5 l 10 l 20 l 30 l

Assay	20,0 ± 1,0 %
Density	approx 1,115 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 20% pure p. a. **CHEM*115296048**

1l 2.5 l 5 l 10 l 20 l 30 l

Assay	20,0 ± 1,0 %
Density	approx 1,115 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 25%

Kwas azotowy roztwór 25%

HNO_3

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**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	25,0 ± 1,0 %
Density	approx 1,1469 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 25% pure p. a. **CHEM*115296036**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	25,0 ± 1,0 %
Density	approx 1,1469 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 30%

Kwas azotowy roztwór 30%

HNO_3

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 | 20 l

Assay	30,0 ± 1,0 %
Density	approx 1,18 g/cm^3

Nitric acid solution 30% pure **CHEM*425296032**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	30,0 ± 1,0 %
Density	approx 1,18 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 30% pure p. a. **CHEM*115296039**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	30,0 ± 1,0 %
Density	approx 1,18 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 40%

Kwas azotowy roztwór 40%

HNO_3

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 20 l

Assay	40,0 ± 1,0 %
Density	approx 1,2463 g/cm^3

Nitric acid solution 40% pure **CHEM*425296030**

1l 2.5 l 5 l 10 l 20 l 30 l

Assay	40,0 ± 1,0 %
Density	approx 1,2463 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 40% pure p. a. **CHEM*115296035**

1l 2.5 l 5 l 10 l 20 l 30 l

Assay	40,0 ± 1,0 %
Density	approx 1,2463 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 50%

Kwas azotowy roztwór 50%

HNO_3

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
500 ml	1l
2.5 l	5 l
1l	2.5 l
5 l	6 l
10 l	20 l
30 l	60 l

Assay	50,0 ± 1,0 %
Density	approx 1,31 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 50% pure p. a. **CHEM*115296035**

100 ml	250 ml
500 ml	1l
2.5 l	5 l
1l	2.5 l
5 l	6 l
10 l	20 l
30 l	60 l

Assay	50,0 ± 1,0 %
Density	approx 1,31 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 APPROX 55%

Kwas azotowy roztwór 55%

HNO_3

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 | 60 l

Assay	55,0 ± 1,0 %
Density	approx 1,3393 g/cm^3

NITRIC ACID 65%

Kwas azotowy roztwór 65%

HNO_3

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**

1l	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	1l	Residue on roasting (as SO_4)	max. 0,005%
2.5 l	5 l	Sulphates (SO_4)	max. 0,001%
1l	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
500 ml	1l
2.5 l	5 l
1l	2.5 l
5 l	6 l
10 l	20 l
30 l	60 l

Assay	min. 65%
Residue on roasting (as SO_4)	max. 0,002%
Chlorides (Cl)	max. 0,0001%
Phosphates (PO_4)	max. 0,00005%
Sulphates (SO_4)	max. 0,0002%
Heavy metals (as Pb)	max. 0,0001%
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 ≤ 0,5 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 ≤ 2 MOL/L)

Kwas azotowy, roztwory mianowane

HNO_3

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

HNO_3

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 benzoesowy

$C_7H_6O_2$

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_2O, 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 $P_{O/W}$:	1,9
Ignition temperature:	121°C		
Explosion limits:	no data		

Benzoic Acid pure **CHEM*425302309**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 15 kg

Assay	min. 99,0 %
Melting point	121 ÷ 123 °C
Solubility in ammonia solution	passes test
Residue on roasting (as SO_4)	max. 0,03 %
Substances darkening under the influence of H_2SO_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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 15 kg

Assay	min. 99,5 %
Melting point	121 ÷ 122 °C
Solubility in ammonia solution	passes test
Residue on roasting (as SO_4)	max. 0,01 %
Substances darkening under the influence of H_2SO_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

H_3BO_3

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_2O, 20°C)		
Melting point:	171°C	in organic solvents:	alcohol, glicerol, acetone
Boiling point:	no data		
Vapour pressure:	2,6 hPa (20°C)	log $P_{O/W}$:	0,757
Density:	1,51 g/cm^3 (20°C)		

Boric acid pure **CHEM*425313603**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg | 40 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
Substances insoluble in C_2H_5OH	passes test
Substances non-volatile with methanol	max. 0,2 %
Chlorides (Cl)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg | 40 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,01 %
Substances insoluble in C_2H_5OH	passes test
Substances non-volatile with methanol	max. 0,05 %
Chlorides (Cl)	max. 0,0003 %
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

H_3BO_3

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**

1l	2.5 l	Assay	2,0 ± 0,1 %
3 l	5 l		

Boric acid solution 3% **CHEM*115313601**

1l	2.5 l	Assay	3,0 ± 0,1 %
3 l			

CHLORACETIC ACID

Kwas chlorooctowy

$C_2H_3ClO_2$

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_2O (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
100 g	250 g
500 g	1 kg
5 kg	10 kg

Assay	min. 98,5 %
Melting point	61-63 °C
Substances insoluble in water	max. 0,01 %
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
100 g	250 g
500 g	1 kg
2 kg	5 kg
10 kg	

Assay	min. 99,0 %
Melting point	61-63 °C
Substances insoluble in water	max. 0,003 %
Acetone (GC)	max. 0,02 %
Carbonyl compounds (as C_2H_4O)	max. 0,01 %
Residue on roasting (as SO_4)	max. 0,02 %
Substances darkening under the influence of H_2SO_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

$C_6H_8O_7 \cdot H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Residue on roasting (as SO_4)	max. 0,07 %
Phosphates (PO_4)	max. 0,005 %
Total sulphur(SO_4)	max. 0,02 %
Heavy metals (as Pb)	max. 0,001 %
Calcium (Ca)	max. 0,02 %
Iron (Fe)	max. 0,001 %

Citric acid monohydrate pure p. a. CHEM*115382101

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 20 kg | 25 kg

Assay	99,5 – 100,5 %
Substances insoluble in water	max. 0,005 %
Residue on roasting (as SO_4)	max. 0,03 %
Substances darkening under the influence of H_2SO_4	passes test
Chlorides (Cl)	max. 0,001 %
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%

$C_6H_8O_7$

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 ≥ 20%

Kwas cytrynowy roztwory

$C_6H_8O_7$

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 | 2.5 l | 3 l

Assay 20,0 ± 0,5 %

Citric acid solution 30% **CHEM*115382104**

500 ml | 1l | 2.5 l | 3 l

Assay 30,0 ± 1,0 %

Citric acid solution 40% **CHEM*115382103**

500 ml | 1l | 2.5 l | 3 l

Assay 40,0 ± 1,0 %

Citric acid solution 50% **CHEM*115382106**

500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Assay 50,0 ± 1,0 %

PHENOL DISULFONIC ACID SOLUTION 25% IN SULFURIC ACID

Kwas fenolodisulfonowy r-r 25% w H_2SO_4

$C_6H_6O_7S_2$

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 | 250 ml | 500 ml | 1l

Density	~1,8 g/cm^3
Nitrogen sensitivity	passes test

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 ≤ 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, m-xylene
Boiling point:	no data		

Hydrofluoric acid solution 10% pure **CHEM*425504631**

1l | 2.5 l | 3 l | 5 l

Assay	10,0 ± 0,5 %
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**

1l | 2.5 l | 3 l | 5 l

Assay	10,0 ± 0,5 %
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, m-xylene
Boiling point:	no data		

Hydrofluoric acid solution 20% pure **CHEM*425504632**

1l | 2.5 l | 3 l | 5 l

Assay	20,0 ± 1,0 %
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**

1l | 2.5 l | 3 l | 5 l

Assay	20,0 ± 1,0 %
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**

1l | 2.5 l | 3 l | 5 l

Assay	30,0 ± 1,0 %
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**

1l | 2.5 l | 3 l | 5 l

Assay	30,0 ± 1,0 %
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
1l | 2.5 l
3 l | 5 l
10 l | 20 l
30 l | 60 l

Assay	40,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,01 %
Substances reducing $KMnO_4$	max. 0,002 %
Chlorides (Cl)	max. 0,005 %
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 | 1l
2.5 l | 3 l
5 l | 10 l
20 l | 30 l
60 l

Assay	40,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,005 %
Substances reducing $KMnO_4$	max. 0,001 %
Chlorides (Cl)	max. 0,003 %
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
1l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l

Assay	50,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,01 %
Substances reducing $KMnO_4$	max. 0,002 %
Chlorides (Cl)	max. 0,003 %
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	1l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	

Assay	50,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,005 %
Substances reducing $KMnO_4$	max. 0,001 %
Chlorides (Cl)	max. 0,003 %
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
1l | 2.5 l
3 l | 5 l
10 l | 20 l
30 l | 60 l

Assay	60,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,01 %
Substances reducing $KMnO_4$	max. 0,002 %
Chlorides (Cl)	max. 0,003 %
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 | 1l
2.5 l | 3 l
5 l | 10 l
20 l | 30 l
60 l

Assay	60,0 ± 1,0 %
Residue on roasting (as SO_4)	max. 0,005 %
Substances reducing $KMnO_4$	max. 0,001 %
Chlorides (Cl)	max. 0,003 %
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, m-xylene
Boiling point:	no data		

Hydrofluoric acid solution 70% pure **CHEM*425504641**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay	70,0 ± 1,0 %
Density (20°C)	1,17 g/cm^3
Silicon (Si)	max. 0,1 %
Sulphates (SO_4)	max. 0,005%
Iron (Fe)	max. 0,0005 %

Hydrofluoric acid solution 70% pure p. a. **CHEM*115504642**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay	70,0 ± 1,0 %
Density (20°C)	1,17 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 %

PHOSPHORIC ACID SOLUTION 5%

Kwas fosforowy roztwór 5%

H_3PO_4

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%

H_3PO_4

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%

H_3PO_4

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**

1l 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**

1l 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%

H_3PO_4

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 20 l 30 l

Assay	30,0 ± 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 30% pure p. a. **CHEM*115691506**

5 l 10 l 20 l 30 l

Assay	30,0 ± 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 50%

Kwas fosforowy roztwór 50%

H_3PO_4

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 | 20 l | 30 l

Assay	50,0 ± 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 50% pure p. a. **CHEM*115691503**

5 l | 10 l | 20 l | 30 l

Assay	50,0 ± 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 75%

Kwas fosforowy roztwór 75%

H_3PO_4

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	1l	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_3PO_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 %
1l	5 l	Density (20°C)	approx 1,58 g/cm^3
10 l	20 l	Substances reducing (as H_3PO_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%

H_3PO_4

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
1l	2.5 l
5 l	6 l
10 l	20 l
30 l	60 l

Assay	80,0 ± 1,0 %
Density (20°C)	approx 1,633 g/cm^3
Substances reducing (as H_3PO_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 80% pure p. a. **CHEM*115691514**

100 ml	250 ml
500 ml	1l
2.5 l	5 l
6 l	10 l
20 l	30 l

Assay	80,0 ± 1,0 %
Density (20°C)	approx 1,633 g/cm^3
Substances reducing (as H_3PO_3)	max. 0,005 %
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 85%

Kwas fosforowy roztwór 85%

H_3PO_4

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
1l	2.5 l
5 l	6 l
10 l	20 l
30 l	60 l

Assay	min. 84,5 %
Density (20°C)	1,678 max. 1,721 g/cm^3
Substances reducing (as H_3PO_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 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
500 ml	1l
2.5 l	5 l
6 l	10 l
20 l	30 l

Assay	84,5 – 87%
Density (20°C)	approx 1,69 g/cm^3
Substances reducing (as H_3PO_3)	max. 0,005 %
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 STANDARD SOLUTION 6 MOL/L

Kwas fosforowy roztwór mianowany 6M

H_3PO_4

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%

$C_3H_6O_3$

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**

1l 3 l 5 l Assay 5,0 ± 0,1 %

DL-LACTIC ACID SOLUTION 10%

Kwas mlekowy roztwór 10%

$C_3H_6O_3$

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**

1l 3 l 5 l Assay 10,0 ± 0,5 %

DL-LACTIC ACID SOLUTIONS (c ≥ 20%)

Kwas mlekowy roztwór

$C_3H_6O_3$

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 5 l Assay 20,0 ± 0,5 %

DL-lactic acid solution 30% **CHEM*115642637**

1l 3 l 5 l Assay 30,0 ± 1,0 %

DL-lactic acid solution 40% **CHEM*115642632**

1l 3 l 5 l Assay 40,0 ± 1,0 %

DL-lactic acid solution 50% **CHEM*325642635**

1l 3 l 5 l Assay 50,0 ± 1,0 %

DL-lactic acid solution 60% **CHEM*115642636**

1l 3 l 5 l Assay 60,0 ± 1,0 %

DL-LACTIC ACID SOLUTION 80%

DL-lactic acid solution 80%

$C_3H_6O_3$

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_2O, 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	1l	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	1l	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%

$C_3H_6O_3$

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_2O, 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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	min. 88,0 %
Residue on roasting (as SO_4)	max. 0,03 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,005 %
Arsenic (As)	max. 0,0001 %
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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay	88,0 – 92,0 %
Residue on roasting (as SO_4)	max. 0,02 %
Chlorides (Cl)	max. 0,0005 %
Sulphates (SO_4)	max. 0,005 %
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%

CH_2O_2

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, glicerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 5% pure **CHEM*425646406**

500 ml	1l
2.5 l	5 l

Assay	5,0 ± 0,1 %
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	1l
2.5 l	5 l

Assay	5,0 ± 0,1 %
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%

CH_2O_2

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, glicerol
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Formic acid solution 6% pure **CHEM*425646403**

500 ml	1l
2.5 l	5 l

Assay	6,0 ± 0,1 %
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
2.5 l	5 l

Assay	6,0 ± 0,1 %
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%

CH_2O_2

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**

1l | 2.5 l | 5 l | 10 l | 20 l

Assay	25,0 ± 1,0 %
Density (20°C)	1,061 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 25% pure p. a. **CHEM*115646409**

1l | 2.5 l | 5 l | 10 l

Assay	25,0 ± 1,0 %
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%

CH_2O_2

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**

1l | 2.5 l | 5 l | 10 l | 20 l

Assay	50,0 ± 1,0 %
Density (20°C)	1,1208 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 50% pure p. a. **CHEM*115646404**

1l | 2.5 l | 5 l | 10 l

Assay	50,0 ± 1,0 %
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%

CH_2O_2

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**

1l | 2.5 l | 5 l | 10 l | 20 l

Assay	60,0 ± 1,0 %
Density (20°C)	1,1431 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 60% pure p. a. **CHEM*115646306**

1l | 2.5 l | 5 l | 10 l

Assay	60,0 ± 1,0 %
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%

CH_2O_2

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**

1l	2.5 l
5 l	10 l
20 l	30 l
60 l	

Assay	80,0 ± 1,0 %
Acetic acid (CH_3COOH)	max. 0,1 %
Oxalic acid ($H_2C_2O_4$)	passes test
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	1l
2.5 l	5 l
10 l	20 l
30 l	60 l

Assay	80,0 ± 1,0 %
Acetic acid (CH_3COOH)	max. 0,05 %
Oxalic acid ($H_2C_2O_4$)	passes test
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%

CH_2O_2

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 %
1l	2.5 l	Acetic acid (CH_3COOH)	max. 0,1 %
5 l	10 l	Oxalic acid ($H_2C_2O_4$)	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	1l	Acetic acid (CH_3COOH)	max. 0,05 %
2.5 l	5 l	Oxalic acid ($H_2C_2O_4$)	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%

$HClO_4$

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 | 500 ml | 1l

Assay	60,0 ± 1,0 %
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 | 500 ml | 1l

Assay	60,0 ± 1,0 %
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%

$HClO_4$

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 | 500 ml | 1l

Assay	65,0 ± 1,0 %
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 | 500 ml | 1l

Assay	65,0 ± 1,0 %
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%

$HClO_4$

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 | 500 ml | 1l

Assay	min. 70,0 %
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 | 500 ml | 1l

Assay	min. 70,0 %
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 ≤ 0,1 MOL/L)

Kwas nadchlorowy roztwory mianowane

$HClO_4$

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

$HClO_4$

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**

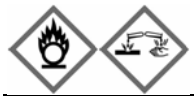
500 ml	1l	Titer	0,996 – 1,004 mol/l

PERIODIC ACID

Kwas nadjodowy

H_5IO_3

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg

Assay	min. 98,0 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,1%
Iron (Fe)	max. 0,01 %

Periodic acid pure p. a. **CHEM* 115652404**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

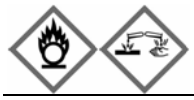
Assay	99,3 - 100,3 %
Substances insoluble in water	max. 0,01 %
Residue on roasting	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,05 %
Heavy metals (as Pb)	max. 0,001 %
Copper(Cu)	max. 0,001 %
Nickel (Ni)	max. 0,001 %
Lead(Pb)	max. 0,001 %
Iron (Fe)	max. 0,0005 %

PERIODIC ACID SOLUTION 10%

Kwas nadjodowy roztwór 10%

H_5IO_3

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**

1l	5 l	Assay	10,0 ± 0,5 %
30 l			

ACETIC ACID
ANALYTICAL WEIGHED AMOUNT

Kwas octowy odważka analityczna

CH_3COOH

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 to1000 ml at 20°C	0,1 mol/l ± 0,2 %

ACETIC ACID SOLUTION 1%

Kwas octowy roztwór 1%

CH_3COOH

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_2O, 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 | 5 l

Assay	1,0 ± 0,1 %
Residue on evaporation	max. 0,005 %

Acetic acid solution 1% pure p. a. **CHEM*115687322**

100 ml | 250 ml | 500 ml | 1l | 5 l

Assay	1,0 ± 0,1 %
Residue on evaporation	max. 0,002 %

ACETIC ACID SOLUTION 3%

Kwas octowy roztwór 3%

CH_3COOH

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_2O, 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 | 5 l

Assay	3,0 ± 0,1 %
Residue on evaporation	max. 0,005 %

Acetic acid solution 3% pure p. a. **CHEM*115687336**

100 ml | 250 ml | 500 ml | 1l | 5 l

Assay	3,0 ± 0,1 %
Residue on evaporation	max. 0,002 %

ACETIC ACID SOLUTION 4%

Kwas octowy roztwór 4%

CH_3COOH

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_2O, 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%

CH_3COOH

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_2O, 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%

CH_3COOH

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_2O, 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 | 5 l

Assay	6,0 ± 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 6% pure p. a. **CHEM*115687606**

500 ml | 1l | 5 l

Assay	6,0 ± 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 10%

Kwas octowy roztwór 10%

CH_3COOH

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 30 l

Assay	10,0 ± 0,5 %
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%

CH_3COOH

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**

1l 5 l 10 l 20 l 30 l

Assay	20,0 ± 0,5 %
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**

1l 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%

CH_3COOH

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**

1l 5 l 10 l 20 l 30 l

Assay	25,0 ± 1,0 %
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**

1l 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%

CH_3COOH

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 | 5 l | 10 l | 20 l | 30 l

Assay	30,0 ± 1,0 %
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 30% pure p. a. **CHEM*115687608**

1l | 2.5 l | 5 l | 10 l | 20 l

Assay	30,0 ± 1,0 %
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 35%

Kwas octowy roztwór 35%

CH_3COOH

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**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	35,0 ± 1,0 %
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 35% pure p. a. **CHEM*115687319**

1l | 2.5 l | 5 l | 10 l

Assay	35,0 ± 1,0 %
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%

CH_3COOH

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**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	40,0 ± 1,0 %
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 40% pure p. a. **CHEM*115687320**

1l | 2.5 l | 5 l | 10 l

Assay	40,0 ± 1,0 %
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%

CH_3COOH

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**

1l | 2.5 l | 5 l | 10 l | 20 l | 30 l

Assay	45,0 ± 1,0 %
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 45% pure p. a. **CHEM*115687321**

1l | 2.5 l | 5 l | 10 l

Assay	45,0 ± 1,0 %
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%

CH_3COOH

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_2O, 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**

1l 5 l 10 l 20 l 30 l

Assay	50,0 ± 1,0 %
Solubility in water	passes test
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**

1l 5 l 10 l 20 l 30 l

Assay	50,0 ± 1,0 %
Aldehydes (as CH_3CHO)	max. 0,01 %
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%

CH_3COOH

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_2O, 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**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay	60,0 ± 1,0 %
Miscibility with water	passes test
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 60% pure p. a. **CHEM*115687331**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay	60,0 ± 1,0 %
Aldehydes (as CH_3CHO)	max. 0,01 %
Formic acid (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 80%

Kwas octowy roztwór 80%

CH_3COOH

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_2O, 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 | 1l
2.5 l | 3 l
5 l | 10 l
20 l | 30 l
60 l

Assay	min. 80 %
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 80% pure p. a. **CHEM*115687330**

500 ml | 1l
2.5 l | 3 l
5 l | 10 l
20 l | 30 l
60 l

Assay	min. 80 %
Aldehydes (as CH_3CHO)	max. 0,01 %
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 90%

Kwas octowy roztwór 90%

CH_3COOH

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_2O, 20°C)		
Melting point:	no data		

Acetic acid solution 90% pure **CHEM*425687328**

500 ml, 1l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay	min. 90 %
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 90% pure p. a. **CHEM*115687329**

500 ml, 1l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay	min. 90 %
Aldehydes (as CH_3CHO)	max. 0,01 %
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 %

GLACIAL ACETIC ACID

Kwas octowy roztwór min. 99,5%

CH_3COOH

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_2O, 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, 500 ml, 1l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay	min. 99,5 %
Residue on evaporation	max. 0,005 %
Chlorides (Cl)	max. 0,0002 %
Sulphates (SO_4)	max. 0,0005 %
Heavy metals (as Pb)	max. 0,0002 %
Iron (Fe)	max. 0,0005 %

Acetic acid min 99,5% pure p. a. **CHEM*115687607**

100 ml, 250 ml, 500 ml, 1l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Assay	min. 99,5 %
Density (20°C)	1,049 - 1,052 g/cm^3
Acetaldehyde (CH_3CHO)	max. 0,01 %
Residue on evaporation	max. 0,002 %
Substances reducing $KMnO_4$ (as HCOOH)	max. 0,02 %
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 ≤ 1 MOL/L)

Kwas octowy roztwory mianowane

CH_3COOH

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 | 500 ml | 1l — Titer 0,000996 – 0,001004 mol/l

Acetic acid standard solution 0,002 mol/l **CHEM*815687339**

100 ml | 250 ml | 500 ml | 1l — Titer 0,001992 – 0,002008 mol/l

Acetic acid standard solution 0,01 mol/l **CHEM*815687328**

100 ml | 250 ml | 500 ml | 1l — Titer 0,00996 – 0,01004 mol/l

Acetic acid standard solution 0,02 mol/l **CHEM*815687338**

100 ml | 250 ml | 500 ml | 1l — Titer 0,01992 – 0,02008 mol/l

Acetic acid standard solution 0,05 mol/l **CHEM*815687336**

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

Acetic acid standard solution 0,1 mol/l **CHEM*815687330**

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

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

CH_3COOH

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	Titer	1,992 – 2,008 mol/l
500 ml	1l		

OLEIC ACID

Kwas oleinowy

$CH_3(CH_2)_7CH=CH(CH_2)_7COOH$

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
		in organic solvents:	no data
Auto-ignition temperature:	350°C		
Ignition temperature:	180°C		

oleic acid pure **CHEM*425689010**

50 ml	100 ml	Appearance	passes test
250 ml	500 ml	Identity	passes test
1l	2.5 l	Density (20°C)	0,889 - 0,895 g/cm^3
3 l	5 l	Freezing temperature	max. 10 °C
10 l		Acid number	196 - 204
		Iodine number	85 - 95
		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

$C_{15}H_{31}COOH$

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 | 250 g | 500 g | 1 kg

Appearance	white crystals
Assay	min. 98,0 %
Acid number	215 – 233 mg KOH/g
Saponification number	216 – 224 mg KOH/g
Iodine number	max. 1g I/100g
Melting point	62-65°C

Palmitic acid pure p. a. **CHEM*115693000**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white crystals
Assay	min. 99,0 %
Acid number	216 – 232 mg KOH/g
Saponification number	217 – 223 mg KOH/g
Iodine number	max. 0,8g I/100g

SALICYLIC ACID

Kwas salicylowy

$C_7H_6O_3$

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		
pH:	2,4 (20 g/l, H_2O, 20°C)	Density:	1,44 g/cm^3 (20°C)
Melting point:	158-161°C	Bulk density:	800 kg/m^3
Boiling point:	211°C	Solubility:	
Auto-ignition temperature:	570°C	in water:	2 g/l (20°C), 70 g/l (100°C)
Ignition temperature:	157°C	in organic solvents:	ethanol
Explosion limits:		log $P_{O/W}$:	2,21

Salicylic acid pure — CHEM*425746009

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Melting point	158 - 161°C

Salicylic acid pure p. a. — CHEM*115746000

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,5 %
Melting point	159 - 161°C
Solubility in ethanol	passes test
Residue on roasting (as SO_4)	max. 0,02 %
Substances darkening under the influence of H_2SO_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 ≤ 0,25 MOL/L)

Kwas siarkowy odważka analityczna

H_2SO_4

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 to1000 ml at 20°C	0,005 mol/l ± 0,2 %	
Sulfuric acid 0,05 mol/l (0,1N) analytical weighed amount				**CHEM*165750639**
1 szt.	10 szt.	Concentration after dilution to1000 ml at 20°C	0,05 mol/l ± 0,2 %	
Sulfuric acid 0,1 mol/l (0,2N) analytical weighed amount				**CHEM*165750641**
1 szt.	10 szt.	Concentration after dilution to1000 ml at 20°C	0,1 mol/l ± 0,2 %	
Sulfuric acid 0,2 mol/l (0,4N) analytical weighed amount				**CHEM*165750642**
1 szt.		Concentration after dilution to1000 ml at 20°C	0,2 mol/l ± 0,2 %	
Sulfuric acid 0,25 mol/l (0,5N) analytical weighed amount				**CHEM*165750643**
1 szt.		Concentration after dilution to1000 ml at 20°C	0,25 mol/l ± 0,2 %	

SULFURIC ACID
ANALYTICAL WEIGHED AMOUNT (C > 0,25 MOL/L)

Kwas siarkowy odważka analityczna

H_2SO_4

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 to1000 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 to1000 ml at 20°C	1 mol/l ± 0,2 %

SULFURIC ACID SOLUTION 5%

Kwas siarkowy roztwór 5%

H_2SO_4

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 | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	5,0 ± 0,1%
Density	approx 1,032 g/cm^3 (20 °C)

Sulfuric acid solution min. 5% pure **CHEM*425749509**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 5,0 %
Density	approx 1,032 g/cm^3 (20 °C)
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 | 5 l | 10 l | 20 l | 30 l

Assay	min. 5,0 %
Density	approx 1,032 g/cm^3 (20 °C)
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%

H_2SO_4

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 | 20 l | 30 l | 1000 l (luz)

Assay	10,0 ± 0,5%
Density	approx 1,0661 g/cm^3 (20 °C)

Sulfuric acid solution min. 10% pure **CHEM*425749502**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 10,0 %
Density	approx 1,0661 g/cm^3 (20 °C)
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**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 10,0 %
Density	approx 1,0661 g/cm^3 (20 °C)
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%

H_2SO_4

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_2O, 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%

H_2SO_4

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**

1l 5 l 10 l 20 l 30 l

Assay	min. 20,0 %
Density	approx 1,1394 g/cm^3 (20 °C)
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**

1l 5 l 10 l 20 l 30 l

Assay	min. 20,0 %
Density	approx 1,1394 g/cm^3 (20 °C)
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%

H_2SO_4

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 20 l 30 l

Assay	25,0 ± 1,0 %
Density	approx 1,1783 g/cm^3 (20 °C)

Sulfuric acid solution min. 25% pure **CHEM*425749506**

1l 5 l 10 l 20 l 30 l

Assay	min. 25,0 %
Density	approx 1,1783 g/cm^3 (20 °C)
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**

1l 5 l 10 l 20 l 30 l

Assay	min. 25,0 %
Density	approx 1,1783 g/cm^3 (20 °C)
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%

H_2SO_4

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 | 20 l | 30 l

Assay	30,0 ± 1,0 %
Density	approx 1,22 g/cm^3 (20 °C)

Sulfuric acid solution min. 30% pure **CHEM*425749511**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 30,0 %
Density	approx 1,22 g/cm^3 (20 °C)
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**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 30,0 %
Density	approx 1,22 g/cm^3 (20 °C)
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%

H_2SO_4

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)

H_2SO_4

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**

1l	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%

H_2SO_4

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 | 20 l | 30 l

Assay	40,0 ± 1,0 %
Density	approx 1,3028 g/cm^3 (20 °C)

Sulfuric acid solution min. 40% pure **CHEM*425749520**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 40,0 %
Density	approx 1,3028 g/cm^3 (20 °C)
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**

1l | 5 l | 10 l | 20 l | 30 l

Assay	min. 40,0 %
Density	approx 1,3028 g/cm^3 (20 °C)
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%

H_2SO_4

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 20 l 30 l

Assay	50,0 ± 1,0 %
Density	approx 1,395 g/cm^3 (20 °C)

Sulfuric acid solution min. 50% pure **CHEM*425749508**

1l 5 l 10 l 20 l 30 l

Assay	min. 50,0 %
Density	approx 1,395 g/cm^3 (20 °C)
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**

1l 5 l 10 l 20 l 30 l

Assay	min. 50,0 %
Density	approx 1,395 g/cm^3(20 °C)
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%

H_2SO_4

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 | 5 l | 10 l | 20 l | 30 l

Assay	min. 69,0 %
Residue on roasting	max. 0,005 %
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 | 5 l | 10 l | 20 l | 30 l

Assay	min. 69,0 %
Residue on roasting	max. 0,001 %
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%

H_2SO_4

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	Assay	70,0 ± 1,0 %
20 l	30 l	Density	approx 1,61 g/cm^3 (20 °C)

SULFURIC ACID SOLUTION 75%

Kwas siarkowy roztwór 75%

H_2SO_4

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**

1l 5 l 10 l 20 l 30 l

Assay	min. 75,0 %
Residue on roasting	max. 0,005 %
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**

1l 5 l 10 l 20 l 30 l

Assay	min. 75,0 %
Residue on roasting	max. 0,001 %
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%

H_2SO_4

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 5 l 10 l 20 l 30 l

Assay	min. 91,0 %
Residue on roasting	max. 0,005 %
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 5 l 10 l 20 l 30 l

Assay	min. 91,0 %
Residue on roasting	max. 0,001 %
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%

H_2SO_4

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 | 20 l | 30 l

Assay	95,0 ± 1,0 %
Density	approx 1,832 g/cm^3 (20 °C)

Sulfuric acid solution min. 95% pure **CHEM*425749500**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 5 l | 6 l | 10 l | 20 l | 30 l

Assay	min. 95,0 %
Residue on roasting	max. 0,005 %
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. 95% pure p. a. **CHEM*115750002**

100 ml	250 ml
500 ml	1l
2.5 l	5 l
6 l	10 l
20 l	30 l

Assay	min. 95,0 %
Residue on roasting	max. 0,001 %
Chlorides (Cl)	max. 0,001% %
Nitrates (NO_3)	max. 0,0002 %
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**

1l	5 l
10 l	20 l
30 l	1000 l (luz)

Assay	min. 95 %
Density (20 °C)	approx 1,832 g/cm^3
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%

H_2SO_4

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
500 ml	1l
2.5 l	5 l
6 l	10 l
20 l	30 l

Assay	min. 98 %
Residue on roasting	max. 0,005 %
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 98% pure p. a. **CHEM*115750023**

100 ml	250 ml
500 ml	1l
2.5 l	5 l
6 l	10 l
20 l	30 l

Assay	98,0 ± 1 %
Density (20ºC)	approx 1,836 g/cm^3
Residue on roasting	max. 0,001 %
Chlorides (Cl)	max. 0,001% %
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 ≤ 0.5 MOL/L)

Kwas siarkowy roztwory mianowane

H_2SO_4

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	1l	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	1l	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	1l	Titer	0,006225 – 0,006275 mol/l

Sulfuric acid standard solution 0,01 mol/l (0,02 N) **CHEM*815749505**

500 ml	1l	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 | 1l | 2.5 l | 3 l | 5 l

Titer 0,01245 – 0,01255 mol/l

Sulfuric acid standard solution 0,025 mol/l (0,05 N) **CHEM*815749506**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,0249 – 0,0251 mol/l

Sulfuric acid standard solution 0,05 mol/l (0,1 N) **CHEM*815749501**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,0498 – 0,0502 mol/l

Sulfuric acid standard solution 0,1 mol/l (0,2 N) **CHEM*815749503**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,0996 – 0,1004 mol/l

Sulfuric acid standard solution 0,125 mol/l (0,25 N) **CHEM*815749513**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,1245 – 0,1255 mol/l

Sulfuric acid standard solution 0,2 mol/l (0,4 N) **CHEM*815749520**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,1992 – 0,2008 mol/l

Sulfuric acid standard solution 0,25 mol/l (0,5 N) **CHEM*815749507**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 0,249 – 0,251 mol/l

Sulfuric acid standard solution 0,4 mol/l (0,8 N)			CHEM*815749610
500 ml	1l	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	1l	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

H_2SO_4

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

SULFURIC ACID
STANDARD SOLUTION (2 ≤ C ≤ 6 MOL/L)

Kwas siarkowy roztwory mianowane

H_2SO_4

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 | 1l | 2.5 l | 3 l | 5 l

Titer 1,992 – 2,008 mol/l

Sulfuric acid standard solution 2.5 mol/l (5 N) **CHEM*815749508**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 2,49 – 2,51 mol/l

Sulfuric acid standard solution 3 mol/l (6 N) **CHEM*815749509**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 2,988 – 3,012 mol/l

Sulfuric acid standard solution 4 mol/l (8 N) **CHEM*815749516**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 3,984 – 4,016 mol/l

Sulfuric acid standard solution 5 mol/l (10 N) **CHEM*815749511**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 4,98 – 5,02 mol/l

Sulfuric acid standard solution 6 mol/l (12 N) **CHEM*815749612**

500 ml | 1l | 2.5 l | 3 l | 5 l

Titer 5,976 – 6,024 mol/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 to1000 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 to1000 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 to1000 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 to1000 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 to1000 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 to1000 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 to1000 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 | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	3,0 ± 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 3% pure p. a. **CHEM*115750023**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	3,0 ± 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 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 | 20 l | 30 l | 60 l

Assay	5,0 ± 0,1 %
Density	approx 1,023 g/cm^3 (20°C)

hydrochloric acid solution 5% pure **CHEM*425752834**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	5,0 ± 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 5% pure p. a. **CHEM*115752830**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	5,0 ± 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 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 | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	7,5 ± 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 7,5% pure p. a. **CHEM*115752845**

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	7,5 ± 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 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 | 20 l | 30 l | 60 l

Assay	10,0 ± 0,5 %
Density	approx 1,048 g/cm^3 (20°C)

hydrochloric acid solution 10% pure CHEM*425752838

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	10,0 ± 0,5 %
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 10% pure p. a. CHEM*115752831

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	10,0 ± 0,5 %
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 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 | 20 l | 30 l | 60 l

Assay	15,0 ± 0,5 %
Density	approx 1,0726 g/cm^3 (20°C)

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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	18,0 ± 0,5 %
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 18% pure p. a. — CHEM*115752838

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	18,0 ± 0,5 %
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 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 | 20 l | 30 l | 60 l

Assay	20,0 ± 1 %
Density	approx 1,098 g/cm^3 (20°C)

hydrochloric acid solution 20% pure CHEM*425752833

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	20,0 ± 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 20% pure p. a. CHEM*115752840

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	20,0 ± 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 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 | 20 l | 30 l | 60 l

Assay	25,0 ± 1,0 %
Density	approx 1,124 g/cm^3 (20°C)

hydrochloric acid solution 25% pure **CHEM*425752839**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	25,0 ± 1,0 %
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 25% pure p. a. **CHEM*115752836**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	25,0 ± 1,0 %
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 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 | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	30,0 ± 1,0 %
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 30% pure p. a. **CHEM*115752835**

500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	30,0 ± 1,0 %
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 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**

1l	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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	35,0 – 38,0 %
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 %
Arsenic (As)	max. 0,00001 %
Iron (Fe)	max. 0,0003 %
Heavy metals (as Pb)	max. 0,0002 %
Density (20ºC)	approx 1,1655 g/cm^3

hydrochloric acid solution 35-38% pure p. a. **CHEM*115752837**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	min. 35 max. 38 %
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 %
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
1l	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
1l	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
1l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 0,0357 mol/l (0,0357 N) **CHEM*805313170**

1l		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
1l	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
1l	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
1l	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
1l	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
1l	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
1l	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
1l	2.5 l		
3 l	5 l		

HYDROCHLORIC ACID IN ETHANOL STANDARD SOLUTION (C < 3 MOL/L)

Kwas solny roztwory mianowane w etanolu

HCl/C_2H_5OH

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 | 1l — Titer 0,0996 – 0,1004 mol/l

Hydrochloric acid standard solution 1 mol/l in ethanol **CHEM*805313183**

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

HYDROCHLORIC ACID STANDARD SOLUTION (3 ≤ 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
1l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution 3,5714 mol/l (3,5714 N) **CHEM*805313100**

1l		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
1l	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
1l	2.5 l		
3 l	5 l		
10 l			

hydrochloric acid standard solution 6 mol/l (6 N) **CHEM*805313169**

100 ml	500 ml	Titer	5,976 – 6,024 mol/l
1l	2.5 l		
3 l	5 l		

hydrochloric acid standard solution approx 11 mol/l **CHEM*805313186**

100 ml	250 ml	Titer	approx 11 mol/l
500 ml	1l		
2.5 l	3 l		
5 l	10 l		

STEARIC ACID

Kwas stearynowy

$CH_3(CH_2)_{16}COOH$

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: (20°C)	ethanol approx 50 g/l
Ignition temperature:	196°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

$C_6H_7NO_3S$

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_2O, 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 $P_{O/W}$:	-2,16
Ignition temperature:	no data		
Explosion limits:	no data		

Sulfanilic acid pure **CHEM*425756007**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,5 %
Substances insoluble in Na_2CO_3	max. 0,02 %
Residue on roasting (as SO_4)	max. 0,02 %
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 | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in Na_2CO_3	max. 0,01 %
Residue on roasting (as SO_4)	max. 0,01 %
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

$C_7H_6O_6S \cdot 2H_2O$

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_2O, 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 $P_{o/w}$:	-0,91
Ignition temperature:	approx 150°C		
Explosion limits:	no data		

5-Sulfosalicylic acid dihydrate pure **CHEM*425756404**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 96,0 %
Substances insoluble in water	max. 0,01 %
Salicylic acid ($C_7H_6O_3$)	max. 0,1 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
Salicylic acid ($C_7H_6O_3$)	max. 0,05 %
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%

$C_7H_6O_6S$

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

$C_2H_2O_4 \cdot 2H_2O$

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_2O, 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 $P_{O/W}$:	-0,81
Explosion limits:	no data		

Oxalic acid dihydrate pure **CHEM*425758600**

50 g | 100 g
250 g | 500 g
750 g | 1 kg
5 kg | 10 kg
15 kg | 25 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Residue on roasting	max. 0,05 %
Total nitrogen (N)	max. 0,005 %
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
100 g | 250 g
500 g | 750 g
1 kg | 5 kg
10 kg | 15 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
Residue on roasting	max. 0,01 %
Substances darkening under the influence of H_2SO_4	passes test
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

$C_2H_2O_4 \cdot 2H_2O$

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_2O, 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	log $P_{O/W}$:	-0,81
Ignition temperature:	no data		
Explosion limits:	no data		

Oxalic acid 0,05 mol/l analytical weighed amount **CHEM*165758801**

1 szt.	10 szt.	Concentration after dilution to1000 ml at 20°C	0,05 mol/l ± 0,2 %

OXALIC ACID
STANDARD SOLUTION (C ≤ 0,5 MOL/L)

Kwas szczawiowy roztwory mianowane

$C_2H_2O_4$

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 (0,05 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

$C_2H_2O_4$

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

CCl_3COOH

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:	approx1 (50 g/l H_2O, 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 $P_{O/W}$:	1,645

Trichloroacetic acid pure — CHEM*425779709

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0 %
Water	max. 1,0 %
Dichloroacetic acid	max. 2,4 %
Sulfuric acid (H_2SO_4)	max. 0,5 %
Iron (Fe)	max. 0,002 %

Trichloroacetic acid pure p. a. — CHEM*115779700

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Water	max. 0,5 %
Dichloroacetic acid	max. 1,2 %
Sulfuric acid (H_2SO_4)	max. 0,3 %
Iron (Fe)	max. 0,001 %

TRICHLOROACETIC ACID SOLUTION 10% ≤ C < 25%

Kwas trichlorooctowy roztwory

CCl_3COOH

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 | 500 ml | 1l

Assay 10,0 ± 0,5 %

Trichloroacetic acid solution 20% **CHEM*115779704**

100 ml | 250 ml | 500 ml | 1l

Assay 20,0 ± 0,5 %

TRICHLOROACETIC ACID SOLUTION C ≥ 25%

Kwas trichlorooctowy roztwory

CCl_3COOH

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

$C_{10}H_{16}N_2O_8$

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_2O, 23°C)	Solubility:	
Melting point:	250°C	in water:	approx 0,5 g/l approx 2,2 g/l (80°C)
Boiling point:	>250°C		
Auto-ignition temperature:	>100°C	in organic solvents:	no data
Ignition temperature:	>200°C	log $P_{O/W}$:	-3,34
Explosion limits:	no data		

Ethylenediaminetetraacetic acid pure **CHEM*425932806**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 12.5 kg

Appearance	white, crystalline powder
Assay	min. 98,5 %
Residue on roasting (as SO_4)	max. 0,3 %
Chlorides (Cl)	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white, crystalline powder
Assay	min. 99,0 %
Residue on roasting (as SO_4)	max. 0,1 %
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

$C_{10}H_{16}N_2O_8$

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

$C_4H_6O_6$

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_2O, 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		
Ignition temperature:	150°C	in organic solvents:	ethanol

L-(+)-Tartaric acid pure **CHEM*425933603**

25 g	50 g
100 g	250 g
500 g	1 kg
5 kg	10 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Residue on roasting (as SO_4)	max. 0,05 %
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
100 g	250 g
500 g	1 kg

Assay	min. 99,5 %
Specific rotation (20°C, 10%, H_2O)	+12 ÷ +13 °
Substances insoluble in water	max. 0,005 %
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%

$C_4H_6O_6$

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 | 500 ml | 1l | 5 l

Assay 5,0 ± 0,1 %

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 | 20 g

Appearance	blue granules
Solubility (10 mg/ml, water)	passes test
pH sensitivity	passes test

LACTOSE MONOHYDRATE

Laktoza 1 hydrat

$C_{12}H_{22}O_{11} \cdot H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Specific rotation (20°C, 10%, H_2O)	+54,4 ÷ +55,9°
Water	4,5 - 5,5 %
Heavy metals (as Pb)	max. 0,0005 %

Lactose monohydrate pure p. a. **CHEM*115955307**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg

Specific rotation (20°C, 10%, H_2O)	+54,4 ÷ +55,9°
Water	4,5 - 5,5 %
Acidity or alkalinity	max. 0,4 ml 0,1N NaOH
Absorbance UV	passes test
Sulphates ash	max. 0,1 %
Heavy metals (as Pb)	max. 0,0005 %

LITHIUM CHLORIDE MONOHYDRATE

Litu chlorek 1 hydrat

$LiCl \bullet H_2O$

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 H2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals
Assay	min. 96,5 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals
Assay	min.. 98,0 %
Substances insoluble in water	max. 0,005 %
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_2O, 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 | 1l — Titer 0,0996 – 0,1004 mol/l

Lithium chloride standard solution 0,5 mol/l **CHEM*816026602**

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

Lithium chloride standard solution 1 mol/l **CHEM*816026603**

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

LITHIUM CHLORIDE STANDARD SOLUTION IN ETANOL (C < 4,5 MOL/L)

Litu chlorek roztwory mianowane w etanolu

$LiCl/C_2H_5OH$

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 | 1l — Titer 0,0996 – 0,1004 mol/l

Lithium chloride standard solution 0,5 mol/l in ethanol **CHEM* 816026606**

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

Lithium chloride standard solution 1 mol/l in ethanol **CHEM* 816026604**

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

LITHIUM SULFATE MONOHYDRATE

Litu siarczan 1 hydrat

$LiSO_4 \cdot H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals
Assay	min. 96,0 %
Chlorides (Cl)	max. 0,004 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals
Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
Free acids (as H_2SO_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

Li_2CO_3

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals
Assay	min. 98,0%
Substances insoluble in HCl	max. 0,02 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals
Assay	min. 99,0%
Substances insoluble in HCl	max. 0,01 %
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

$LiOH \cdot H_2O$

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	no data

Lithium hydroxide monohydrate pure **CHEM*426048709**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,01 %
Lithium carbonate (Li_2CO_3)	max. 2,0 %
Chlorides (Cl)	max. 0,03 %
Sulphates (SO_4)	max. 0,02 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 15 kg

Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,005 %
Lithium carbonate (Li_2CO_3)	max. 1,0 %
Chlorides (Cl)	max. 0,015 %
Sulphates (SO_4)	max. 0,01 %
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

$Mg(NO_3)_2 \cdot 6H_2O$

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_2O)	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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg

Appearance	colourless crystals
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
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
100 g	250 g
500 g	750 g
1 kg	2 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$MgCl_2 \cdot 6H_2O$

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_2O)	Bulk density:	no data
Melting point:	116°C	Solubility:	
Boiling point:	not applicable	in water:	1670 g/l (20°C),
Auto-ignition temperature:	not applicable		3670 g/l (100°C)
Ignition temperature:	not applicable	in organic solvents:	no data

Magnesium chloride hexahydrate pure **CHEM*426120509**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Free acids(as HCl)	max. 0,0045 %
Total nitrogen (N)	max. 0,005 %
Phosphates (as PO_4)	max. 0,002 %
Sulphates (SO_4)	max. 0,005 %
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

$MgCl_2$

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_2O)	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 to1000 ml at 20°C | 0,01 mol/l ± 0,2 %

MAGNESIUM CHLORIDE STANDARD SOLUTION

Magnezu chlorek roztwór mianowany

$MgCl_2$

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

$(CH_3COO)_2Mg \cdot 4H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless, crystalline powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless, crystalline powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
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

$MgSO_4$

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg | 3 kg | 5 kg | 10 kg | 25 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
Residue on roasting	max. 2,5 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder
Assay	min. 98,5 %
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

$MgSO_4 \cdot 7H_2O$

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_2O, 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 | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	colourless crystals
Assay	98,5 – 102,0 %
pH (5%, 20°C)	5,5 – 8,0
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals
Assay	99,0 - 100,5 %
pH (5%, 20°C)	5,5 – 8,0
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,002 %
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

$MgSO_4$

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_2O, 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 to1000 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 to1000 ml at 20°C — 0,05 mol/l ± 0,2 %

MAGNESIUM SULFATE STANDARD SOLUTION

Magnezu siarczan roztwory mianowane

$MgSO_4$

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, insoluble in ethanol
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Magnesium oxide pure — CHEM*426140200

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	min. 95,0 %
Substances insoluble in HCl	max. 0,1 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 97,0 %
Substances insoluble in HCl	max. 0,02 %
Chlorides (Cl)	max. 0,01 %
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

~ $4MgCO_3 \cdot Mg(OH)_2 \cdot 5H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Magnesium (Mg)	min. 24,0 %
Substances insoluble in water	max. 1,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Magnesium (Mg)	min. 24,0 %
Substances insoluble in water	max. 1,0 %
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

$C_{12}H_{22}O_{11} \cdot H_2O$

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_2O, 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 in ethanol
Ignition temperature:	no data		

D-(+)-Maltose monohydrate pure **CHEM*446153008**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	~ 97%
Specific rotation(20°C,4%, H_2O, NH_3)	+128 ÷ + 132°
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 | 100 g | 250 g | 500 g | 1 kg

Assay	~ 98%
Specific rotation (20°C,4%, H_2O, NH_3)	+128 ÷ + 132°
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_2O)	passes test

MANGANESE (II) NITRATE TETRAHYDRATE

Manganu azotan 4 hydrat

$Mn(NO_3)_2 \cdot 4H_2O$

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_2O, 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)
		in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Manganese (II) nitrate tetrahydrate pure **CHEM*426158409**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min. 97,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 1 kg | 5 kg | 10 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,002 %
Ammonia salt (NH_4)	max. 0,05 %
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

$Mn(NO_3)_2$

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

$MnCl_2 \cdot 4H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 20 kg

Appearance	pink crystalline powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Substances reducing $KMnO_4$ (as O)	max. 0,001 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg

Appearance	pink crystalline powder
Assay	min. 99,0%
pH (5%, 20^{o}C)	3.5 - 6.0 (20°C)
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

$(CH_3COO)_2Mn \cdot 4H_2O$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg

Assay	min. 98,0%
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,004 %
Calcium (Ca)	max. 0,001 %
Cadmium (Cd)	max. 0,001 %
Cobalt (Co)	max. 0,001 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg

Assay	min. 99,0%
Chlorides (Cl)	max. 0,0005 %
Sulphates (SO_4)	max. 0,002 %
Calcium (Ca)	max. 0,0005 %
Cadmium (Cd)	max. 0,0005 %
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

$MnSO_4$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98%
Substances insoluble in water	max. 0,01%
Subst. reducing $KMnO_4$	max. 0,001%
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
Subst. reducing $KMnO_4$	max. 0,0005 %
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

$MnSO_4 \cdot H_2O$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Appearance	pink crystals or crystalline powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
Chlorides (Cl)	max. 0,005 %
Zinc (Zn)	max. 0,02 %
Nickel (Ni)	max. 0,01 %
Calcium (Ca)	max. 0,01 %
Iron (Fe)	max. 0,002 %

Manganese (II) sulfate monohydrate pure p. a. **CHEM*116169409**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	pink crystals or crystalline powder
Assay	99,0 - 101 %
Residue on roasting	10,0 – 12,0 %
Substances insoluble in water	max. 0,01 %
Subst. reducing $KMnO_4$ (as O_2)	passes test
Chlorides (Cl)	max. 0,002 %
Heavy metals (as Pb)	max. 0,001 %
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

$MnCO_3$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in HNO_3	max. 0,01 %
Iron (Fe)	max. 0,001 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in HNO_3	max. 0,005 %
Iron (Fe)	max. 0,0005 %
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

CH_3OH

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 | 20 l | 30 l | 60 l

Appearance	colourless, clearliquid
Assay (GC)	min 99,5 %
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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clearliquid
Assay (GC)	min 99,8 %
Water	max. 0,1 %
Free acids (as HCOOH)	max. 0,002 %
Free base (as NH_3)	max. 0,0005 %
Aldehydes and ketones(as HCHO)	max. 0,007 %
Residue on evaporation	max. 0,002 %
Substances darkening under the influence of H_2SO_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, clearliquid
500 ml	1l	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_2SO_4	passes test
		Substances reducing $KMnO_4$ (as O)	max. 0,0005 %
		Iron (Fe)	max. 0,00002 %
Methanol HPLC			**CHEM*616219904**
1l	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**
1l	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
		Baselline 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 %
2.5 l		Water (KF)	max. 0,1 %
		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 dekachlorobiphenyl	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

$C_4H_{10}O_2$

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_2O, 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_3COOH)	max. 0,01%
60 l		Assay	max. 0,5%
		Density (20/20°C)	0,920 - 0,927 g/cm^3

METHYLAMINE HYDROCHLORIDE

Metyloaminy chlorowodorek

CH_3-NH_2-HCl

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 $P_{O/W}$:	-3,82

Methylamine hydrochloride pure **CHEM*426292301**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Melting point	229-233 °C

Methylamine hydrochloride pure p. a. **CHEM*116292300**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Melting point	228-231°C

1-METHYL-2-PYRROLIDINONE

1-Methylo-2-pirolidon

C_5H_9NO

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
Colour:	colourless - yellow
Odor:	characteristic
pH:	8,5 - 10,0 (100 g/l H_2O, 20°C)
Melting point:	-24°C
Boiling point:	202°C
Auto-ignition temperature:	245°C
Ignition temperature:	91°C
Explosion limits:	
bottom:	1,3% v/v
top:	9,5% v/v
Viscosity:	1,80 mPa·s (20°C); 0,97 mPa·s (100°C)
Vapour pressure:	1,33 hPa (20°C), 0,33 hPa (40°C)
Density:	1,03 g/cm^3 (20°C)
Solubility:	
in water:	1000 g/l (20°C)
in organic solvents:	no data

1-Methyl-2-pyrrolidinone pure **CHEM*426418805**

100 ml	250 ml
500 ml	1l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	200 l

Assay (GC)	min. 99,5 %
Acidity / alkalinity	max. 0,0002 meq/g
Insoluble substances	max. 0,005 %
Water (KF)	max. 0,05 %
Lead (Pb)	max. 0,0005 %
Iron (Fe)	max. 0,0005 %

METHYL ACETATE

Metylu octan

C_5H_9NO

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		
Boiling point:	55 - 57°C	Density:	0,93 g/cm^3 (20°C)
Auto-ignition temperature:	455°C	Solubility:	
Ignition temperature:	-13°C	in water:	250 g/l (20°C)
Explosion limits:		in organic solvents:	ethanol, ether

Methyl acetate pure — CHEM*426539005

100 ml | 250 ml | 500 ml | 1l | 5 l | 10 l

Appearance	colourless, clear liquid
Assay	min. 98,5 %
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 | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l

Assay (GC)	min. 99,5 %
Free acids(as CH_3COOH)	max. 0,005%
Etylu octan (GC)	max. 0,1 %
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

$Cu(NO_3)_2 \cdot 3H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 99,0 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,01 %
Sodium, potassium, calcium (Na+K+Ca)	max. 0,15 %
Iron (Fe)	max. 0,02 %
Substances insoluble in water	max. 0,01 %

Copper (II) nitrate trihydrate pure p. a. — CHEM*116570600

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 99,0 %
Chlorides (Cl)	max. 0,001 %
Sulphates (SO_4)	max. 0,005 %
Sodium, potassium, calcium (Na+K+Ca)	max. 0,07 %
Iron (Fe)	max. 0,005 %
Substances insoluble in water	max. 0,005 %

COPPER (II) CHLORIDE DIHYDRATE

Miedzi (II) chlorek 2 hydrat

$CuCl_2 \cdot 2H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15kg | 25 kg

Assay	min 98,0 %
Sulphates (SO_4)	max. 0,01 %
Arsenic (As)	max. 0,0002 %
Potassium (K)	max. 0,004 %
Calcium (Ca)	max. 0,004 %
Iron (Fe)	max. 0,005 %

Copper (II) chloride dihydrate pure p. a. — CHEM*116565404

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg

Assay	min 99,0 %
pH (5 %, 20^{o}C)	3,0 - 3,8
Total nitrogen (N)	max. 0,004 %
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)

$(HCO_2)_2Cu$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Iron (Fe)	max. 0,005 %
Lead (Pb)	max. 0,005 %
Magnesium (Mg)	max. 0,005 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min 99,0 %
Iron (Fe)	max. 0,005 %
Lead (Pb)	max. 0,005 %
Magnesium (Mg)	max. 0,005 %
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

$C_4H_6CuO_4 \bullet H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min 98,0 %
Substances insoluble in water	max. 0,05 %
Total nitrogen (N)	max. 0,05 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min 99,0 %
Substances insoluble in water	max. 0,01 %
Total nitrogen (N)	max. 0,03 %
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

$CuSO_4$

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_2O, 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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min. 97,5 %
Substances insoluble in water	max. 0,02 %
Substances non-precipitated with H_2S (as SO_4)	max. 0,3 %
Iron (Fe)	max. 0,02 %
Appearance	grey-white amorphous powder

Copper (II) sulfatepure p. a. **CHEM*116582805**

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	grey-white amorphous powder
Assay	min. 98,0 %
pH (5 %, 20°C)	3,5 - 4,5
Substances insoluble in water	max. 0,01 %
Loss on drying(250°C)	max. 0,5 %
Substances non-precipitated H_2S (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

$CuSO_4 \cdot 5H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg | 30 kg

Assay	98,5 – 101,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,001 %
Total nitrogen (N)	max. 0,005 %
Sodium, potassium, calcium (Na + K + Ca)	max. 0,15 %
Iron (Fe)	max. 0,02 %

Copper (II) sulfate 5 hydrat pure p. a. **CHEM*116583101**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	99,0 – 101,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,0005 %
Total nitrogen (N)	max. 0,004 %
Nickel (Ni)	max. 0,005 %
Sodium, potassium, calcium (Na + K + Ca)	max. 0,07 %
Iron (Fe)	max. 0,01 %

COPPER (II) SULFATE STANDARD SOLUTION (C ≤ 0,015 MOL/L)

Miedzi siarczan roztwory mianowane

$CuSO_4$

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

$CuSO_4$

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 sufate 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

$CuSO_4$

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_2O 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 | 100 g | 250 g | 500 g | 1 kg

Appearance	black powder
Assay	min. 99,0 %
Residue on roasting	max. 1,0 %
Lead (Pb)	max. 0,05 %
Iron (Fe)	max. 0,05 %

Copper (II) oxide pure p. a. **CHEM*116585762**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	czarny powder
Assay (iodometric)	min. 99,0 %
Substances insoluble in HNO_3	max. 0,02 %
Free base	passes test
Substances non-precipitated with H_2S	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

$CuCO_3 \bullet Cu(OH)_2$

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_2O; 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	szarozielony powder
Assay (Cu)	52,0 – 56,0 %
Substances insoluble in H_2SO_4	max. 0,02 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	szarozielony powder
Assay (Cu)	54,0 – 56,0 %
Substances insoluble in H_2SO_4	max. 0,01 %
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_2O; 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 | 250 g | 500 g | 1 kg

Chlorides (Cl)	max. 0,01 %
Total sulphur (S)	max. 0,01 %
Sieve analysis: particle size:	
< 0,2 mm	min. 95,0 %

UREA

Mocznik

CH_4N_2O

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_2O, 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		
Ignition temperature:	no data	log $P_{(w/o)}$:	-1,59
Explosion limits:	no data		

urea pure **CHEM*426615308**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	small, colourless crystals
Assay	min. 99,0 %
Melting point	131 - 133 °C
Substances insoluble in water	max. 0,02 %
Biuret	max. 0,3 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	small, colourless crystals
Assay	min. 99,5 %
Melting point	132 - 133 °C
Substances insoluble in water	max. 0,01 %
Biuret	max. 0,1 %
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

$C_8H_8N_6O_6$

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_2O, 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 | 10 g | 25 g | 50 g

Appearance	red-brown powder
Assay	min. 65,0 %
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	Distilation:	
		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

$C_{10}H_7OH$

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		
pH:	no data	Density:	1,27 g/cm^3 (20°C)
Melting point:	121,6°C	Bulk density:	approx 300 kg/m^3
Boiling point:	285°C	Solubility:	
Auto-ignition temperature:	no data	in water:	1 g/l (20°C)
Ignition temperature:	153°C	in organic solvents:	ethanol, ether (20°C)

2-naphthol pure p. a. **CHEM*116675400**

5 g | 10 g | 25 g | 50 g | 75 g | 100 g | 250 g

Assay	min. 99,0 %
Melting point	121 -123°C

NICKEL (II) NITRATE HEXAHYDRATE

Niklu (II) azotan 6 hydrat

$Ni(NO_3)_2 \cdot 6H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Chlorides (Cl)	max. 0,003 %
Sulphates (SO_4)	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
pH (5%, 20^{o}C)	3,5 ÷ 5
Substances insoluble in water	max. 0,005 %
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

$Ni(NO_3)_2$

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

$NiCl_2 \cdot 6H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 97,0 %
Zinc (Zn)	max. 0,002 %
Cobalt (Co)	max. 0,02 %
Copper(Cu)	max. 0,002 %
Lead (Pb)	max. 0,005 %
Iron (Fe)	max. 0,005 %
Appearance	green crystlline powder

Nickel (II) chloride hexahydrate pure p. a. — CHEM*116745300

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
Zinc (Zn)	max. 0,001 %
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

$NiSO_4 \cdot 6H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,05 %
Zinc (Zn)	max. 0,002 %
Cobalt (Co)	max. 0,15 %
Copper(Cu)	max. 0,002 %
Iron (Fe)	max. 0,004 %

Nickel (II) sulfate hexahydrate pure p. a. — CHEM*116751600

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,001%
Zinc (Zn)	max. 0,001 %
Cobalt (Co)	max. 0,05 %
Copper(Cu)	max. 0,001 %
Iron (Fe)	max. 0,002 %

NICKEL (II) SULFATE HEPTAHYDRATE

Niklu siarczan 7 hydrat

$NiSO_4 \cdot 7H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Assay (Ni)	20,8 - 22,4 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	min. 3,5
Chlorides (Cl)	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 99,0 %
Chlorides (Cl)	max. 0,005 %
Zinc (Zn)	max. 0,005 %
Cobalt (Co)	max. 0,05 %
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

$Ni(OH)_2$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay (Ni)	min. 60,0 %
Substances insoluble in HCl	max. 0,2 %
Sulphates (SO_4)	max. 0,02 %
Total nitrogen (N)	max. 0,03 %
Iron (Fe)	max. 0,005 %

NINHYDRIN

Ninhydryna

$C_9H_6O_4$

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_2O, 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 | 50 g | 100 g | 250 g | 500 g

Assay	min. 99,0%
pH (1%, 20°C)	4,6 - 5,0
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

$C_9H_6O_4/C_2H_5OH$

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 | 250 ml | 500 ml | 1l — Assay — approx 1 g/l

Ninhydrin 0,5% in ethanol **CHEM*116765005**

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

Ninhydrin 1% in ethanol **CHEM*116765003**

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

NINHYDRIN IN ETHANOL 50%

Ninhydryna w etanolu 50%

$C_9H_6O_4/C_2H_5OH$

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

$(CH_3CO)_2O$

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_2O, 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		
Explosion limits:		log $P_{O/W}$:	-0,2

Acetic anhydride pure — CHEM*426938706

500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless liquid
Assay	min. 98,0 %
Density (20°C)	approx 1,08 g/cm^3
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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless liquid
Assay	min. 98,0 %
Density (20°C)	1,079 - 1,082 g/cm^3
Residue on evaporation	max. 0,003 %
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 Denigesa

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
		in organic solvents:	no data
Ignition temperature:	approx 12°C (methanol)		
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-Reinhardta

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-Reinhardta reagent **CHEM*116950800**

100 ml

OCTANE

Oktan

$CH_3(CH_2)_6CH_3$

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 | 100 ml | 250 ml | 500 ml | 1l

Assay	min 99,5%
Water	max. 0,000002%
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

$Pb(NO_3)_2$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 20 kg

Appearance	white crystals or white powder
Assay	min. 98,0 %
Substances insoluble in HNO_3	max. 0,01 %
Chlorides (Cl)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Appearance	white crystals or white powder
Assay	min. 99,0 %
Substances insoluble in HNO_3	max. 0,005 %
Chlorides (Cl)	max. 0,001 %
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

$(CH_3COO)_2Pb \cdot 3H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	colourless or white crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	colourless or white crystals
Assay	99,5 - 103,0 %
Substances insoluble in CH_3COOH	max. 0,005 %
Nitrates and nitrites (as NO_3)	max. 0,002 %
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%

$C_4H_6O_4Pb \cdot 2\ Pb(OH)_2$

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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay (Pb)	6,8 ÷ 7,8%
Assay (PbO)	90 ÷ 103,2 g/dm³

LEAD (II) ACETATE SOLUTIONS (C > 25%)

Ołowiu octan roztwory

$C_4H_6O_4Pb \cdot 2\ Pb(OH)_2$

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 | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay (Pb)	17,0 - 19,5 %
Assay (PbO)	225 - 258 g/l
Density:	1,23 g/cm^3 (20 °C)

Lead (II) acetate solution 33% **CHEM*527030610**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay (Pb)	22,4 ÷ 25,7%
Assay (PbO)	297 ÷ 340,6 g/l
Appearance	colourless liquid,

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	red or żółty powder
Assay	99,0 – 100,5 %
Substances insoluble in CH_3COOH	max. 0,2 %
Loss on roasting (700°C)	max. 0,2 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	red or żółty powder
Assay	min. 99,5 %
Bismuth (Bi)	max. 0,025 %
Copper (Cu)	max. 0,001 %
Lead (Pb)	max. 0,01 %
Silwer (Ag)	max. 0,002 %
Iron (Fe)	max. 0,0025 %

XYLENOL ORANGE TETRASODIUM SALT

Oranż xylenolowy

$C_{31}H_{28}N_2Na_4O_{13}S$

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_2O, 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		

xylenol orange CHEM*237045902

5 g | 10 g | 25 g | 50 g

Assay	min. 35,0 %
Moisture	max. 10,0 %
Th sensitivity	min. 0,000001 g/ml
Xylenol red	max. 3,0 %
Semixylenol orange	max. 15,0 %
Residue on roasting (as SO_4)	max. 38,0 %
Suitability for titration	passes test

METHYL ORANGE

Oranż metylowy

$C_{14}H_{15}N_3SO_3Na$ **(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_2O, 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

$C_{14}H_{15}N_3SO_3Na$

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 500 ml 1l

Appearance	orange liquid
pH range	
red	3,2
yellow	4,4

methyl orange water solution 0,1% **CHEM*217046307**

100 ml 250 ml 500 ml 1l

Appearance	orange liquid
pH range	
red	3,2
yellow	4,4

methyl orange water solution 0,5% **CHEM*217046305**

100 ml 250 ml 500 ml 1l

Appearance	orange liquid
pH range	
red	3,2
yellow	4,4

methyl orange water solution 0,7% **CHEM*217046306**

100 ml 250 ml 500 ml 1l

Appearance	orange liquid
pH range	
red	3,2
yellow	4,4

METHYL ORANGE IN ETHANOL SOLUTION

Oranż metylowy roztwory etanolowe

$C_{14}H_{15}N_3SO_3Na/C_2H_5OH$

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 | 500 ml | 1l

Appearance	orange liquid
Methyl orange	approx 1,0 g/l

SILICA GEL

Pakiet osuszający (żel silikonowy)

$SiO_2 \cdot nH_2O$

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 | 250 g | 500 g | 800 g | 1 kg | 2 kg

Density (20^{o}C)	0,827 – 0,890 g/cm^3
Dynamic viscosity	110 – 230 mPa*s
pH	5,0 – 7,0
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

parafin wax for histopathology tt. 50-52°C **CHEM*597144522**

250 g	500 g	Melting point	50 - 52 °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 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	Melting point	54 - 56 °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°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	Melting point	54 - 56 °C
5 kg	10 kg		
12,5 kg	15 kg		
17 kg	20 kg		
25 kg			

n-PENTANE

Pentan

C_5H_{12}

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 | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l

Assay	min. 99,0 %
Water (KF)	max. 0,025 %
Acidity	max. 0,001 meq/g
Residue on evaporation	max. 0,05 %

pentane pure p. a. **CHEM*117179209**

50 ml | 100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l

Assay	min. 99,0 %
Water (KF)	max. 0,02 %
Acidity	max. 0,0005 meq/g
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 chromiumatografii HPLC			**CHEM*617179209**
1l	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 - transsmision (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	1l	Assay (GC)	min. 99,0 %
2.5 l		Water (KF)	max. 0,02 %
		Acidity	max. 0,0005 meq/g
		Residue on evaporation	max. 0,0005 %

pentane reduced content of trihalomethanes			**CHEM*617179212**
500 ml	1l	Assay (GC)	min. 99,0 %
2.5 l		Water (KF)	max. 0,01 %
		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 ÷ 36,0ºC
		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

$C_5H_{12}O$

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_2O, 20°C)	Solubility:	
Melting point:	-79°C	in water:	21,9 g/l H_2O (20°C)
Boiling point:	138°C	in organic solvents:	soluble
Auto-ignition temperature:	300°C	Log $_{PO/W}$:	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 | 250 ml | 500 ml | 1l | 2.5 l

Appearance	colourless, clear liquid
Assay	min. 98,0 %
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 | 250 ml | 500 ml | 1l

Appearance	colourless, clear liquid
Assay	min. 98,5 %
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

$C_6H_3(OH)_3$

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_2O, 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 | 50 g | 75 g | 100 g | 250 g | 500 g

Assay	min. 97,0 %
Melting point	129-134°C

pyrogallol pure p. a. **CHEM*117259608**

10 g | 25 g | 50 g | 75 g | 100 g | 250 g | 500 g

Assay	min. 99,5 %
Melting point	130-133°C
Free acids	max. 0,02 %
Residue on roasting (as SO_4)	max. 0,05 %
Chlorides (Cl)	max. 0,002 %
Sulfates (SO_4)	max. 0,02 %

PYRIDINE

Pirydyna

C_5H_5N

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 | 250 ml | 500 ml | 1l

Appearance	colourless or yellow, clear liquid
Assay	min. 99,0 %
Water (KF)	max. 0,5 %

pyridine pure p. a. **CHEM*117276102**

50 ml | 100 ml | 250 ml | 500 ml | 1l

Appearance	colourless or yellow, clear liquid
Assay	min. 99,5 %
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

KNO_3

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		
Ignition temperature:	not applicable	in other solvents:	ammonia

potassium nitrate pure CHEM*427389100

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg

Appearance	white powder
Assay	min. 98,5 %
Water	max. 0,5 %
Substances insoluble in water	max. 0,005 %
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
100 g	250 g
500 g	750 g
1 kg	2 kg
5 kg	10 kg
25 kg	

Appearance	white powder
Assay	min. 99,0 %
Water	max. 0,2 %
pH (5%, 20^{o}C)	5,5 - 8
Substances insoluble in water	max. 0,005 %
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

KNO_3

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		
Ignition temperature:	not applicable	in other solvents:	ammonia

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

KNO_3

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 1l Titer 0,0498 – 0,0502 mol/l

potassium nitrate standard solution 0,1 mol/l **CHEM*817309102**

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

potassium nitrate standard solution 0,5 mol/l **CHEM*817309104**

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

potassium nitrate standard solution 1 mol/l **CHEM*817309101**

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

potassium nitrate standard solution 2 mol/l **CHEM*817309100**

250 ml 500 ml 1l Titer 1,992 – 2,008 mol/l

POTASSIUM NITRITE

Potasu azotyn

KNO_2

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_2O 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg

Assay	min. 95,0 %
Chlorides (Cl)	max. 0,05 %
Sulfates (SO_4)	max. 0,05 %
Arsenic (As)	max. 0,0002 %
Lead (Pb)	max. 0,001 %
Iron (Fe)	max. 0,002 %

potassium nitrite pure p. a. — CHEM*117389508

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 25 kg

Assay	min. 96,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Arsenic (As)	max. 0,0001 %
Lead (Pb)	max. 0,0005 %
Iron (Fe)	max. 0,001 %

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Appearance	white, powder
Assay	min. 98,5 %
Loss on drying	max. 0,5 %
Substances insoluble in water	max. 0,02 %
pH (5%, H_2O)	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
50 g	100 g
250 g	500 g
750 g	1 kg

Appearance	white, powder
Assay	min. 99,5 %
Loss on drying	max. 0,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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_2O, 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 | 1l — Titer: 0,0498 – 0,0502 mol/l

potassium bromate-bromide standard solution 0,1 mol/l **CHEM*811923802**

250 ml | 500 ml | 1l — Titer: 0,0998 – 0,1004 mol/l

POTASSIUM BROMATE

Potasu bromian

$KBrO_3$

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder or white crystals
Assay	min. 99,8 %
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

$KBrO_3$

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_2O, 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

$KBrO_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	5,5 - 8,0
Total nitrogen (N)	max. 0,003 %
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
25 kg	

Appearance	white, powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	5,5 - 8,0
Total nitrogen (N)	max. 0,001 %
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_2O, 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 | 500 ml | 1l

Titer 0,000996 – 0,001004 mol/l

potassium chloride standard solution 0,01 mol/l **CHEM*817397409**

100 ml | 250 ml | 500 ml | 1l

Titer 0,00996 – 0,01004 mol/l

potassium chloride standard solution 0,1 mol/l **CHEM*817397407**

100 ml | 250 ml | 500 ml | 1l

Titer 0,0996 – 0,1004 mol/l

potassium chloride standard solution 0,2 mol/l **CHEM*817397412**

100 ml | 500 ml | 1l

Titer 0,1992 – 0,2008 mol/l

potassium chloride standard solution 0,3 mol/l **CHEM*817397401**

100 ml | 250 ml | 500 ml | 1l

Titer 0,2988 – 0,3012 mol/l

potassium chloride standard solution 0,5 mol/l **CHEM*817397404**

100 ml | 250 ml | 500 ml | 1l

Titer 0,498 – 0,502 mol/l

potassium chloride standard solution 1 mol/l **CHEM*817397406**

100 ml | 250 ml | 500 ml | 1l

Titer 0,996 – 1,004 mol/l

potassium chloride standard solution 3 mol/l **CHEM*817397400**

50 ml | 100 ml | 250 ml | 500 ml | 1l | 2,5 l | 3 l | 5 l | 10 l

Titer 2,988 – 3,012 mol/l

potassium chloride standard solution 3,3 mol/l **CHEM*817397403**

100 ml | 250 ml | 500 ml | 1l

Titer 3,2868 – 3,3132 mol/l

potassium chloride standard solution 4 mol/l **CHEM*817397405**

100 ml | 250 ml | 500 ml | 1l

Titer 3,984 – 4,016 mol/l

potassium chloride saturated solution **CHEM*817397408**

50 ml | 100 ml | 250 ml | 500 ml | 1l | 2,5 l | 3 l | 5 l | 10 l

Assay approx 342 g/l

POTASSIUM CHROMATE

Potasu chromian

K_2CrO_4

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow crystals
Assay	min. 99,5 %
Substances insoluble in water	max. 0,004 %
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

K_2CrO_4

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 | 500 ml | 1l

Assay	1 % ± 0,1 %
pH	8,5 - 10,0
Density (18°C)	approx 1,0066 g/cm^3

potassium chromate 5% **CHEM*817402502**

100 ml | 250 ml | 500 ml | 1l

Assay	5 % ± 0,1 %
pH	8,5 - 10,0
Density (18°C)	approx 1,0394 g/cm^3

potassium chromate 10% **CHEM*527410406**

100 ml | 250 ml | 500 ml | 1l

Assay	10 % ± 0,1 %
pH	8,5 - 10,0
Density (18°C)	approx 1,0821 g/cm^3

POTASSIUM CITRATE TRIBASIC MONOHYDRATE

Tri-Potasu cytrynian 1 hydrat

$C_6H_5K_3O_7 \cdot H_2O$

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_2O, 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 | 250 g | 500 g | 1 kg | 5 kg | 10 kg

Appearance	colourless or white, crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,01 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless or white crystals
Assay	min. 99,0 %
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

$K_2Cr_2O_7$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Appearance	orange crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Substances precipitated NH_4OH	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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	orange crystals
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
Substances precipitated NH_4OH	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

$K_2Cr_2O_7$

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_2O, 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%

$K_2Cr_2O_7$

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_2O, 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	Assay	5,0 ± 0,1 %
500 ml	1l	Density (20°C)	approx 1,0336 g/cm^3
5 l			

POTASSIUM DICHROMATE 10% solution

Potasu dichromian roztwór 10%

$K_2Cr_2O_7$

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_2O, 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

$K_2Cr_2O_7$

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_2O, 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

$K_2Cr_2O_7$

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_2O, 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 1l Titer 0,01245 – 0,01255 mol/l

POTASSIUM DICHROMATE 0,025 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,025M

$K_2Cr_2O_7$

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_2O, 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 | 1l

Titer 0,0249 – 0,0251 mol/l

POTASSIUM DICHROMATE 0,04167 MOL/L (0,25N) STANDARD SOLUTION

Potasu dichromian roztwór 0,25N

$K_2Cr_2O_7$

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_2O, 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

$K_2Cr_2O_7$

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_2O, 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 | 1l

Titer 0,0996 – 0,1004 mol/l

POTASSIUM DICHROMATE 0,25 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,25M

$K_2Cr_2O_7$

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_2O, 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 | 1l

Titer 0,249 – 0,251 mol/l

POTASSIUM DICHROMATE 0,5 MOL/L STANDARD SOLUTION

Potasu dichromian roztwór 0,5M

$K_2Cr_2O_7$

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_2O, 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 | 1l

Titer 0,498 – 0,502 mol/l

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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 3 kg

Appearance	colourless or white powder
Assay	min. 97,5 %
Loss on drying	max. 1,5 %
Substances insoluble in water	max. 0,1 %
Free acids (as HF)	max. 0,05 %
Free basics (as K_2CO_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
100 g	250 g
500 g	750 g
1 kg	

Appearance	colourless or white powder
Assay	min. 99,0 %
Loss on drying	max. 1,0 %
Substances insoluble in water	max. 0,01 %
Free acids (as HF)	max. 0,01 %
Free basics (as K_2CO_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

$KF \cdot 2H_2O$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,03 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
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

KH_2PO_4

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_2O, 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 | 250 g | 500 g | 1 kg | 5 kg | 10 kg | 20 kg | 25 kg

Appearance	colourless crystals
Assay	min. 98,0 %
Loss on drying	max. 1,0 %
Substances insoluble in water	max. 0,02 %
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 | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Appearance	colourless crystals
Assay	min. 99,5 %
Loss on drying	max. 0,2 %
Substances insoluble in water	max. 0,01 %
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 %

Potassiumsium phosphate dibasic

di-potasu wodorofosforan

K_2HPO_4

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_2O, 20°C)	Solubility:	
Melting point:	decomposition >180°C	in water:	1600 g/l (20°C)
Boiling point:	no data	in organic solvents:	no data

Potassiumsium phosphate dibasic pure **CHEM*427421009**

50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals or powder
Assay	min. 98,0 %
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 %

Potassiumsium phosphate dibasic pure p. a. **CHEM*117421000**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals or powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Loss on drying	max. 1,0 %
pH (5%, 20^{o}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

$K_4[Fe(CN)_6] \cdot 3H_2O$

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		
Ignition temperature:	not applicable	in organic solvents:	no data

potassium hexacyanoferrate (II) 3 hydrate pure **CHEM*427469803**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow crystals
Assay	min. 98,5 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow crystals
Assay	99,0 – 102,0 %
Substances insoluble in water	max. 0,005 %
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

$K_4[Fe(CN)_6]$

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

$K_4[Fe(CN)_6]$

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 1l

Titer 0,0996 – 0,1004 mol/l

POTASSIUM HEXACYANOFERRATE (III)

Potasu heksacyjanożelazian (III)

$K_3Fe(CN)_6$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Appearance	red crystals
Assay	min. 98,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	red crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,01 %
Hexacyanoferrate (II)	max. 0,05 %

POTASSIUM HEXAHYDROXOANTIMONATE (V)

Potassiumsium heksahydroksyantymonian (V)

$KSb(OH)_6$

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_2O 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 | 50 g | 100 g | 250 g

pH	7,5 - 11
Sodium (Na)	max. 0,3 %
Lead (Pb)	max. 0,01 %

potassium hexahydroxoantimonate (V) pure p. a. **CHEM*117469810**

5 g | 10 g | 25 g | 50 g | 100 g | 250 g

pH	8 - 10
Sodium (Na)	max. 0,2 %
Lead (Pb)	max. 0,005 %

POTASSIUM IODATE

Potasu jodan

KIO_3

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	no data

potassium iodate pure **CHEM*427430800**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white, powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder
Assay	min. 99,8 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

KIO_3

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	no data

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 ≤ 0,25 MOL/L)

Potasu jodan roztwory

KIO_3

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 1l Titer 0,000996 – 0,001004 mol/l

potassium iodate standard solution 0,01 mol/l **CHEM*807430802**

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

potassium iodate standard solution 0,1 mol/l **CHEM*807430803**

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

potassium iodate standard solution 0,25 mol/l **CHEM*807430805**

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

POTASSIUM IODATE 0,5 MOL/L STANDARD SOLUTION

Potasu jodan roztwór 0,5M

KIO_3

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_2O, 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 | 1l

Titer 0,498 – 0,502 mol/l

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Moisture	max. 0,6 %
Substances insoluble in water	max. 0,02 %
Chlorides and bromides (as Cl)	max. 0,1 %
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
100 g	250 g
500 g	750 g
1 kg	2 kg
5 kg	10 kg
15 kg	20 kg

Appearance	colourless crystals
Assay	min. 99,5 %
Moisture	max. 0,1 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	6,0 – 8,0
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_2O, 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/cm^3 (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^{o}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 1l Titer 0,0498 – 0,0502 mol/l

potassium iodide standard solution 0,1 mol/l **CHEM*807431611**

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

potassium iodide standard solution 0,25 mol/l **CHEM*807431612**

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

potassium iodide standard solution 0,5 mol/l **CHEM*807431609**

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

potassium iodide standard solution 1 mol/l **CHEM*807431610**

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

POTASSIUM PERMANGANATE

Potasu nadmanganian

$KMnO_4$

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/cm³ (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 | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	violet crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 1,0 %
Insoluble zanieczyszczenia (without MnO_2)	max. 0,03 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	violet crystals
Assay	min. 99,5 %
Substances insoluble in water	max. 0,1 %
Insoluble impurities (without MnO_2)	max. 0,01 %
Total nitrogen (N)	max. 0,005 %
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

$KMnO_4$

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/cm³ (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%

$KMnO_4$

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**

1l | 5 l | 10 l | 20 l | 30 l

Assay	5,0 % ± 0,1 %
Density	1,0312 g/cm^3 (15°C)

POTASSIUM PERMANGANATE STANDARD SOLUTIONS(C ≤ 0,0125 MOL/L)

Potasu nadmanganian roztwory mianowane

$KMnO_4$

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 1l Titer 0,001992 – 0,002008 mol/l

potassium permanganate standard solution 0,0025 mol/l **CHEM*807438802**

250 ml 500 ml 1l Titer 0,00249 – 0,00251 mol/l

potassium permanganate standard solution 0,01 mol/l **CHEM*807438801**

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

potassium permanganate standard solution 0,0125 mol/l **CHEM*807438806**

250 ml 500 ml 1l Titer 0,01245 – 0,01255 mol/l

POTASSIUM PERMANGANATE STANDARD SOLUTIONS(0,02 ≤ C ≤ 0,1 MOL/L)

Potasu nadmanganian roztwory mianowane

$KMnO_4$

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 1l Titer 0,01992 – 0,02008 mol/l

potassium permanganate standard solution 0,05 mol/l **CHEM*807438809**

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

potassium permanganate standard solution 0,1 mol/l **CHEM*807438807**

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

POTASSIUM PERMANGANATE STANDARD SOLUTIONS(C ≥ 0,2 MOL/L)

Potasu nadmanganian roztwory mianowane

$KMnO_4$

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 | 1l — Titer 0,1992 – 0,2008 mol/l

potassium permanganate standard solution 0,25 mol/l **CHEM*807438813**

250 ml | 500 ml | 1l — Titer 0,249 – 0,251 mol/l

potassium permanganate standard solution 0,5 mol/l **CHEM*807438804**

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

POTASSIUM PERSULFATE

Potasu nadsiarczan

$K_2S_2O_8$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,5 %
Chlorides (Cl)	max. 0,01 %
Heavy metals (as Pb)	max. 0,005 %
Iron (Fe)	max. 0,003 %

potassium persulfate pure p. a. — CHEM*117457210

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Chlorides (Cl)	max. 0,005 %
Heavy metals (as Pb)	max. 0,005 %
Manganese (Mn)	max. 0,0005 %
Iron (Fe)	max. 0,002 %

POTASSIUM ACETATE

Potasu octan

CH_3COOK

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Water	max. 5,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Water	max. 1,0 %
Substances insoluble in water	max. 0,005 %
Substances reducing $KMnO_4$ (as HCOOH)	max. 0,01 %
pH (5%, 20^{o}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

$K_2S_2O_7$

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_2O, 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 | 50 g | 75 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	min. 96,5 %
Chlorides (Cl)	max. 0,001 %
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 | 50 g | 75 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	min. 97,5 %
Total nitrogen (N)	max. 0,002 %
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

$K_2S_2O_5$

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_2O, 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 $P_{O/W}$:	-4,0
Ignition temperature:	not applicable		

potassium disulfite pure — CHEM*427447703

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Appearance	white, powder
Assay	min. 95,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	white, powder
Assay	min. 96,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,005 %
Phosphates (PO_4)	max. 0,0002 %
Tiosulfates (S_2O_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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white, powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,02 %
Sulfates (SO_4)	max. 0,05 %
Heavy metals (as Pb)	max. 0,001 %
Iron (Fe)	max. 0,001 %

potassium thiocyanate pure p. a. — CHEM*117455008

10 g | 25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	white, powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Substances oxidizing iodine	max. 0,05 %
pH (5%, 20^{o}C)	5,3 - 8,7
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_2O, 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

K_2SO_4

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	no data

potassium sulfate pure **CHEM*427457202**

50 g	100 g
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	25 kg

Appearance	white or colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
Chlorides (Cl)	max. 0,002 %
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
50 g	100 g
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
25 kg	

Appearance	white or colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	5,5 – 8,0
Total nitrogen (N)	max. 0,001 %
Chlorides (Cl)	max. 0,001 %
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

$K_2CO_3 \cdot Na_2CO_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	99,0 - 101,0 %
Substances insoluble in water	max. 0,02 %
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 | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	99,0 - 101,0 %
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

$C_4H_4KNaO_6 \cdot 4H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	98,5 – 103,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	7,0 - 8,5
Reducing substances	passes test
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Appearance	colourless crystals or white powder
Assay	99,0 - 102,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	7,0 - 8,5
Reducing substances	passes test
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

$C_2K_2O_4 \cdot H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless, powder
Assay	min. 99,0 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless, powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
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

Potassiumsium carbonate

K_2CO_3

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_2O,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 | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
Loss on roasting	max. 1,0 %
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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	25 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Loss on roasting	max. 0,8 %
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

$K_2CO_3 \cdot 1{,}5\ H_2O$

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:	
	solid
Colour:	white
Odor:	odorless
pH:	alkaline
Melting point:	891°C
Boiling point:	no data
Auto-ignition temperature:	not applicable
Ignition temperature:	not applicable
Explosion limits:	not applicable
Vapour pressure:	no data
Density:	no data
Bulk density:	no data
Solubility:	
in water:	approx 1300 g/l (20°C)
in organic solvents:	no data

potassium CARBONATE 1,5 hydrat pure **CHEM*427465901**

25 g	50 g
100 g	250 g
500 g	1 kg

Appearance	colourless crystals or white powder
Assay	min. 98,0 %
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
100 g	250 g
500 g	1 kg

Appearance	colourless crystals or white powder
Assay	min. 99,0 %
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

$C_4H_4K_2O_6 \cdot 0{,}5H_2O$

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_2O, 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
100 g	250 g
500 g	1 kg

Appearance	drobne, white crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,01 %
Free acids (as $C_4H_6O_6$)	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
25 g	50 g
100 g	250 g
500 g	1 kg

Appearance	drobne, white crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
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

$KHSO_4$

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_2O, 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 | 250 g | 500 g | 1 kg

Assay	min. 96 %
Substances insoluble in water	max. 0,02 %
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 | 250 g | 500 g | 1 kg

Assay	min. 96 %
Substances insoluble in water	max. 0,005 %
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_2O, 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 | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white granule
Assay	min. 85,0 %
Total nitrogen (N)	max. 0,001 %
Chlorides (as Cl)	max. 0,01 %
Phosphates (PO_4)	max. 0,003 %
Silicon dioxide (SiO_2)	max. 0,01 %
Sulfates (SO_4)	max. 0,005 %
Carbonates (as K_2CO_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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
25 kg	

Appearance	white granule
Assay	min. 85,0 %
Total nitrogen (N)	max. 0,001 %
Chlorides (as Cl)	max. 0,004 %
Phosphates (PO_4)	max. 0,001 %
Siliconu dioxide (SiO_2)	max. 0,005 %
Sulfates (SO_4)	max. 0,002 %
Carbonates (as K_2CO_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 ≤ 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:	1,137 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 ± 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 ± 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	1l	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	1l	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	1l	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	1l	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	1l	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	1l	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	1l	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 | 500 ml | 1l

Titer 0,00996 – 0,01004 mol/l

potassium hydroxide standard solution 0,05 mol/l **CHEM*817468023**

100 ml | 250 ml | 500 ml | 1l

Titer 0,0498 – 0,0502 mol/l

POTASSIUM HYDROXIDE 0,01 MOL/L (0,01 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek roztwory mianowane 0,01M w etanolu

KOH/C_2H_5OH

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/C_2H_5OH

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

POTASSIUM HYDROXIDE STANDARD SOLUTIONS (0,1 ≤ C ≤ 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/C_2H_5OH

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

POTASSIUM HYDROXIDE 0,1 MOL/L STANDARD SOLUTION IN METHANOL

Potasu wodorotlenek roztwory mianowane 0,1M w metanolu

KOH/CH_3OH

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:	approx12% 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	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

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:	approx1,023 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/C_2H_5OH

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/CH_3OH

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 (methanol)
Odor:	methanol		
pH:	approx 14 (20°C)	Vapour pressure:	128 mbar (20°C) (methanol)
Melting point:	no data		
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:	approx12% v/v
Colour:	colourless	Viscosity w temp. 15°C:	approx2,86 mPa·s
Odor:	characteristic		
pH:	neutral	Vapour pressure:	approx43 mbar (20°C)
Melting point:	approx -89°C	Density:	no data
Boiling point:	approx82-83°C	Bulk density:	not applicable
Auto-ignition temperature:	approx400°C	Solubility:	
Ignition temperature:	approx12°C	in water:	soluble
Explosion limits:		in organic solvents:	soluble
bottom:	approx2,0% v/v		

potassium hydroxide standard solution 0,5 mol/l in propanol **CHEM*817468020**

100 ml | 250 ml | 500 ml | 1l

Titer 0,498 – 0,502 mol/l

POTASSIUM HYDROXIDE STANDARD SOLUTIONS (1,0 ≤ C ≤ 5,5 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 | 500 ml | 1l

Titer 0,996 – 1,004 mol/l

potassium hydroxide standard solution 1,5 mol/l **CHEM*817468006**

100 ml | 250 ml | 500 ml | 1l

Titer 1,494 – 1,506 mol/l

potassium hydroxide standard solution 2 mol/l **CHEM*817468001**

100 ml | 250 ml | 500 ml | 1l

Titer 1,992 – 2,008 mol/l

potassium hydroxide standard solution 3 mol/l **CHEM*817468010**

100 ml | 250 ml | 500 ml | 1l

Titer 2,988 – 3,012 mol/l

POTASSIUM HYDROXIDE 1 MOL/L (1 N) STANDARD SOLUTION IN ETHANOL

Potasu wodorotlenek, roztwór mianowany 1M w etanolu

KOH/C_2H_5OH

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

POTASSIUM HYDROXIDE 1 MOL/L (1 N) STANDARD SOLUTION IN METHANOL

Potasu wodorotlenek roztwory mianowane 1M w metanolu

KOH/CH_3OH

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 (methanol)
Odor:	methanol		
pH:	approx 14 (20°C)	Vapour pressure:	128 mbar (20°C) (methanol)
Melting point:	no data		
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:	approx12% v/v
Colour:	colourless	Viscosity w temp. 15°C:	approx2,86 mPa·s
Odor:	characteristic		
pH:	neutral	Vapour pressure:	approx43 mbar (20°C)
Melting point:	approx -89°C	Density:	no data
Boiling point:	approx82-83°C	Bulk density:	not applicable
Auto-ignition temperature:	approx400°C	Solubility:	
Ignition temperature:	approx12°C	in water:	soluble
Explosion limits:		in organic solvents:	soluble
bottom:	approx2,0% 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

$KHCO_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	min. 98,5 %
Substances insoluble in water	max. 0,02 %
Chlorides (as Cl)	max. 0,005 %
Phosphates (PO_4)	max. 0,002 %
Silicates (as SiO_2)	max. 0,01 %
Sulfates (SO_4)	max. 0,005 %
Potassium carbonate (K_2CO_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

$CH_3CH_2CH_2OH$

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 tempeature:	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
250 ml	500 ml
1l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l
200 l	

Assay	min. 99,0 %
Density (20°C)	0,803 - 0,805 g/cm^3
Water	max. 0,3 %
Free acids (as C_2H_5COOH)	max. 0,002 %
Residue on evaporation	max. 0,001 %

1-propanol pure p. a. — CHEM*117514602

50 ml | 100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Assay	min. 99,5 %
Colour	max. 10 as Hz
Density (20°C)	0,803 - 0,805 g/cm^3
Water	max. 0,1 %
Acids	max. 0,0004 meq/g
Bases	max. 0,0006 meq/g
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_2SO_4	passes test
Carbonyl compounds(as C_2H_5CHO)	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

1l | 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**

Purity	min. 99,9 %

25 ml | 50 ml | 75 ml | 100 ml

2-PROPANOL

2-Propanol

C_3H_8O

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 $P_{O/W}$:	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
5 l	10 l
20 l	30 l
60 l	200 l

Assay	min. 99,0%
Density (20°C)	0,785 - 0,787 g/cm^3
Water	max. 0,2%
Substances reducing $KMnO_4$ (as O)	max. 0,0005 %
Free acids (as CH_3COOH)	max. 0,003%
Organic impurities	max. 0,12 %
Residue on evaporation	max. 0,003 %

2-propanol pure **CHEM*427515001**

100 ml	250 ml
500 ml	1l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	200 l

Appearance	colourless, clear liquid
Assay	min. 99,5%
Density (20°C)	0,785 - 0,787 g/cm^3
Refractive index(20°C)	1,377 - 1,378
Water	max. 0,2%
Substances insoluble in water	passes test
Free acids (as CH_3COOH)	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
500 ml	1l
2.5 l	3 l
5 l	10 l
20 l	30 l
60 l	200 l

Appearance	colourless, clear liquid
Assay	min. 99,7 %
Density (20°C)	0,785 - 0,787 g/cm^3
Water	max. 0,1 %
Substances insoluble in water	passes test
Free acids (as CH_3COOH)	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 reducing$KMnO_4$ (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_2H_5COOH)	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, 2.5 l	Assay (GC)	min. 99,8 %
	Water (KF)	max. 0,2 %
	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, 75 ml, 100 ml	Purity	min. 99,9 %

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%

C_3H_8O

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 $P_{O/W}$:	no data
Ignition temperature:	22,2°C		

2-propanol 70% pure p. a. CHEM*117515007

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless, clear liquid
Assay	70,0 % ± 1,0 %
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay	65,0 – 75,0 %
Density (20°C)	0,85 - 0,873 g/cm^3
Water	25,0 – 35,0 %
Assay methanol	max. 0,05 %

2-PROPANOL 90%

2-Propanol 90%

C_3H_8O

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 $P_{O/W}$:	no data
Ignition temperature:	no data		

2-propanol 90% **CHEM*527515002**

1l	2.5 l
3 l	5 l
10 l	20 l
30 l	

Appearance	colourless, clear liquid
Assay	90,0 % ± 1,0 %
Density (20°C)	approx 0,818 g/cm^3
Water	approx 10,0 %
Assay methanol	max. 0,05 %

n-PROPYL ACETATE

Propylu octan

$C_5H_{10}O_2$

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:	-92,5C	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
250 ml | 500 ml
1l | 2.5 l
3 l

Assay	min. 99,0 %
Colour	max. 10 as Hz
Acidity	max. 0,05 %
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
250 ml | 500 ml
1l | 2.5 l
3 l

Assay	min. 99,5 %
Colour	max. 10 as Hz
Acidity	max. 0,02 %
Organic impurities	passes test
Non-volatile matter	max. 0,0025 %
Water	max. 0,05 %
Appearance	colourless, clear liquid

BROMOCRESOL PURPLE

Purpura bromokrezolowa

$C_{21}H_{16}Br_2O_5S$

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
25 g	50 g
75 g	100 g

Appearance	purple powder
Molar absorptivity coefficient:	
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

$C_6H_4(OH)_2$

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:	approx4 - 6 (100 g/l H_2O, 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**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless or pink crystals
Assay	min. 99%
Melting point	109 - 111°C
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

$C_{28}H_{31}ClN_2O_3$

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_2O, 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:	approx0,8 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

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Acetone	passes test
Petroleum spirits	passes test
Isobutanol	passes test
Butyl acetate	passes test
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

1l 2.5 l 3 l 5 l 10 l 20 l 30 l

Acetone	passes test
Btanone-2	passes test
Isobutanol	passes test
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:	approx0,8 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

1l	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:	approx0,8 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

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Petroleum spirits	passes test
Butanol	passes test
Xylene	passes test

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 emperaturę:	no data
Colour:	colourless	Explosion limits:	no data
Odor:	characteristic	Vapour pressure:	no data
pH:	no data	Density:	approx0,829 g/cm^3 (20°C)
Melting point:	(toluene, acetone)	Solubility:	
Boiling point:	55°C (acetone)	in water:	no data
Auto-ignition emperaturę:	no data	in organic solvents:	no data

diluent „Nitro” CHEM*757651423

1l	2.5 l	Acetone	passes test
3 l	5 l	Toluene	passes test
10 l	20 l		
30 l			

UNIVERSAL DILUENT

Rozpuszczalnik uniwerslany

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:	approx0,8 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**

1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Acetone	passes test
Extraction naphtha	passes test
Toluene	passes test

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 | 1l

Appearance	colourless, clear liquid
pH (20°C)	0,95 ÷ 1,05

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	colourless, clear liquid
		pH (20°C)	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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
pH (20°C)	3,95 ÷ 4,05

buffer solution pH 4,00 (yellow) — CHEM*177655712

100 ml | 500 ml | 1l

Appearance	yellow, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	4,55 ± 0,05
sodium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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	colourless, clear liquid
		pH (20°C)	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 | 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	5,80 ± 0,05
potassium	0,05± 0,005mol/l

BUFFER SOLUTIONFOR 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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 | 1l

Appearance	colourless, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	6,00 ± 0,05
potassium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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	colourless, clear liquid
		pH (20°C)	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 | 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
pH (20°C)	6,78 ÷ 6,82

buffer solution pH 6,80 phosphate **CHEM*177657803**

100 ml | 1l | 10 l

Appearance	colourless, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	6,80 ± 0,05
potassium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	6,80 ± 0,05
sodium	0,05± 0,005mol/l

BUFFER SOLUTIO NFOR 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 1l 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
pH (20°C)	6,80 ± 0,05
sodium	0,05± 0,005mol/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	colourless, clear liquid
		pH (20°C)	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 1l

Appearance	colourless, clear liquid
pH (20°C)	6,95 ÷ 7,05

buffer solution pH 7,00 green **CHEM*177659306**

100 ml 500 ml 1l

Appearance	green, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	7,00 ± 0,05
potassium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	7,20 ± 0,05
Potassium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
pH (20°C)	7,20 ± 0,05
potassium	0,05± 0,005mol/l

BUFFER SOLUTIONFOR 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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	7,40 ± 0,05
potassium	0,05± 0,005mol/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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 | 1l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
pH (20°C)	7,50 ± 0,05
potassium	0,05± 0,005mol/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 1l 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
pH (20°C)	7,50 ± 0,05
Potassium	0,05± 0,005mol/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 | 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
pH (20°C)	8,95 ÷ 9,05

buffer solution pH 9,00 red **CHEM*177661811**

100 ml 500 ml 1l

Appearance	red, clear liquid
pH (20°C)	8,95 ÷ 9,05

BUFFER SOLUTIONpH 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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l

Appearance	colourless, clear liquid
pH (20°C)	11,95 ÷ 12,05

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 1l

Appearance	colourless, clear liquid
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 1l

Appearance	colourless, clear liquid
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 | 1l | 5l | 10 l | 20 l | 30 l

Appearance	colourless, clear liquid
Assay HCl	0,0090 – 0,011mol/dm^3

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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
Assay HCl	0,0090 – 0,011mol/dm^3

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	1l	Appearance	colourless, clear liquid
5l	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 2l

Appearance	colourless, clear liquid
In the concentrate diluted 1:25	
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 1l

Potential	360 mV± 5
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 1l 5 l

Assay TrisHCl	passes test
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 | 1l | 5 l

pH	6,8 ± 0,02
Assay TrisHCl	passes test
Assay EDTA	passes test
Appearance	olourless, 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 | 1l | 5 l

pH	8,8 ± 0,02
Assay TrisHCl	passes test
Assay EDTA	passes test
Appearance	colourless, clear liquid

SOLUTION FOR THE CONDUCTOMETER CALIBRATION 1413µS

Roztwór do kalibracji konduktometru 1413µs

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 1413µS **CHEM*177664900**

100 ml 500 ml 1l

Electrolytic specific conductance (25^{o}C)	1413 µS/cm ± 5
Appearance	colourless, clear liquid

MERCURY (II) NITRATE MONOHYDRATE

Rtęci (II) azotan 1 hydrat

$Hg(NO_3)_2 \cdot H_2O$

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:	approx4,39 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 | 50 g | 75 g | 100 g

Assay	min. 97,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,02 %
Copper (Cu)	max. 0,005 %
Lead (Pb)	max. 0,005 %
Iron (Fe)	max. 0,005 %

MERCURY (II) BROMIDE

Rtęci (II) bromek

$HgBr_2$

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 | 50 g | 75 g | 100 g | 250 g

Assay	min. 99,0 %
Substances insoluble in methanol	max.. 0,05 %
Chlorides (Cl)	max.. 0,25 %
Residue on reduction	max.. 0,02 %

MERCURY (I) CHLORIDE

Rtęci (I) chlorek

Hg_2Cl_2

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 | 50 g | 75 g | 100 g

Assay	min. 97,0 %
Residue on roasting	max. 0,2 %
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 | 50 g | 75 g | 100 g

Assay	min. 98,0 %
Residue on roasting	max. 0,1 %
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

$HgCl_2$

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		
pH:	3,2 (15 g/l H_2O, 20°C)	Density:	5,44 g/cm^3 (20°C)
Melting point:	280,7°C	Bulk density:	approx 2000 kg/m^3
Boiling point:	302°C	Solubility:	
Auto-ignition temperature:	not applicable	in water:	74 g/l (20°C), 550g/l (100°C)
Ignition temperature:	not applicable	in organic solvents:	no data

Mercury (II) chloride pure p. a. **CHEM*117681505**

5 g | 10 g | 25 g | 50 g | 75 g | 100 g | 250 g

Appearance	colourless crystals or white powder
Assay	min. 99,5 %
Solubility in ether	passes test
Residue on reduction	max. 0,02 %
Iron (Fe)	max. 0,002 %

MERCURY (II) IODIDE RED

Rtęci (II) jodek czerwony

HgI_2

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),
Odor:	odorless		approx 0,006 mbar (80°C)
pH:	approx6 - 7 (50 g/l H_2O, 20°C)	Density:	6,28 g/cm^3 (20°C)
Melting point:	259°C	Bulk density:	1350 kg/m^3
Boiling point:	354°C	Solubility:	
Auto-ignition temperature:	not applicable	in water:	insoluble
Ignition temperature:	not applicable	in organic solvents:	no data

Mercury (II) iodide red pure p. a. **CHEM*117690601**

5 g | 10 g | 25 g | 50 g | 75 g | 100 g | 250 g

Assay	min. 99,0 %
Solubility mercury salts (as Hg)	max. 0,05 %
Solubility (10% in 10% KI)	passes test
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

$(CH_3COO)_2Hg$

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 | 25 g | 50 g | 75 g | 100 g | 250 g

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Residue on reduction	max. 0,02 %
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

$HgSO_4$

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:	approx6,47 g/cm^3 (20°C)
pH:	approx1 (50 g/l H_2O, 20°C)	Bulk density:	approx670 kg/m^3
Melting point:	>450°C Boiling point: not applicable	Solubility:	
		in water:	
Auto-ignition temperature:	not applicable	in organic solvents:	no data

Ignition temperature: not applicable

Mercury (II) sulfate pure p. a. **CHEM*117694004**

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

Appearance	white crystals or powder
Assay	min. 98,0 %
Chlorides (Cl)	max. 0,01 %
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_2O, 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 | 25 g | 50 g | 75 g | 100 g | 250 g

Assay	min. 99,5 %
Chlorides (Cl)	max. 0,025 %
Sulfates (SO_4)	max. 0,005 %
Calcium (Ca)	max. 0,005 %
Iron (Fe)	max. 0,003 %

SUCROSE

Sacharoza

$C_{12}H_{22}O_{11}$

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 $P_{O/W}$:	-3,67

Sucrose pure CHEM*427720906

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	min. 99,5 %
Specific rotation (20°C, 10%, H_2O)	min. 66,25 °
Substances insoluble in water	max. 0,006 %
Residue on roasting	max. 0,03 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg

Appearance	colourless crystals or white powder
Assay	min. 99,8 %
Specific rotation(20°C, 10%, H_2O)	min. 66,4 °
Substances insoluble in water	max. 0,003 %
Acids (as CH_3COOH)	max. 0,008 %
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

$C_{12}H_{22}O_{11}$

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 $P_{O/W}$:	-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/cm^3

Sucrose solution 60% **CHEM*527720907**

500 ml	1 l	Assay	60,0 % ± 1,0 %
		Density (20°C)	approx 1,286 g/cm^3

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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	yellow powder
Assay	min. 99,85 %
Ash	max. 0,1 %
Acids (as H_2SO_4)	max. 0,01 %
Organic compounds	max. 0,02 %
Arsenic, Selenium, Tellurium (As, Se, Te)	-
Water	max. 0,2 %

Sublimed sulfur pure p. a. — CHEM*117796706

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	yellow powder
Assay	min. 99,9 %
Water	max. 0,1 %
Solubility in NaOH	passes test
Acids (as H_2SO_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:	yelow - 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg

Pore size	0,3 nm
Particle size	1,6 – 2,5 nm
Water absorptive capacity	22 %
Bulk density	0,795 kg/m^3
Crushing strength	33 N
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_2O, 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	*A*brasibility	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

$(C_6H_{10}O_5)_n$

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_2O, 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

$(C_6H_{10}O_5)_n$

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 | 500 ml | 1l

Assay	0,5 % ± 0,01 %
pH	5,0 - 7,5

Starch, soorle solution 1% CHEM*527898206

100 ml | 250 ml | 500 ml | 1l

Assay	1,0 % ± 0,1 %
pH	5,0 - 7,5

Starch, soorle solution 5% CHEM*527898207

100 ml | 250 ml | 500 ml | 1l

Assay	5,0 % ± 0,1 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Density	1,02 -1,04 g/cm^3
Specific heat	1200 -1300 J/kg*K
Heat conduction	4 - 4,5 J/m*s*K
Non - worked penetration	200 - 250 mm
Worked penetration	280 - 360 mm
pH of water extract	5,8 - 6,8

SODIUM NITRATE

Sodu azotan

$NaNO_3$

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_2O, 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		
Ignition temperature:	not applicable	log $P_{O/W}$:	-3,8 (doświadczalnie)
Explosion limits:	not applicable		

Sodium nitrate pure **CHEM*427926600**

50 g	100 g
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
25 kg	

Assay	min. 99,5 %
Substances insoluble in water	max. 0,01 %
Water	max. 1,0 %
Nitrites (NO_2)	max. 0,0005 %
Chlorides (Cl)	max. 0,005 %
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	

Appearance	white powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	5 - 7,5
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

$NaNO_2$

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_2O 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 $P_{O/W}$:	-3,7

Sodium nitrite pure — CHEM*427926906

50 g | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,02 %
Sulfates (SO_4)	max. 0,03 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,015 %
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

$NaNO_2$

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**

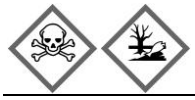
100 ml	250 ml	Titer	0,0996 – 0,1004 mol/l
500 ml	1l		

SODIUM AZIDE

Sodu azydek

NaN_3

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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Assay	min. 99,0 %
Loss on drying	max. 0,5 %
Heavy metals (as Pb)	max. 0,005 %
Iron (Fe)	max. 0,002 %

SODIUM BENZOATE

Sodu benzoesan

C_6H_5COONa

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_2O, 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		
Ignition temperature:	>500°C	in organic solvents:	no data

Sodium benzoate pure **CHEM*427932106**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Appearance	white powder or granulated product
Assay	min. 99,0 %
Loss on drying	max. 1,5 %
Substances insoluble in water	passes test
Acidity or alkalinity	passes test
Substances easy carbonize	passes test
Chlorides (Cl)	max. 0,03 %
Sulfates (SO_4)	max. 0,02 %
Carbonates (as Na_2CO_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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg

Appearance	white powder or granulat
Assay	min. 99,5 %
Loss on drying	max. 1,5 %
Substances insoluble in water	passes test
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_2O, 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 22 g/l
Ignition temperature:	not applicable		

Sodium bromide pure CHEM*427935109

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 95,0 %
Substances insoluble in water	max. 0,02 %
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
250 g	500 g
750 g	1 kg

Appearance	white, crystalline powder
Assay	min. 98,5 %
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

$NaClO_3$

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_2O, 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 | 500 g | 1 kg | 5 kg | 10 kg | 20 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
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%

$NaClO_3$

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_2O 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
500 g	750 g
1 kg	2 kg
5 kg	10 kg
15 kg	20 kg
25 kg	

Appearance	colourless crystals or white powder
Assay	min. 99,8 %
Substances insoluble in water	max. 0,01 %
Residue on roasting	max. 1,5 %
Total nitrogen (N)	max. 0,002 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	min. 99,9 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	5,0 - 8,0
Residue on roasting	max. 1,0 %
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 | 5 kg | 10 kg | 25 kg

Assay	min. 99,9%
Moisture	max. 0,1%

Sodium chloride for salt spray chamber — CHEM*117941207

2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 99,90 %
Calcium (Ca)	max. 0,0002 %
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^{o}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_2O, 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 | 500 ml | 1l

Assay 0,9 % ± 0,05%
Density (20°C) approx 1,0052 g/cm^3

Sodium chloride solution 1% **CHEM*527941205**

100 ml | 250 ml | 500 ml | 1l

Assay 1,0 % ± 0,05%
Density (20°C) approx 1,0053 g/cm^3

Sodium chloride solution 3% **CHEM*117941207**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay 3,0 % ± 0,1%
Density (20°C) approx 1,019 g/cm^3

Sodium chloride solution 5% **CHEM*527941211**

100 ml | 250 ml | 500 ml | 1l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Assay 5,0 % ± 0,1%
Density (20°C) approx 1,034 g/cm^3

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 | 500 ml | 1l — Titer: 0,01992 – 0,02008 mol/l

Sodium chloride standard solution 0,1 mol/l **CHEM*817935101**

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

Sodium chloride standard solution 0,25 mol/l **CHEM* 817935105**

100 ml | 250 ml | 500 ml | 1l — Titer: 0,249 – 0,251 mol/l

Sodium chloride standard solution 0,5 mol/l **CHEM*817935104**

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

Sodium chloride standard solution 1 mol/l **CHEM*817935103**

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

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%

$NaClO_2$

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 $P_{O/W}$:	no data
Ignition temperature:	not applicable		

sodu chlorite 7,5% **CHEM*527941210**

2.5 l	3 l
5 l	10 l
20 l	30 l

Assay	7,5 % ± 0,1%
Density (20°C)	1,052 - 1,062 g/cm^3
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_2O, 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

$C_6H_5Na_3O_7 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white or colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	7,5 - 9,0
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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	white or colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	7,0 - 9,0
Chlorides (Cl)	max. 0,001 %
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

$C_6H_5Na_3O_7$

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 | 500 ml | 1 l — Assay 1,0 % ± 0,1%

sodium citrate solution 3,8% **CHEM*527957801**

100 ml | 250 ml | 500 ml | 1 l — Assay 3,8 % ± 0,1%

sodium citrate solution 10% **CHEM*527957800**

100 ml | 250 ml | 500 ml | 1 l — Assay 10,0 % ± 0,5%

SODU CYTRYNIAN
STANDARD SOLUTION

Sodu cytrynian roztwory mianowane

$C_6H_5Na_3O_7$

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

$Na_2Cr_2O_7$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,5 %
Substances insoluble in water	max. 0,01 %
Substances prepicitated 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 | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
Substances prepicitated 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 DICHROMATE DIHYDRATE

Sodu dichromian 2 hydrat

$Na_2Cr_2O_7 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	98,0 – 101,0 %
Substances insoluble in water	max. 0,01 %
Substances prepicitated 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 | 250 g | 500 g | 750 g | 1 kg

Assay	99,5 - 100,5 %
Substances insoluble in water	max. 0,005 %
Substances prepicitated 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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay (w przeliczeniu na subst. bezw.)	98,5 – 102,0 %
Substances insoluble in water	max. 0,025 %
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 | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
Loss on drying(150°C)	max. 0,2 %
Acids (as HF)	max. 0,05 %
Bases (as NaOH)	max. 0,04 %
Chlorides (Cl)	max. 0,003 %
Sulfates (SO_4)	max. 0,01 %
Fluorsilicate (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

NaH_2PO_4

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	4,0 - 4,5
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 pure p. a. **CHEM*117992004**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
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

$NaH_2PO_4 \cdot H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
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 monohydrate pure p. a. **CHEM*117991804**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	approx 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. 0,0001 %
Magnesium (Mg)	max. 0,001 %
Calcium (Ca)	max. 0,005 %
Iron (Fe)	max. 0,002 %

SODIUM PHOSPHATE MONOBASIC DEHYDRATE

Sodu diwodorofosforan 2 hydrat

$NaH_2PO_4 \cdot 2H_2O$

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_2O, 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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	25 kg

Appearance	colourless crystals or white powder
Assay	min. 98,0 %
Loss on drying	22,5 – 24,0 %
Substances insoluble in water	max. 0,01 %
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
250 g	500 g
750 g	1 kg

Appearance	colourless or white powder
Assay	min. 99,0 %
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

Na_2HPO_4

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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
Loss on drying(105°C, 2 h)	max. 0,4 %
pH (5%, 20°C)	8,9 - 9,3
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
Loss on drying(105°C, 2 h)	max. 0,2 %
pH (5%, 20°C)	8,9 - 9,2
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

$Na_2HPO_4 \cdot 2H_2O$

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_2O 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	8,7 - 9,3
Loss on drying(130°C)	19,5 - 21 %
Chlorides (Cl)	max. 0,002 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	99 - 101 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	8,9 - 9,2
Loss on drying(130°C)	19,5 - 21 %
Chlorides (Cl)	max. 0,001 %
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

$Na_2HPO_4 \cdot 12H_2O$

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_2O 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
500 g | 750 g
1 kg | 2 kg
5 kg | 10 kg
15 kg | 25 kg

Appearance	white crystals or powder
Assay	98,0 – 102,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	9,0 - 9,5
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
250 g | 500 g
750 g | 1 kg
2 kg | 5 kg
10 kg | 15 kg

Appearance	white crystals or powder
Assay	99,0 – 102,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	9,0 - 9,3
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

Na_3PO_4

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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 94 %
Chlorides (Cl)	max. 0,002 %
Sulfates (SO_4)	max. 0,002 %
Iron (Fe)	max. 0,0002 %
Heavy metals (as Pb)	max. 0,002 %

Sodium phosphate tribasic pure p. a. **CHEM*117993506**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98 %
Chlorides (Cl)	max. 0,001 %
Sulfates (SO_4)	max. 0,001 %
Iron (Fe)	max. 0,0001 %
Heavy metals (as Pb)	max. 0,001 %

SODIUM PHOSPHATE TRIBASIC DODECAHYDRATE

tri-sodu fosforan 12 hydrat

$Na_3PO_4 \cdot 12H_2O$

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 oe white	Vapour pressure:	no data
Odor:	odorless	Density:	1,62 g/cm^3 (w 20°C)
pH:	approx 12 (10 g/l, H_2O)	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, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg, 25 kg

Appearance	colourless crystals
Assay	min. 97,5 %
Substances insoluble in water	max. 0,02 %
Free bases (as NaOH)	max. 2,5 %
Total nitrogen (N)	max. 0,003 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Carbonates (as Na_2CO_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, 250 g, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg, 25 kg

Appearance	colourless crystals
Assay	min. 98,0 %
Substances insoluble in water	max. 0,01 %
Free bases (as NaOH)	max. 2,0 %
Total nitrogen (N)	max. 0,002 %
Chlorides (Cl)	max. 0,003 %
Sulfates (SO_4)	max. 0,005 %
Carbonates (as Na_2CO_3)	passes test
Heavy metals (as Pb)	max. 0,001 %
Arsenic (As)	max. 0,00005 %
Iron (Fe)	max. 0,001 %

SODIUM METAPHOSPHATE

Sodu heksametafosforan

$Na_6(PO_3)_6$

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_2O)	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		
Ignition temperature:	not applicable	log $P_{(O/W)}$:	-7,18
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_2O_5)	min. 69 %
750 g	1 kg	Water	max. 0,5 %
2 kg	5 kg	pH (1%, 20^{o}C)	4,0 – 7,5
10 kg	15 kg		
20 kg			

SODIUM IODATE

Sodu jodan

$NaIO_3$

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_2O)	Solubility:	
Melting point:	no data	in water:	81 g/l (20°C), 330 g/l (100°C)
Boiling point:	no data		
Auto-ignition temperature:	not applicable	in organic solvents:	soluble in acetone, insoluble in methanol
Ignition temperature:	not applicable		
Explosion limits:	not applicable	log $P_{(O/W)}$:	-7,18

Sodium iodate pure — CHEM*428013101

50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white, crystalline powder
Assay	min. 99,0 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white, crystalline powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

NaI

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_2O)	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 $P_{(O/W)}$:	-7,18
Explosion limits:	not applicable		

Sodium iodide pure p. a. CHEM*118013500

5 g | 25 g
50 g | 100 g
250 g | 500g
1kg

Appearance	white powder
Assay	min. 99 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$Na_2SiO_3 \cdot 5H_2O$

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_2O)	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
100 g	250 g
500 g	1 kg
2 kg	5 kg
10 kg	15 kg
25 kg	

Assay	min. 97,0 %
Assay Na_2O	28,1 - 29,5 % (m/m)
Assay SiO_2	28,0 - 29,4 % (m/m)
Molar fraction	1,01 - 1,05
Mass fraction	0,98 - 1,02
pH (1%, 20^{o}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

$Na_2MoO_4 \cdot 2H_2O$

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_2O, 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		
Auto-ignition temperature:	not applicable	in organic solvents:	no data
Ignition temperature:	not applicable		
Explosion limits:	not applicable		

Sodium molybdate dihydrate pure **CHEM*428033709**

25 g | 50 g | 75 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals or powder
Assay	min. 98,0 %
pH (5 %, 20°C)	7 - 10,5
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
75 g	100 g
250 g	500 g
1 kg	

Appearance	colourless crystals or powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,005 %
pH (5 %, 20^{o}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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 98,0 %
pH (5%, 20°C)	7,0 - 8,5
Substances insoluble in water	max. 0,025 %
Acids (as HCOOH)	max. 0,1 %
Chlorides (as Cl)	max. 0,005 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg

Assay	min. 99,0 %
pH (5%, 20°C)	7,0 - 8,5
Substances insoluble in water	max. 0,005 %
Acids (as HCOOH)	max. 0,05 %
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

$NaIO_4$

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_2O, 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 | 500 ml | 1 l — Titer 0,0498 – 0,0502 mol/l

Sodium (meta)periodate standard solution 0,1 mol/l **CHEM*818027910**

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

Sodium (meta)periodate standard solution 0,25 mol/l **CHEM*818027912**

100 ml | 250 ml | 500 ml | 1 l — Titer 0,249 – 0,251 mol/l

SODIUM PERSULFATE

Sodu nadsiarczan

$Na_2S_2O_8$

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_2O, 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 %
250 g	500 g	Water	max. 0,08 %
750 g	1 kg	Heavy metals (as Pb)	max. 0,002 %
		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 %
250 g	500 g	Total nitrogen (N)	max. 0,1 %
750 g	1 kg	Chlorides (Cl)	max. 0,05 %
		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

CH_3COONa

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_2O, 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 $P_{(O/W)}$:	-4,22

Sodium acetate pure **CHEM*428056402**

50 g | 100 g
250 g | 500 g
750 g | 1 kg
2 kg | 5 kg
10 kg | 15 kg
25 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20^{o}C)	7,5 – 9,5
Chlorides (as Cl)	max. 0,005 %
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
20 kg	

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	7,0 – 9,2
Loss on drying (120°C)	max. 1,0 %
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

$CH_3COONa \cdot 3H_2O$

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_2O, 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 | 250 g | 500 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	7,5 – 9,5
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
250 g	500 g
1 kg	5 kg
10 kg	15 kg
25 kg	

Appearance	colourless crystals
Assay	99,0 – 101,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}C)	7,5 – 9,2
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

CH_3COONa

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 1 l Titer 0,00996 – 0,01004 mol/l

sodu octan standard solution 0,05 mol/l **CHEM* 818056710**

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

sodu octan standard solution 0,1 mol/l **CHEM*818056705**

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

sodu octan standard solution 0,2 mol/l **CHEM*818056706**

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

sodu octan standard solution 0,5 mol/l **CHEM*818056708**

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

sodu octan standard solution 1 mol/l **CHEM*818056707**

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

SODIUM PYROPHOSPHATE DECAHYDRATE

tetra-sodu pirofosforan 10hydrat

$Na_4O_7P_2 \cdot 10H_2O$

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_2O 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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless or white crystals
Assay	98,5 - 102,0 %
Substances insoluble in water	max. 0,02 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless or white crystals
Assay	99,0 - 101,0 %
Substances insoluble in water	max. 0,01 %
pH (5 %, 20^{o}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

$Na_2S_2O_7$

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 $P_{(O/W)}$:	no data
Ignition temperature:	no data		

Sodium pyrosulfate pure **CHEM*428066207**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 97,0 %
Total nitrogen (N)	max. 0,005 %
Chlorides (Cl)	max. 0,001 %
Phosphates (PO_4)	max. 0,002 %
Heavy metals (as Pb)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Assay	min. 97,5%
Total nitrogen (N)	max. 0,002%
Chlorides (Cl)	max. 0,0005%
Phosphates (PO4)	max. 0,001%
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

$Na_2S_2O_5$

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_2O, 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 $P_{(O/W)}$:	-3,7

Sodium metabisulfite pure — CHEM*428066202

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	white, crystalline powder
Assay	min. 96,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (as Cl)	max. 0,01 %
Heavy metals (as Pb)	max. 0,005 %
Arsenic (As)	max. 0,0001 %
Iron (Fe)	max. 0,002 %

Sodium metabisulfite pure p. a. — CHEM*118066503

10 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg

Appearance	white, crystalline powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (as Cl)	max. 0,005 %
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_2O, 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_2CO_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	1l	Assay	9,6 ± 0,1%
2.5 l	3 l	Density (20ºC)	approx 1,181 g/cm³
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_2CO_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_2CO_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
1 l	2.5 l
3 l	5 l
10 l	20 l
30 l	60 l

Assay	15 – 20 %
Density (20ºC)	1,15 ÷ 1,25 g/cm³
Assay NaOH	max. 2,0 %
Stabilizer	1 - 1,5 %

SODIUM HYPOPHOSPHITE MONOHYDRATE

Sodu podfosforyn 1 hydrat

$NaH_2PO_2 \cdot H_2O$

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 $P_{(O/W)}$:	no data

Sodium hypophosphite monohydrate pure **CHEM*428068005**

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals or powder
Assay	min. 99,0 %
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 | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless or white crystals or powder
Assay	101,0 – 105,0 %
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

$C_7H_5NaO_3$

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_2O, 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, 100 g, 250 g, 500 g, 750 g, 1 kg

Appearance	white, crystalline powder
Assay	min. 99,0 %
Loss on drying(110°C)	max. 0,7 %
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, 100 g, 250 g, 500 g, 750 g, 1 kg

Appearance	white, crystalline powder
Assay	min. 99,0 %
Loss on drying (110°C)	max. 0,5 %
Chlorides (as Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,02 %
Heavy metals (as Pb)	max. 0,001 %

SODIUM SULFATE

Sodu siarczan

Na_2SO_4

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_2O 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg | 30 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	5,2 - 7,5
Residue on roasting	max. 1,0 %
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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	25 kg
30 kg	

Appearance	white, higroskopijny powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	5,2 - 7,5
Residue on roasting	max. 0,5 %
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

$Na_2SO_4 \cdot 10H_2O$

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_2O, 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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	25 kg

Appearance	colourless crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	5,0 – 8,0
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
250 g	500 g
750 g	1 kg
2 kg	5 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,002 %
pH (5%, 20^{o}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

Na_2SO_4

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_2O 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 1 l Titer 0,0996 – 0,1004 mol/l

sodium sulfate standard solution 0,25 mol/l **CHEM* 818078704**

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

sodium sulfate standard solution 0,5 mol/l **CHEM* 818078703**

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

sodium sulfate standard solution 1 mol/l **CHEM* 818078702**

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

SODIUM SULFIDE NONAHYDRATE

Sodu siarczek 9 hydrat

$Na_2S \cdot 9H_2O$

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	n-oktanol, diethy ether

Sodium sulfide nonahydrate pure — CHEM*428080004

50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	min. 95,0 %
Sulfites and tiosulfates (as SO_4)	max. 1 %

Sodium sulfide nonahydrate pure p. a. — CHEM*118080005

50 g | 100 g | 250 g | 500 g | 1 kg

Assay	min. 98,0 %
Sulfites and tiosulfates (as SO_4)	max. 0,1 %
Ammonia salts (NH_4)	max. 0,005 %
Iron (Fe)	passes test

SODIUM SULFITE

Sodu siarczyn bezwodny

Na_2SO_3

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_2O, 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 $P_{(O/W)}$:	4,0

Sodium sulfite pure — CHEM*428081005

10 g, 25 g, 50 g, 100 g, 250 g, 500 g, 750 g, 1 kg, 5 kg, 10 kg, 15 kg, 25 kg

Assay	min. 91,0 %
Substances insoluble in water	max. 0,02 %
Chlorides (Cl)	max. 0,02 %
Tiosulfates (S_2O_3)	max. 0,1 %
Carbonates (as Na_2CO_3)	max. 0,15 %
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, 50 g, 100 g, 250 g, 500 g, 750 g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg, 25 kg

Appearance	white powder
Assay	min. 96,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,01 %
Tiosulfates (S_2O_3)	max. 0,04 %
Carbonates (as Na_2CO_3)	max. 0,15 %
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

$Na_2SO_3 \cdot 7H_2O$

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 | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 91,0 %
Substances insoluble in water	max. 0,01 %
Chlorides (Cl)	max. 0,01 %
Thiosulfates (S_2O_3)	max. 0,04 %
Carbonates (Na_2CO_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 | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg

Assay	min. 95,0 %
Substances insoluble in water	max. 0,005 %
Chlorides (Cl)	max. 0,005 %
Thiosulfates (S_2O_3)	max. 0,02 %
Carbonates (Na_2CO_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 ≤ 1,85 MOL/L)

Sodu siarczyn roztwory mianowane

Na_2SO_3

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. w glicerynie, prawie nierozp. w alkoholu
Boiling point:	no data		
Auto-ignition temperature:	not applicable	log $P_{(O/W)}$:	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

$CH_3(CH_2)_{16}COONa$

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 $P_{(O/W)}$:	no data

Sodium stearate pure **CHEM* 428083700**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	98,5 - 101,5%
Free acids or bases	passes test

Sodium stearate pure p. a. **CHEM*118083700**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	99 - 101,5%
Free acids or bases	passes test

SODIUM OXALATE

Sodu szczawian

$C_2Na_2O_4$

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	white powder
Assay	min. 99,0 %
pH (2,5%, 20°C)	6,5 - 8,5
Heavy metals (as Pb)	max. 0,002 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	min. 99,5 %
Loss on drying(105 ± 5°C)	max. 0,1 %
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

$C_2Na_2O_4$

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_2O, 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

$C_2Na_2O_4$

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 1 l Titer 0,006225 – 0,006275 mol/l

di-Sodium oxalate standard solution 0,01 mol/l **CHEM*818095010**

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

di-Sodium oxalate standard solution 0,0125 mol/l **CHEM*818095008**

250 ml 500 ml 1 l Titer 0,01245 – 0,01255 mol/l

di-Sodium oxalate standard solution 0,025 mol/l **CHEM*818095006**

250 ml 500 ml 1 l Titer 0,0249 – 0,0251 mol/l

di-Sodium oxalate standard solution 0,05 mol/l **CHEM*818095009**

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

di-Sodium oxalate standard solution 0,1 mol/l **CHEM*818095005**

250 ml 500 ml 1 l Titer 0,0996 – 0,1004 mol/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 ≥ 0,5 MOL/L)

Sodu szczawian roztwory mianowane

$C_2Na_2O_4$

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 | 1 l

Titer 0,498 – 0,502 mol/l

SODIUM TETRABORATE DECAHYDRATE

Sodu tetraboran 10 hydrat

$Na_2B_4O_7 \cdot 10H_2O$

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_2O, 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
1 kg | 5 kg
10 kg | 15 kg
25 kg

Appearance	colourless crystals or white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,02 %
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
500 g | 750 g
1 kg | 2.5 kg
5 kg | 10 kg
15 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	99,5 – 103,0 %
Substances insoluble in water	max. 0,01 %
pH (4%, 20^{o}C)	9,0 - 9,6
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg

Appearance	colourless crystals or white powder
Assay	99,5 - 100,5 %
Substances insoluble in water	max. 0,005 %
pH (0,01 mol/l, H_2O, 25°C)	9,15 - 9,2
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

$Na_2B_4O_7 \cdot 10H_2O$

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_2O, 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

$Na_2S_2O_3 \cdot 5H_2O$

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_2O 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 $P_{(O/W)}$:	-4,35 (obl.)

Sodium thiosulfate pentahydrate pure **CHEM*428095801**

50 g	100 g
250 g	500 g
1 kg	5 kg
10 kg	15 kg
20 kg	25 kg

Assay	99,0 - 101,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	6,0 – 7,5
Sulfates and sulfites (as SO_4)	max. 0,1 %
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
250 g	500 g
1 kg	5 kg
10 kg	15 kg
20 kg	25 kg

Appearance	colourless crystals
Assay	99,5 - 100,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	6,0 – 7,5
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

$Na_2S_2O_3 \cdot 5H_2O$

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_2O 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 $P_{(O/W)}$:	-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

$Na_2S_2O_3$

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

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 12.5 kg | 15 kg | 25 kg

Appearance	white powder
Assay	98,5 - 100,5 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	4,0 – 5,0
Chlorides (Cl)	max. 0,01 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 15 kg | 25 kg

Appearance	white powder
Assay	99,0 - 100,5 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20°C)	4,0 – 5,0
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

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$

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_2O, 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

$C_{10}H_{14}N_2Na_2O_8$

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_2O, 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 | 500 ml | 1l — Titer 0,000996 – 0,001004 mol/l

Edetate disodium standard solution 0,005 mol/l **CHEM*818798112**

100 ml | 250 ml | 500 ml | 1l — Titer 0,00498 – 0,00502 mol/l

Edetate disodium standard solution 0,01 mol/l **CHEM*818798102**

100 ml | 250 ml | 500 ml | 1l — Titer 0,00996 – 0,01004 mol/l

Edetate disodium standard solution 0,015 mol/l **CHEM*818798113**

100 ml | 250 ml | 500 ml | 1l — Titer 0,01494 – 0,01506 mol/l

Edetate disodium standard solution 0,02 mol/l **CHEM*818798103**

100 ml | 250 ml | 500 ml | 1l — Titer 0,01992 – 0,02008 mol/l

Edetate disodium standard solution 0,025 mol/l **CHEM*818798108**

100 ml | 250 ml | 500 ml | 1l — Titer 0,0249 – 0,0251 mol/l

Edetate disodium standard solution 0,05 mol/l **CHEM*818798106**

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

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

Na_2CO_3

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_2O, 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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	20 kg
25 kg	

Appearance	white powder
Assay	min. 99,5 %
Substances insoluble in water	max. 0,02 %
Residue on roasting	max. 1,0 %
Chlorides (Cl)	max. 0,015 %
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
250 g	500 g
750 g	1 kg
5 kg	10 kg
13 kg	15 kg
20 kg	25 kg

Appearance	white powder
Assay	min. 99,8 %
Substances insoluble in water	max. 0,01 %
Residue on roasting	max. 0,5 %
Total nitrogen (N)	max. 0,001 %
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

$Na_2CO_3 \cdot 10H_2O$

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_2O, 25°C)	Bulk density:	approx700-900 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
500 g	750 g
1 kg	2 kg
5 kg	10 kg
15 kg	25 kg

Appearance	colourless crystals
Assay	min. 99,8 %
Substances insoluble in water	max. 0,01 %
Silicates (as SiO_2)	max. 0,005 %
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
250 g	500 g
750 g	1 kg
5 kg	15 kg
25 kg	

Appearance	colourless crystals
Assay	min. 99,8 %
Substances insoluble in water	max. 0,003 %
Silicates (as SiO_2)	max. 0,001 %
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

Na_2CO_3

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_2O, 25°C)	Solubility:	
Melting point:	approx 891°C	in water:	approx 210 g/l (20°C)
Boiling point:	1600°C	in organic solvents:	rozp. w glicerynie, nierozp. w acetonie, alkoholu
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		
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 ≤ 2,25 MOL/L)

Sodu węglan roztwory mianowane

Na_2CO_3

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

$C_4H_4Na_2O_6 \cdot 2H_2O$

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_2O, 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 | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	min. 98,0 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	colourless crystals
Assay	min. 99,0 %
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

$NaHSO_4 \cdot H_2O$

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
100 g	250 g
500 g	1 kg

Assay	min. 98,0%
Chlorides (Cl)	max. 0,002 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,001 %

Sodium bisulfate monohydrate pure p. a. **CHEM*118079606**

25 g	50 g
100 g	250 g
500 g	1 kg

Assay	min. 99,0%
Total nitrogen (N)	max. 0,001%
Chlorides (Cl)	max. 0,001 %
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 wodorosiarczyn roztwory

$NaHSO_3$

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
		in organic solvents:	no data
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable		

Sodium bisulfite solution 30% purified **CHEM*738081646**

1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l, 1000 l

Assay	min. 29,0 %
Density (20°C)	approx 1,27 g/cm^3

Sodium bisulfite solution 35-37% purified **CHEM*738081647**

100 ml, 500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l, 1000 l

Assay	35,0 – 37,0 %
Density (20°C)	max. 1,34 g/cm^3

Sodium bisulfite solution 40% purified **CHEM* 738081648**

100 ml, 500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l

Assay	approx 40,0 %
Density (20°C)	max. 1,38 g/cm^3

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_2O, 20°C)	Solubility:	
Melting point:	324°C	in water:	1090 g/l (20°C)
Boiling point:	1390°C	in organic solvents:	alcohol, glicerol
Explosion limits:	not applicable		

Sodium hydroxide pure CHEM*428109251

100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 18 kg | 25 kg

Assay	min. 98,0 %
Sodium carbonate (Na_2CO_3)	max. 1,0 %
Total nitrogen (N)	max. 0,0007 %
Chlorides (Cl)	max. 0,015 %
Phosphates (PO_4)	max. 0,002 %
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
500 g	750 g
1 kg	2 kg
5 kg	10 kg
15 kg	20 kg
25 kg	

Assay	min. 98,8 %
Sodium carbonate (Na_2CO_3)	max. 0,7 %
Total nitrogen (N)	max. 0,0005 %
Chlorides (Cl)	max. 0,005 %
Phosphates (PO_4)	max. 0,001 %
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	1,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,15 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 1% pure p. a. — CHEM*118109254

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	1,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,1 %
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 | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	2,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,15 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 2% pure p. a. — CHEM*528109231

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	2,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,1 %
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 | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	3,0 % ± 0,1 %
Density	approx 1,0318 g/cm^3 (20°C)

Sodium hydroxide solution 3% pure — CHEM*528109232

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	3,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,15 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 3% pure p. a. — CHEM*528109231

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid
Assay	3,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,1 %
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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	5,0 % ± 0,1 %
Density	approx 1,0538 g/cm^3 (20°C)

Sodium hydroxide solution 5% pure — CHEM*528109241

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	5,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,15 %
Lead (Pb)	max. 0,002 %
Iron (Fe)	max. 0,001 %

Sodium hydroxide solution 5% pure p. a. — CHEM*528109242

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	5,0 % ± 0,1 %
Sodium carbonate (Na_2CO_3)	max. 0,1 %
Lead (Pb)	max. 0,001 %
Iron (Fe)	max. 0,0005 %

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, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	10,0 % ± 0,5 %
Density	approx 1,1089 g/cm^3 (20°C)

Sodium hydroxide solution 10% pure — CHEM*428109252

500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	10,0 % ± 0,5 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	10,0 % ± 0,5 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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_2CO_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_2CO_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, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l, 1000 l

Appearance	colourless liquid
Assay	20,0 % ± 0,5 %
Density	approx 1,2191 g/cm^3 (20°C)

Sodium hydroxide solution 20% pure — CHEM*428109250

500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	20,0 % ± 0,5 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	20,0 % ± 0,5 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	25,0 % ± 1,0 %
Density	approx 1,2739 g/cm^3 (20°C)

Sodium hydroxide solution 25% pure — CHEM*428109255

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	25,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	25,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 1000 l

Appearance	colourless liquid
Assay	30,0 % ± 1,0 %
Density	approx 1,3279 g/cm^3 (20°C)

Sodium hydroxide solution 30% pure — CHEM*528109248

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	30,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	30,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	33,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	35,0 % ± 1,0 %
Density	approx 1,3798 g/cm^3 (20°C)

Sodium hydroxide solution 35% pure — CHEM*528109271

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	35,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	35,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 1000 l

Appearance	colourless liquid
Assay	40,0 % ± 1,0 %
Density	approx 1,43 g/cm^3 (20°C)

Sodium hydroxide solution 40% pure — CHEM*528109255

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	40,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	40,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	45,0 % ± 1,0 %
Density	approx 1,4779 g/cm^3 (20°C)

Sodium hydroxide solution 45% pure CHEM*528109262

500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	45,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless liquid
Assay	45,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_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, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	50,0 % ± 1,0 %
Density	approx 1,5253 g/cm^3 (20°C)

Sodium hydroxide solution 50% pure — CHEM*528109265

500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	50,0 % ± 1,0 %
Chlorides (Cl)	max. 0,01 %
Sulfates (SO_4)	max. 0,02 %
Sodium carbonate (Na_2CO_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, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l

Appearance	colourless liquid
Assay	50,0 % ± 1,0 %
Chlorides (Cl)	max. 0,005 %
Sulfates (SO_4)	max. 0,01 %
Sodium carbonate (Na_2CO_3)	max. 0,1 %
Lead (Pb)	max. 0,001 %
Iron (Fe)	max. 0,0005 %

SODIUM HYDROXIDE STANDARD SOLUTION (C ≤ 0,125 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 | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,00996 – 0,01004 mol/l

Sodium hydroxide standard solution 0,02 mol/l — CHEM*810953163

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,01992 – 0,02008 mol/l

Sodium hydroxide standard solution 0,05 mol/l — CHEM*810953166

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,0498 – 0,0502 mol/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 ≤ 0,125 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 | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,0498 – 0,0502 mol/l

Sodium hydroxide standard solution 0,1 mol/l **CHEM*810953193**

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,0996 – 0,1004 mol/l

SODIUM HYDROXIDE STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwory mianowane w etanolu

$NaOH/C_2H_5OH$

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 | 1l — Titer 0,0498 – 0,0502 mol/l

Sodium hydroxide standard solution 0,1 mol/l in ethanol **CHEM*810953170**

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

SODIUM HYDROXIDE 0,1 MOL/L (0,1N) STANDARD SOLUTION IN METHANOL

Sodu wodorotlenek roztwór mianowany 0,1M w etanlu

$NaOH/CH_3OH$

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)
pH:	approx 13,0 (20°C)		(methanol)
Melting point:	-98°C (methanol)	Density:	no data
Boiling point:	65°C (methanol)	Solubility:	
Auto-ignition temperature:	455°C (methanol)	in water: soluble	
Ignition temperature:	11°C (methanol)	in organic solvents:	soluble
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 ≤ 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 0,2 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 | 1 l | 2.5 l | 3 l | 5 l | 10 l

Titer 0,249 – 0,251 mol/l

Sodium hydroxide standard solution 0,5 mol/l **CHEM*810953191**

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l

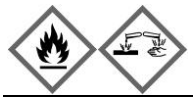
Titer 0,498 – 0,502 mol/l

SODIUM HYDROXIDE 0,5 MOL/L STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwór mianowany 0,5M w etanolu

$NaOH/C_2H_5OH$

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 (etanol)
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

$NaOH/CH_3OH$

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)		
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 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 ≤ 1 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 ≤ 1 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**

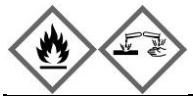
100 ml	500 ml	Titer	0,996 – 1,004 mol/l
1 l	2.5 l		
3 l	5 l		
10 l			

SODIUM HYDROXIDE 1 MOL/L (1N) STANDARD SOLUTION IN ETHANOL

Sodu wodorotlenek roztwór mianowany w etanolu

$NaOH/C_2H_5OH$

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

$NaOH/CH_3OH$

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 13,0 (20°C)		
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 | 1 l — Titer 1,992 – 2,008 mol/l

Sodium hydroxide standard solution 2,5 mol/l **CHEM*810953171**

250 ml | 500ml | 1 l — Titer 2,49 – 2,51 mol/l

Sodium hydroxide standard solution 3 mol/l **CHEM*810953158**

250 ml | 500ml | 1 l — Titer 2,988 – 3,012 mol/l

Sodium hydroxide standard solution 4 mol/l **CHEM*810953173**

250 ml | 500ml | 1 l — Titer 3,984 – 4,016 mol/l

Sodium hydroxide standard solution 5 mol/l **CHEM*810953174**

250 ml | 500ml | 1 l — Titer 4,98 – 5,02 mol/l

Sodium hydroxide standard solution 6 mol/l **CHEM*810953177**

250 ml | 500ml | 1 l — Titer 5,976 – 6,024 mol/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

$NaHCO_3$

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_2O, 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, 50 kg

Appearance	white powder
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, 500 g, 750 g, 1 kg, 5 kg, 10 kg, 15 kg, 25 kg

Appearance	white powder
Assay	99,0 – 101,0 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20°C)	8,0 - 8,6
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
250 g	500 g
750 g	1 kg
5 kg	10 kg
15 kg	20 kg
25 kg	

Appearance	white powder
Assay	99,5 – 101,0 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}C)	8,0 - 8,6
Chlorides (Cl)	max. 0,01 %
Sulfur (as SO_4)	max. 0,005 %
Phosphates (PO_4)	max. 0,002 %
Ammonia salts (NH_4)	max. 0,001 %
Substancje redujące 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

$NaHCO_3$

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_2O)	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

$AgNO_3$

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_2O, 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,
Ignition temperature:	not applicable		alcohol ~33g/l

Silver nitrate pure **CHEM*428143219**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals or white powder
Assay	min. 99,9 %
Moisture	max. 0,06 %
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 | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	colourless crystals or white powder
Assay	min. 99,9 %
Moisture	max. 0,06 %
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

$AgNO_3$

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_2O, 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,
Ignition temperature:	not applicable		alcohol ~33g/l

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%

$AgNO_3$

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/cm^3

SILVER NITRATE
STANDARD SOLUTION (C < 0,015 MOL/L)

Srebra azotan roztwory mianowane

$AgNO_3$

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 | 1 l — Titer 0,000996 – 0,001004 mol/l

Silver nitrate standard solution 0,01 mol/l **CHEM*804340160**

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l — Titer 0,00996 – 0,01004 mol/l

Sodium chloride standard solution 0,0125 mol/l **CHEM*804340164**

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l — Titer 0,01245 – 0,01255 mol/l

SILVER NITRATE
STANDARD SOLUTION (0,015 ≤ C ≤ 0,15 MOL/L)

Srebra azotan roztwory mianowane

$AgNO_3$

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 | 2.5 l | 3 l | 5 l — Titer 0,01992 – 0,02008 mol/l

Silver nitrate standard solution 0,025 mol/l **CHEM*804340168**

500 ml | 1 l | 2.5 l | 3 l | 5 l — Titer 0,0249 – 0,0251 mol/l

Sodium chloride standard solution 0,05 mol/l **CHEM*804340166**

500 ml | 1 l | 2.5 l | 3 l | 5 l — Titer 0,0498 – 0,0502 mol/l

Silver nitrate standard solution 0,1 mol/l **CHEM*804340162**

100 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l — Titer 0,0996 – 0,1004 mol/l

SILVER NITRATE
STANDARD SOLUTION (0,3 < C < 0,6 MOL/L)

Srebra azotan roztwory mianowane

$AgNO_3$

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	Titer	0,498 – 0,502 mol/l
1 l	2.5 l		
3 l	5 l		

SILVER NITRATE
STANDARD SOLUTION (0,6 ≤ C < 1,5 MOL/L)

Srebra azotan roztwory mianowane

$AgNO_3$

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

SILVER NITRITE

Srebra azotyn

$AgNO_2$

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

Srebra 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	min. 99,0 %
Moisture	max. 0,9 %
Substances insoluble in water	max. 0,02 %

Silver chloride pure p. a. **CHEM*118146224**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	min. 99,5 %
Moisture	max. 0,4 %
Substances insoluble in water	max. 0,01 %
Sulfates (SO_4)	max. 0,002 %

SILVER ACETATE

Srebra octan

$AgC_2H_3O_2$

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 $P_{(O/W)}$:	-0,17

Silver acetate pure — CHEM*428157811

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals or powder
Assay	min. 99,0 %
Substances insoluble in HNO_3	max. 0,05 %
Total nitrogen (N)	max. 0,01 %

Silver acetate pure p. a. — CHEM*118157824

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,5%
Sulfates (SO_4)	max. 0,05%
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 %

SILVER SULFATE

Srebra siarczan

Ag_2SO_4

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals or white powder
Assay	min. 99,5 %
Nitrates (NO_3)	max. 0,05 %
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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white crystals or white powder
Assay	min. 99,8 %
Azotany (NO_3)	max. 0,005 %
Chlorides (Cl)	max. 0,001 %
Lead, copper, zinc (Pb+Cu+Zn)	max. 0,002 %
Iron (Fe)	max. 0,001 %

SILVER CARBONATE

Srebra węglan

Ag_2CO_3

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_2O, 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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow powder
Assay	min. 99,0 %
Substances insoluble in HNO_3	max. 0,05 %
Nitrogen (as NO_3)	max. 0,05 %
Sodium (Na)	max. 0,1 %

Silver carbonate pure p. a. **CHEM*118162329**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	yellow powder
Assay	min. 99,5 %
Substances insoluble in HNO_3	max. 0,01 %
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

$Sr(NO_3)_2$

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_2O, 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 | 250 g | 500 g | 1 kg

Appearance	white crystals
Assay	min. 99,0 %
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 | 250 g | 500 g | 1 kg

Appearance	white crystals
Assay	min. 99,0 %
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

$SrCl_2 \cdot 6H_2O$

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_2O, 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

$SrSO_4$

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),
Auto-ignition temperature:	not applicable		0,0113 g/l (95°C)
Ignition temperature:	not applicable	in organic solvents:	no data

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

$SrCO_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 98,0 %
Moisture	max. 0,5 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,0 %
Moisture	max. 0,2 %
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

$Sr(OH)_2 \cdot 8H_2O$

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_2O, 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 | 500 g | 1 kg

Assay	min. 98,0 %
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 | 500 g | 1 kg

Assay	min. 99,0 %
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

$Na_2O \cdot n\ SiO_2 \cdot n\ H_2O$

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 | 3 l | 5 l | 10 l | 20 l | 30 l

Molar fraction SiO_2 / Na_2O	2,4 – 2,6
SiO_2 + Na_2O	min. 39,0%
Density (20°C)	1,45 – 1,48 g/cm^3
Fe_2O_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

C_2Cl_4

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:	characterictic	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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay (GC)	min. 98,0 %
Water (KF)	max. 0,01 %
Non-volatile substances	max. 0,002 %
Free acids(as HCl)	max. 0,002 %
Free bases (as NH_3)	max. 0,003 %
Appearance	colourless, clear liquid

Tetrachloroethylene pure p.a. — CHEM*112759209

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay (GC)	min. 99,5 %
Water (KF)	max. 0,01 %
Non-volatile substances	max. 0,001 %
Free acids(as HCl)	max. 0,001 %
Free bases (as NH_3)	max. 0,002 %
Appearance	colourless, clear liquid

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

C_4H_8O

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 $P_{(O/W)}$:	0,47
low:	1,5% V/V		

tetrahydrofuran pure — CHEM*422782003

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay (GC)	min. 98,5 %
Density (20°C)	0,887 – 0,9 g/cm^3
Water	max. 0,1 %
Acids (as CH_3COOH)	max. 0,005 %
Peroxides (as H_2O_2)	max. 0,04 %
Residue on evaporation	max. 0,008 %

tetrahydrofuran pure p.a. — CHEM*112782000

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless, clear liquid
Assay (GC)	min. 99,5 %
Colour	max. 20 Hazen
Density (20°C)	0,887 - 0,89 g/cm^3
Water	max. 0,05 %
Acids (as CH_3COOH)	max. 0,003 %
Peroxides (as H_2O_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

CH_3CSNH_2

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_2O, 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

H_2NCSNH_2

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_2O, 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 $P_{(O/W)}$:	-0,92

thiourea pure — CHEM*428345700

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 13 kg | 15 kg | 17 kg | 20 kg | 25 kg

Appearance	colourless crystals or white crystaline powder
Assay	min. 99,0 %
Melting point	174 - 176 °C
Substances insoluble in water	max. 0,02 %
Residue on roasting (as SO_4)	max. 0,1 %

thiourea pure p.a. — CHEM*118345701

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals or white crystaline powder
Assay	min. 99,0 %
Melting point	174 - 176 °C
Substances insoluble in water	max. 0,01 %
Residue on roasting (as SO_4)	max. 0,1 %
Se sensitivity	passes test

TOLUENE

Toluen

C_7H_8

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:			
low:	1,2% V/V	log $P_{(O/W)}$:	2,65

toluene purified CHEM*328370405

2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay (GC)	min. 98,0 %
Water (KF)	max. 0,25 %
Lead (Pb)	max. 0,01 %
Iron (Fe)	max. 0,01 %

toluene pure CHEM*428370405

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay (GC)	min. 99,5 %
Water	max. 0,05 %
Reaction of water extract	neutral
Residue on evaporation	max. 0,002 %
Thiotoluene	brak
Total sulphur (S)	max. 0,001 %

toluene pure p.a.		**CHEM*118370406**
100 ml, 250 ml, 500 ml, 1 l, 2.5 l, 3 l, 5 l, 10 l, 20 l, 30 l, 60 l, 200 l	Appearance	colourless, clear liquid
	Assay (GC)	min. 99,5 %
	Water	max. 0,03 %
	Reaction of water extract	neutral
	Residue on evaporation	max. 0,001 %
	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, 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 %

toluene GC		**CHEM*618370409**
1l, 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

$CH_3C_6H_4NH_2$

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 | 50 g | 100 g | 250 g

Assay	min. 98,0 %
Melting point	41 – 46°C

p-toluidine pure p.a. — CHEM*118376604

10 g | 25 g | 50 g | 100 g | 250 g

Appearance	brown flakes
Assay (GC)	min 98,5 %
Melting point	41 – 46 °C
Water	max. 0,3 %
o-Toluidine + m-Toluidine (GC)	max. 1 %

TRICHLOROETHYLENE

Trichloroetylen

C_2HCl_3

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, benzine, benzene
Ignition temperature:	32°C		
Explosion limits:			
low:	8 % V/V	log $P_{(O/W)}$:	2,42
top:	10,5 % V/V		

trichloroethylene pure CHEM*418469101

250 ml | 500 ml
1 l | 2.5 l
3 l | 5 l
10 l | 20 l
30 l | 60 l
200 l

Appearance	colourless, clear liquid
Assay	min. 99,0 %
Water	max. 0,1 %
Acids	max. 0,0005 meq/g
Bases	max. 0,001 meq/g
Etanol (GC)	max. 0,5 %
Residue on evaporation	max. 0,005 %
Tetrachloroethylene (C_2Cl_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 | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | 200 l

Appearance	colourless, clear liquid
Assay	min. 99,5 %
Colour	max. 10 Hazen
Water	max. 0,02 %
Acids	max. 0,0001 meq/g
Bases	max. 0,0003 meq/g
Etanol	max. 0,5 %
Residue on evaporation	max. 0,001 %
Tetrachloroethylene (C_2Cl_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

$C_6H_{15}NO_3$

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_2O, 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 $P_{(O/W)}$:	-2,3

triethanoloamine pure — CHEM*428484302

250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l

Appearance	colourless liquid darkens in the air
Assay	min. 98,0 %
Density (20°C)	1,12 - 1,13 g/ml
Refractive index (20°C)	1,481 - 1,486
Water	max. 0,15 %
Residue on roasting (as SO_4)	max. 0,1 %

triethanoloamine pure p.a. — CHEM*118484303

50 ml | 100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l

Appearance	colourless liquid darkened on the air
Assay	min. 99,0 %
Density (20°C)	1,123 - 1,128 g/ml
Refractive index (20°C)	1,482 - 1,485
Water	max. 0,1 %
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

$C_6H_{15}N$

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 $P_{(O/W)}$:	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
2.5 l	3 l	Water	max. 0,2 %
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
2.5 l	3 l	Water	max. 0,1 %
5 l	10 l	Residue on roasting (as SO_4)	max. 0,01 %

TRIS(HYDROXYMETHYL)AMINOMETHANE

Tris(hydroxymetylo)aminometan

$C_4H_{11}NO_3$

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: 26mg/ml, acetone 14.6mg/ml, ethyl acetate: 0.5 mg/ml, cyclohexane: 0.1 mg/ml, chloroform: 0.05 mg/ml,
Boiling point:	219 - 220°C (10 mm Hg)		
Auto-ignition temperature:	no data		
Ignition temperature:	>93,9°C		
Explosion limits:	no data		
Vapour pressure:	no data	log $P_{(O/W)}$:	-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

$C_4H_{11}NO_3$

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

$C_{34}H_{62}O_{11}$

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_2O, 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_2O)	63 - 69°C
1 l			

THYMOL

Tymol

$C_{10}H_{14}O$

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 mm3/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_2O, 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 | 25 g | 50 g | 100 g | 250 g | 500 g

Assay	min 99,0 %
Melting point	48 – 51 °C
Non-volatile substances	max. 1000 ppm

THYMOLPHTHALEIN

Tymoloftaleina

$C_{28}H_{30}O_4$

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 $P_{(O/W)}$:	7,06 (obl.)

Thymolphthalein CHEM*218631706

5 g | 10 g | 25 g | 50 g | 100 g

Appearance	white or yellow powder
Maximum absorpcji	592 - 596 nm
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

$C_{28}H_{30}O_4/C_2H_5OH$

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 500 ml

Assay	1 g/l
pH sensitivity:	
colourless	8,8
blue	10,5

Thymolphthalein 1% solution in ethanol **CHEM* 218631706**

100 ml 250 ml 500 ml

Assay	10 g/l
pH sensitivity:	
colourless	8,8
blue	10,5

HEXAMETHYLENETETRAMINE

Urotropina

$C_6H_{12}N_4$

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_2O, 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 $P_{(O/W)}$:	-2,13
Explosion limits:	no data		

Hexamethylenetetramine pure CHEM*428691506

50 g | 100 g | 250 g | 500 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	colourless crystals or white powder
Assay	min. 98,0 %
Substances insoluble in water	max. 0,005 %
pH (10%, 20°C)	8,5 - 9,5
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 | 250 g | 500 g | 1 kg | 5 kg | 10 kg

Appearance	colourless crystals or white powder
Assay	min. 99,0 %
Substances insoluble in water	max. 0,002 %
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

$Ca(NO_3)_2 \cdot 4H_2O$

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_2O, 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		
Ignition temperature:	not applicable	in organic solvents:	no data

Calcium nitrate 4hydrat pure CHEM*428745700

100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg

Appearance	colourless crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,01 %
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 | 250 g | 500 g | 1 kg | 2 kg | 5 kg

Appearance	colourless crystals
Assay	min. 99,0 %
Substances insoluble in water	max. 0,005 %
pH (5%, 20^{o}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

$CaCl_2$

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_2O, 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		
Ignition temperature:	not applicable	log $P_{(O/W)}$:	0,05
Explosion limits:	not applicable		

calcium chloride anhydrous pure — CHEM*428748702

50 g | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 25 kg

Appearance	white granule or white powder
Assay	min. 96,0 %
Sulphates (SO_4)	max. 0,05 %
Heavy metals(as Pb)	max. 0,005 %
Iron (Fe)	max. 0,005 %

calcium chloride anhydrous pure p.a. — CHEM*118748703

50 g | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white granule or white powder
Assay	min. 97,0 %
Sulphates (SO_4)	max. 0,02 %
Heavy metals(as Pb)	max. 0,002 %
Iron (Fe)	max. 0,002 %

calcium chloride anhydrous for desiccator pure — CHEM*468748908

100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white granule or white powder
Loss on roasting	max. 10,0 %

CALCIUM CHLORIDE 2 HYDRATE

Wapnia chlorek 2 hydrat

$CaCl_2 \cdot 2H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Assay	99,0-103,0 %
pH (5%, 20°C)	4,5 - 8,5
Sulphates (SO_4)	max. 0,005 %
Fluorides (F)	max. 0,004 %
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 | 250 g | 500 g | 750 g | 1 kg

Assay	min. 99,5 %
pH (5%, 20°C)	4,5 - 8,0
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

$CaCl_2 \cdot 6H_2O$

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_2O, 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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 25 kg

Appearance	White powder
Assay	min. 97,5 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20°C)	5,5 – 7,5
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Appearance	colourless crystals
Assay	min. 98,5 %
Substances insoluble in water	max. 0,005 %
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

$CaCl_2$

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_2O, 20°C)	Solubility:	
Melting point:	772°C	in water:	740 g/l (0°C)
Boiling point:	> 1670°C/760 mmHg	in organic solvents:	aceton, alkohol, kwas octowy
Auto-ignition temperature:	not applicable		
Ignition temperature:	not applicable	log $P_{(O/W)}$:	0,05
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

$CaCl_2 \cdot 6H_2O$

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_2O, 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 | 3 l | 5 l

Assay	39-41 %
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 | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay ($CaCl_2$*$6H_2O$)	57,5 - 62,5 %
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 STANDARD SOLUTIONS (C < 2 MOL/L)

Wapnia chlorek roztwory mianowane

$CaCl_2$

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_2O, 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 1 l Titer 0,00996 – 0,01004 mol/l

calcium chloride standard solution 0,02 mol/l **CHEM*818748710**

250 ml 500 ml 1 l Titer 0,01992 – 0,02008 mol/l

calcium chloride standard solution 0,05 mol/l **CHEM*818748712**

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

calcium chloride standard solution 0, 1 mol/l **CHEM*818748711**

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

calcium chloride standard solution 0,25 mol/l **CHEM*818748713**

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

calcium chloride standard solution 0,5 mol/l **CHEM*818748714**

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

CALCIUM DIHYDROGENPHOSPHATE 1 HYDRATE

Wapnia diwodorofosforan hydrat

$Ca(H_2PO_4)_2 \cdot H_2O$

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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,02 %
Nitrates (NO_3)	max. 0,01 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,05 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Appearance	white crystals or white powder
Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,01 %
Total nitrogen(N)	max. 0,02 %
Chlorides (Cl)	max. 0,005 %
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

$CaHPO_4$

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_2O)	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 $P_{(O/W)}$:	-2,55

calcium hydrogenphosphate anhydrous pure **CHEM*428758802**

100 g | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	min. 98,0 %
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 | 250 g | 500 g | 750 g | 1 kg

Appearance	white powder
Assay	99,0 - 100,5 %
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

$CaHPO_4 \cdot 2H_2O$

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_2O, 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:	insolublle in methanol
Ignition temperature:	not applicable	in other solvents:	soluble in HCl

calcium hydrogenphosphate 2 hydrat pure **CHEM*428758808**

50 g	100 g
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
20 kg	25 kg

Appearance	white powder
Identity	passes test
Assay	98,0 – 102,0 %
Substances insoluble in HCl	max. 0,01 %
Loss on roasting	24,5 - 26,5 %
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
17.5 kg	25 kg

Appearance	white powder
Identity	passes test
Assay	99,0 – 101,0 %
Substances insoluble w HCl	max. 0,005 %
Loss on roasting	24,5 - 26,5 %
Chlorides (Cl)	max. 0,002 %
Sulphates (SO_4)	max. 0,02 %
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

$Ca_3(PO_4)_2$

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_2O, 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 500 g 1 kg

Assay	90,0 – 103,0 %
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 250 g 500 g 1 kg

Assay	min. 96,0 %
Loss on roasting (900°C)	max. 0,1 %
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

$C_6H_{10}CaO_6 \cdot 5H_2O$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 96,0 %
Chlorides (Cl)	max. 0,01 %
Phosphates (PO_4)	max. 0,02 %
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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg

Assay	min. 98,0 %
Loss on roasting (120°C)	24,0 - 30,0 %
Chlorides (Cl)	max. 0,008 %
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

$Ca(CH_3COO)_2 \cdot H_2O$

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_2O, 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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	12 kg
15 kg	25 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in CH_3COOH	max. 0,04 %
Chlorides (Cl)	max. 0,01 %
Sulphates (SO_4)	max. 0,05 %
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
250 g	500 g
750 g	1 kg
2 kg	5 kg
10 kg	15 kg
20 kg	

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in CH_3COOH	max. 0,02 %
Chlorides (Cl)	max. 0,005 %
Sulphates (SO_4)	max. 0,03 %
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

$Ca(CH_3COO)_2$

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 | 1l | 2.5 l | 3 l | 5 l

Assay	4,9 – 5,1 %
Sodium, potassium and magnesium(Na + K + Mg)	max. 0,2 %
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 acetate 25% pure p.a. **CHEM*528773906**

500 ml | 1l | 2.5 l | 3 l | 5 l

Assay	24,0 – 26,0 %
Density	approx 1,13 g/cm^3
Sodium, potassium and magnesium(Na + K + Mg)	max. 0,2 %
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

$CaSO_4 \cdot 0,5\ H_2O$

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_2O, 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 50 g 100 g 250 g 500 g 1 kg

Appearance	white powder
Loss on roasting	4,5 - 8 %
Free acids(as H_2SO_4)	max. 0,04 %
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 50 g 100 g 250 g 500 g 1 kg

Appearance	white powder
Loss on roasting	4,5 - 7 %
Free acids(as H_2SO_4)	max. 0,02 %
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

$CaSO_4 \cdot 2\ H_2O$

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_2O, 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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder
Assay	min. 98,0 %
Substances insoluble in HCl	max. 0,05 %
Nitrates (NO_3)	max. 0,01 %
Chlorides (Cl)	max. 0,01 %
Free acids(as H_2SO_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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white powder
Assay	min. 99,0 %
Chlorides (Cl)	max. 0,005 %
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

$CaC_2O_4 \cdot 2H_2O$

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
50 g	75 g
100 g	250 g
500 g	1 kg

Assay	min. 98,0 %
Copper (Cu)	max. 0,001%
Zinc (Zn)	max. 0,02%
Iron (Fe)	max. 0,002%
Sodium (Na)	max. 0,1%
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
50 g	75 g
100 g	250 g
500 g	1 kg

Assay	min. 99,0 %
Copper (Cu)	max. 0,0005%
Zinc (Zn)	max. 0,01%
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_2O, 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:	glicerin
Ignition temperature:	not applicable		

calcium oxide pure — **CHEM*428782109**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	white, yellow or grey powder
Assay	min. 96,0 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white, yellow or grey powder
Assay	min. 98,0 %
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

$CaCO_3$

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_2O, 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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	white powder
Assay	min. 98,5 %
Substances insoluble in HCl	max. 0,02 %
Chlorides (Cl)	max. 0,01 %
Sulphates (SO_4)	max. 0,1 %
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
100 g	250 g
500 g	750 g
1 kg	2 kg
5 kg	15 kg

Appearance	white powder
Assay	min. 99,0 %
Substances insoluble in HCl	max. 0,005 %
Total nitrogen(N)	max. 0,04 %
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
500 g	750 g
1 kg	2 kg
3.5 kg	5 kg
12.5 kg	15 kg
20 kg	25 kg

Assay	98,5 - 100,5 %
Chlorides (Cl)	max. 0,025 %
Sulphates (SO_4)	max. 0,25 %
Magnesium	max. 1,0 %
Heavy metals(as Pb)	max. 0,001 %
Arsenic (As)	max. 0,0005 %
Loss on drying	max. 2,0 %
Barium compounds	passes test

CALCIUM HYDROXIDE

Wapnia wodorotlenek

CaH_2O_2

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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white or grey powder
Assay	min. 95,0 %
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 | 100 g | 250 g | 500 g | 1 kg

Appearance	white or grey powder
Assay	min. 96,0 %
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_2O, 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 | 2 kg | 5 kg | 10 kg | 15 kg

Assay moisture	2,0 %
Assay ash	2,5 %
Methylene number	24 cm^3
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_2O, 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 | 2 kg | 5 kg | 10 kg | 15 kg

Bulk density	490 kg/m^3
Mechanical strength	99,9 %
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_2O, 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
		Solubility:	
Boiling point:	not applicable	**in water**:	insoluble
Auto-ignition temperature:	no data	in organic solvents:	no data

Activated charcoalNorit SX 2 pure p.a. **CHEM*118799500**

100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 6 kg

Substances insoluble w HCl	max. 1,0 %
Loss on drying(110°C)	max. 10,0 %
Copper (Cu)	max. 0,001 %
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:	wyciągu 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:	
		in water:	insoluble
Boiling point:	not applicable	in organic solvents:	no data
Auto-ignition temperature:	no data		

Activated charcoal 1-4mm Chem WD-extra/w CHEM*118799553

250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg

Masa nasypowa	454 kg/m^3
Mechanical strength	95,9 %
Attrition	0,18 %
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

CCl_4

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:	sweety	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 $P_{(O/W)}$:	2,64

carbon tetrachloride pure **CHEM*428804703**

50 ml	100 ml
250 ml	500 ml
1 l	2.5 l

Density (20°C)	1,591 – 1,597 g/cm^3
Distillation range	75,5 – 77,5°C
Non-volatile residue	max. 0,001 %
Free acids (as HCl)	max. 0,0004 %
Adlehydes (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 disuffide (CS_2)	max. 0,001 %

carbon tetrachloride pure p.a. **CHEM*118804704**

50 ml	100 ml
250 ml	500 ml
1 l	2.5 l

Assay	min. 99,6 %
Density (20ºC)	1,585 - 1,595 g/cm^3
Free acids(as HCl) and phosgene	max. 0,0002 %
Non-volatile matter	max. 0,0005 %
Water	max. 0,02 %
Adlehydes (as CH_2O)	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_2SO_4	passes test
Suitability to work with dithizone	passes test

DISTILLED WATER

Woda destylowana

H_2O

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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Appearance	colourless clear liquid
Acidity or alkalinity	passes test
Phenols	passes test
Free chlorine(Cl_2)	passes test
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 caompounds	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 | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l | luz

Appearance	colourless liquid
Acidity or alkalinity	passes test
Chlorides (Cl)	passes test
Sulphates (SO_4)	passes test
Calcium and magnesium compounds	passes test
Heavy metals(as Pb)	passes test
Specific electrolytic conductivity (20°C)	max. 5 µS/cm

WATER HPLC

H_2O

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^{o}C)	max. 2µS/cm
Absorption (254nm, 1cm)	max. 0,001AU
Gradient test 254nm – highest	max. 2mAU
Filtering (0,2µm)	passes test

WATER DEMINERALISED (accumulator)

H_2O

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**

1l	5 l	Specific electrolytic conductivity(20°C)	max. 10,0 µS/cm
10 l	20 l		

HYDROGEN PEROXIDE SOLUTION 1%

Wodoru nadtlenek roztwór 1%

H_2O_2

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 | 1 l | 5 l | 10 l

Assay	1,0 % ± 0,1 %
Density (18°C)	approx 1,0022 g/cm^3
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 1% pure p.a. **CHEM*118851947**

100 ml | 500 ml | 1 l | 5 l | 10 l

Assay	1,0 % ± 0,1 %
Density (18°C)	approx 1,0022 g/cm^3
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 3%

Wodoru nadtlenek roztwór 3%

H_2O_2

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 | 1 l | 5 l | 10 l

Assay	3,0 % ± 0,1 %
Density (18°C)	approx 1,009 g/cm^3
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 3% pure p.a. **CHEM*118851937**

100 ml | 500 ml | 1 l | 5 l | 10 l

Assay	3,0 % ± 0,1 %
Density (18°C)	approx 1,009 g/cm^3
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 5%

Wodoru nadtlenek roztwór 5%

H_2O_2

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 | 5 l | 10 l | 20 l | 30 l

Assay	5,0 % ± 0,1 %
Density (18°C)	approx 1,017 g/cm^3
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 | 5 l | 10 l | 20 l | 30 l

Assay	5,0 % ± 0,1 %
Density (18°C)	approx 1,017 g/cm^3
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 SOLUTION10%

Wodoru nadtlenek roztwór 10%

H_2O_2

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 SOLUTION10% 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 SOLUTION15%

Wodoru nadtlenek roztwór 15%

H_2O_2

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
10 l	20 l
30 l	60 l

Assay	15,0 % ± 0,5 %
Density (18°C)	approx 1,054 g/cm^3

HYDROGEN PEROXIDE SOLUTION 15% pure **CHEM*428851931**

500 ml	1 l
5 l	10 l
20 l	30 l

Assay	15,0 % ± 0,5 %
Density (18°C)	approx 1,054 g/cm^3
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
5 l	10 l
20 l	30 l

Assay	15,0 % ± 0,5 %
Density (18°C)	approx 1,054 g/cm^3
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 SOLUTION18%

Wodoru nadtlenek roztwór 18%

H_2O_2

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%

H_2O_2

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 | 5 l | 10 l | 20 l | 30 l

Assay	20,0 % ± 0,5 %
Density (18°C)	approx 1,072 g/cm^3
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 | 5 l | 10 l | 20 l | 30 l

Assay	20,0 % ± 0,5 %
Density (18°C)	approx 1,072 g/cm^3
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%

H_2O_2

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 SOLUTION30%

Wodoru nadtlenek roztwór 30%

H_2O_2

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 | 10 l | 20 l | 30 l | 60 l

Assay	30,0 % ± 1,0 %
Density (18°C)	approx 1,11 g/cm^3

HYDROGEN PEROXIDE SOLUTION 30% pure **CHEM*428851933**

100 ml | 250 ml | 500 ml | 1 l | 2.5 l | 3 l | 5 l | 10 l | 20 l | 30 l | 60 l

Assay	30,0 % ± 1,0 %
Free acids(as H_2SO_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 30% pure p.a.			**CHEM*118851934**
100 ml	250 ml	Assay	30,0 % ± 1,0 %
500 ml	1 l	Free acids(as H_2SO_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_2SO_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%

H_2O_2

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_2SO_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
5 l	10 l
20 l	30 l

Assay	35,0 % ± 1,0 %
Free acids(as H_2SO_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 40%

Wodoru nadtlenek roztwór 40%

H_2O_2

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 | 5 l | 10 l | 20 l | 30 l

Assay	40,0 % ± 1,0 %
Free acids(as H_2SO_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 40% pure p.a. **CHEM*118851933**

500 ml | 1 l | 5 l | 10 l | 20 l | 30 l

Assay	40,0 % ± 1,0 %
Free acids(as H_2SO_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 45%

Wodoru nadtlenek roztwór 45%

H_2O_2

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_2SO_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_2SO_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%

H_2O_2

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 | 10 l | 20 l | 30 l | 60 l

Assay	50,0 % ± 1,0 %
Density (18°C)	approx 1,197 g/cm^3

HYDROGEN PEROXIDE SOLUTION 50% pure CHEM*428851935

500 ml | 1 l | 5 l | 10 l | 20 l | 30 l

Assay	50,0 % ± 1,0 %
Free acids(as H_2SO_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 50% pure p.a. **CHEM*118851932**

500 ml	1 l
5 l	10 l
20 l	30 l

Assay	50,0 % ± 1,0 %
Free acids(as H_2SO_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 60%

Wodoru nadtlenek roztwór 60%

H_2O_2

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
10 l	20 l
30 l	60 l

Assay	60,0 % ± 1,0 %
Density (18°C)	approx 1,24 g/cm^3

HYDROGEN PEROXIDE SOLUTION 60% pure **CHEM*428851939**

500 ml	1 l
5 l	10 l
20 l	30 l

Assay	60,0 % ± 1,0 %
Free acids(as H_2SO_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 60% pure p.a. **CHEM*118851935**

500 ml	1 l
5 l	10 l
20 l	30 l

Assay	60,0 % ± 1,0 %
Free acids(as H_2SO_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 %

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 | 50 ml | 100 ml | 250 ml | 500 ml

Thymol blue	passes test
Methyl red	passes test
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

$C_{21}H_{14}Br_4O_5S$

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
10 g	25 g
50 g	100 g

Appearance	white or orange powder
Molar absorptivity coefficient:	
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)

$C_{21}H_{14}Br_4O_5S/C_2H_5OH$

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 | 250 ml | 500 ml

Assay	approx 1 g/l
pH sensitivity:	
yellow	3,8
blue	5,4

MALACHITE GREEN

Zieleń malachitowa

$C_{25}H_{26}N_2O_4$ **(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_2O, 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 - 60 g/l (24°C)
Ignition temperature:	167°C		

malachite green CHEM*128994700

5 g	10 g
25 g	50 g
100 g	250 g
500 g	1 kg
2 kg	5 kg
10 kg	13 kg
25 kg	

Appearance	green crystals
Molar absorptivity coefficient:	
E (610÷620 nm; water)	min.. 55000
Moisture	max. 10,0 %
TLC test	passes test
Residue on roasting	max. 2,5 %
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

1l | 2 l | 5 l | 10 l | 25 l

Grain size	0,61 ± 0,05 mm min.90 %
Bulk density	670 kg/m^3 (±5%)
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

1l | 2 l | 5 l | 10 l | 25 l

Grain size 0,58 ± 0,05 mm	min. 90 %
Bulk density	820 kg/m^3 (±5%)
Coefficient of uniformity	max. 1,1
Gravity	1,28 ca.
Assay water	42 – 48 %
Total exchange capacity	min.. 2,0 eq/l
Expansion $Na^+ \rightarrow H^+$	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

1l | 2 l | 5 l | 10 l | 25 l

Grain size	0,6 ± 0,05 mm min. 90 %
Bulk density	820 kg/m^3 (±5%)
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 $Na^+ \rightarrow H^+$	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

1l | 2 l | 5 l | 10 l | 25 l

Grain size <0,3 mm	max. 2,0 % v/v
Grain sizze >1,2 mm	max. 5,0 % v/v
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

$SiO_2 \cdot nH_2O$

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 | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 17 kg | 20 kg | 25 kg

Bulk density	500 - 650 kg/m^3
Moisture (150°C, 3h)	max. 2,0 %
The ability of adsorption of water (24h, 80% relative humidity)	min.. 5,0 %
Granulation	2 - 7 mm
Mechanical strength	min.. 85,0 %
Dynamic activity(100% relative humidity)	min. 70,0 %

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 | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 25 kg

Bulk density	650 - 800 kg/m^3
Moisture	max. 10,0 %
Granulation	2 - 7 mm
Mechanical strength	min. 92,0 %
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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 17.5 kg | 20 kg

Bulk density	650 - 800 kg/m^3
Moisture	max. 3,0 %
Granulation	3 - 7 mm
Dynamic activity	
at 40% relative humidity	min. 20,0 %
Static activity	
at 20% relative humidity	8,0 – 13,0 %
at 35% relative humidity	13,0 – 20,0 %
at 50% relative humidity	20,0 – 25,0 %

SILICA GEL WITH MOISTURE INDICATOR (WITH COBALT) 1-4 MM

Żel wskaźnikowy z kobaltem 1-4mm

SiO_2

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

$Fe(NO_3)_3 \cdot 9H_2O$

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_2O, 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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	vilet crystals
Assay	min. 98,0 %
Chlorides (Cl)	max. 0,002 %
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 | 50 g | 100 g | 250 g | 500 g | 1 kg

Appearance	violet crystals
Assay	min. 99,0 %
Chlorides (Cl)	max. 0,0005 %
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

$FeCl_3 \cdot 6H_2O$

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_2O, 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 $P_{(O/W)}$:	-4 (24°C)

iron (III) chloride 6 hydrat pure — CHEM*429041803

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 20 kg | 15 kg

Assay	min.. 99,0 %
Sulphates (SO_4)	max. 0,03 %
Lead (Pb)	max. 0,01 %
Copper(Cu)	max. 0,01 %

iron (III) chloride 6 hydrat pure p.a. — CHEM*119041804

50 g | 100 g | 250 g | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min.. 99,0 %
Sulphates (SO_4)	max. 0,02 %
Arsenicic (As)	max. 0,0005 %
Lead (Pb)	max. 0,005 %
Copper(Cu)	max. 0,005 %

IRON (III) CHLORIDE SOLUTIONS (C < 25%)

Żelaza (III) chlorek roztwory

$FeCl_3$

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**

Assay	approx 20,0 %
Density (20°C)	approx 1,182 g/cm^3

100 ml	250 ml
500 ml	1l
2.5 l	3 l
5 l	10 l
20 l	40 l
60 l	

IRON (III) CHLORIDE SOLUTIONS (C ≥ 25%)

Żelaza (III) chlorek roztwory

$FeCl_3$

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

$FeSO_4 \cdot 7H_2O$

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_2O, 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 | 25 kg

Appearance	green crystals
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 | 500 g | 750 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Appearance	green crystals
Assay	99,0 - 104,5 %
Substances insoluble in water	max. 0,02 %
pH (5%, 20^{o}C)	3,0 - 4,0
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 | 250 g | 500 g | 1 kg | 2 kg | 5 kg

Appearance	green crystals
Assay	99,5 - 104,5 %
Substances insoluble in water	max. 0,01 %
pH (5%, 20^{o}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%

$FeSO_4$

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 ≤ 2 MOL/L)

Żelaza (II) siarczan roztwory mianowane

$FeSO_4$

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

$Fe(C_2O_4) \cdot 2H_2O$

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 | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min.. 98,0 %
Chlorides (Cl)	max. 0,01 %
Heavy metals(as Pb)	max. 0,02 %
Sulphates (SO_4)	max. 0,2 %

iron (II) oxalate 2 hydrat pure p.a. **CHEM*119049209**

25 g | 50 g | 100 g | 250 g | 500 g | 750 g | 1 kg

Assay	min.. 99,0 %
Chlorides (Cl)	max. 0,005 %
Heavy metals(as Pb)	max. 0,01 %
Sulphates (SO_4)	max. 0,1 %

IRON (III) SULPHATE HYDRAT

Iron (III) sulfate hydrate

$Fe_2(SO_4)_3 \cdot xH_2O$

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 | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay [as $Fe_2(SO_4)_3$]	~75 %
Chlorides (Cl)	max. 0,02 %
Zinc (Zn)	max. 0,2 %
Iron Fe (II)	max. 0,2 %

iron (III) sulphate hydrat pure p.a. **CHEM*119048800**

25 g | 50 g | 100 g | 250 g | 500 g | 1 kg | 2 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay [as $Fe_2(SO_4)_3$]	~75 %
Substances insoluble in H_2SO_4	max. 0,025 %
Nitrate (NO_3)	max. 0,02 %
Chlorides (Cl)	max. 0,01 %
Copper(Cu)	max. 0,005 %
Potassium (K)	max. 0,01 %
Sodium (Na)	max. 0,05 %
Iron Fe (II)	max. 0,1 %

IRON (III) OXIDE RED

Żelaza (III) tlenek

Fe_2O_3

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_2O, 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_2SO_4
Ignition temperature:	not applicable		

iron (III) oxide red pure **CHEM*429049607**

100 g | 250 g | 500 g | 1 kg | 5 kg | 10 kg | 15 kg | 25 kg

Assay	min. 96,0 %
Loss on roasting	max. 0,5 %
Substances insoluble in water	max. 1,0 %
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 | 500 g | 1 kg | 5 kg | 10 kg

Moisture	max. 0,5 %
Loss on roasting	max. 0,25 %
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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FIRMA CHEMPUR®

Oddział Piekary Śląskie
ul. Jana Lortza 70A
41-940 Piekary Śląskie
tel/fax. (032) 287 20 52
tel. (032) 767 88 92
fax. (032) 767 93 41
e-mail: chempur@chempur.pl

Oddział Tarnowskie Góry
ul. Boczna 3
42-600 Tarnowskie Góry
tel. (032) 382 49 01
fax. (032) 382 00 41

Oddział Krupski Młyn
ul. Krasickiego 6
42-693 Krupski Młyn
tel. (032) 284 84 60
fax. (032) 284 81 04

www.chempur.pl