QRëC®

Quality Reagent Chemical

www.QREC.asia

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Analytical Reagents

QReC offers about 2,000 kinds of Analytical reagents including General Reagents & Special purposee reagents.

Special Purpose reagents

- Volumetric analysis
- Buffer Solution
- Indicator solution for Titration
- Anhydrous titration

Quality grades

- Guaranteed Reagents (GR)
- Extra Pure
- Chemical Pure (CP)
- AR ('AnalaR' Standards)
- ACS (Americ Chemical Society)

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High Purity Solvents

- High Purity with Lot-to-Lot consistency
  - LC-MS
  - Ultimate
  - HPLC
  - Pesticide
  - DNA Biosynthesis

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Solvents for Electronics

Grade/EL

-Description / Electronic grade

-Trace impurity / 30 ppb and above

Grade / ELH

- Description / Electronic High Purity grade
- Trace impurity / 1 ppb to 30 ppb

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QRëC®

CHEMICAL CATALOGUE

2014 - 2018

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QRëC®

QREC a well accepted quality brand was originated from New Zealand at the past decade. With the transfer of technology and continual commitment towards the growing demand of customer, QREC is now emphasize in the fast growing market in Asia Pacific and has established its facilities in Malaysia

Under the new establishment of May Chemical, **QREC** brand of reagent will further strengthen fulfillment of total customer satisfaction. Our prior mission continually ensures providing value adding to customer through our innovative development and modern purification techniques.

Products consistency is achieved and maintained by our **ISO** 9002 accreditation. All product range is produced under tight quality control procedure to ensure top quality standard.

As a chemical producer, we also gave priority to Environmental and Health & Safety. We constantly comply with local legal requirement and also responsibilities to our employees and customers as well as public in terms of health and safety and environmental issues. In recognition to excel in this area, we have also certified ISO 14001 environmental management system.

ISO 9001 BUREAU VERITAS Certification
ISO 9001 no. Q209263
UKAS QUALITY MANAGEMENT 008

ISO 9001 BUREAU VERITAS Certification
ISO 14001 no. E209197
UKAS QUALITY MANAGEMENT 008

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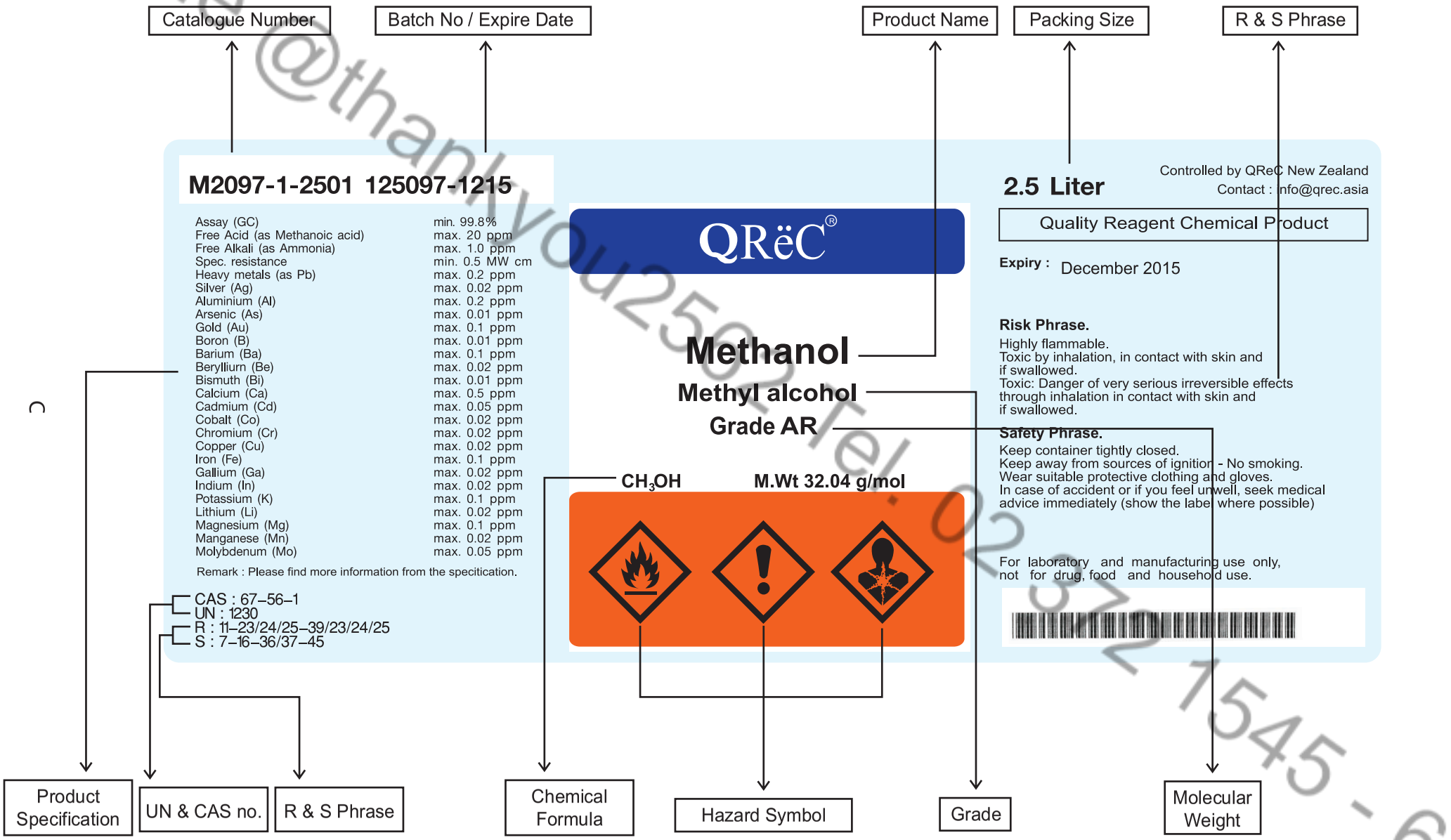

Packaging for Safety, Convenience and Product Quality

Amber Glass Bottles
Suitable for Photosensitive solvents and acids. We offer 1 litre, 2.5 litres.
1 litre : 6 bottles per box
2.5 litres : 4 bottles per box

Plastic Bottles
Plastic bottles are supplied wherever possible, where chemical properties are compatible, because they minimize the risk of breakage, and they are lighter in weight and easier and more economical to ship. We offer 500g, 1kg, 5kg, 2.5 litres, 4 litres, 5 litres. 4 bottles per box for liquid form. 6 bottles per box for powder form.

Drums for Bulk Quantity
We offer 20 litres, 25 litres HDPE jars, 200 litres HDPE drums and metal drums with PE inner lining.

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GHS Elements

Compared to the current EU system the most noticeable change are the pictograms (formerly: hazard symbols). While the most of the GHS pictograms have an equivalent in the old system, the pictograms GHS 04, GHS 07 and GHS 08 are completely new.

The GHS System is built on 16 physical, 10 health and 3 environmental hazard classes and comprises the following communication elements

Exploding Bomb

Unstable explosives
Explosives of Divisions 1.1, 1.2, 1.3, 1.4
Self reactive substances and mixtures, Types A,B
Organic peroxides, Types A,B

Flame

Flammable gases, category 1
Flammable aerosols, categories 1,2
Flammable liquids, categories 1,2,3
Flammable solids, categories 1,2
Self-reactive substances and mixtures, Types B,C,D,E,F
Pyrophoric liquids, category 1
Pyrophoric solids, category 1
Self-heating substances and mixtures, categories 1,2
Substances and mixtures, which in contact with water,
emit flammable gases, categories 1,2,3
Organic peroxides, Types B,C,D,E,F

Flame Over Circle

Oxidizing gases, category 1
Oxidizing liquids, categories 1,2,3

Gas Cylinder

Gases under pressure:
- Compressed gases
- Liquefied gases
- Refrigerated liquefied gases
- Dissolved gases

Corrosion

Corrosive to metals, category 1
Skin corrosion, categories 1A,1B,1C
Serious eye damage, category 1

Skull and Crossbones

Acute toxicity (oral, dermal, inhalation), categories 1,2,3

Exclamation Mark

Acute toxicity (oral, dermal, inhalation), category 4
Skin irritation, category 2
Eye irritation, category 2
Skin sensitisation, category 1
Specific Target Organ Toxicity - Single exposure, category 3

Health Hazard

Respiratory sensitization, category 1
Germ cell mutagenicity, categories 1A,1B,2
Carcinogenicity, categories 1A,1B,2
Reproductive toxicity, categories 1A,1B,2
Specific Target Organ Toxicity - Single exposure, categories 1,2
Specific Target Organ Toxicity - Repeated exposure, categories 1,2
Aspiration Hazard, category 1

Environment

Hazardous to the aquatic environment
- Acute hazard, category1
- Chronic hazard, categories 1,2

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EXPLANATIONS : SECURITY : RISK AND SAFETY PHRASES

RISK PHRASES (R)

R 1	Explosive when dry.
R 2	Risk of explosion by shock, friction, fire or other sources of ignition.
R 3	Extreme risk of explosion by shock, friction, fire or other sources of ignition.
R 4	Forms very sensitive explosive metallic compounds.
R 5	Heating may cause an explosion.
R 6	Explosive with or without contact with air.
R 7	May cause fire.
R 8	Contact with combustible material may cause fire.
R 9	Explosive when mixed with combstible material.
R 10	Flammable
R 11	Highly flammable.
R 12	Extremely flammable.
R 14	Reacts violently with water.
R 15	Contact with water liberates extremely flammable gases.
R 16	Explosive when mixed with oxidizing substances.
R 17	Spontaneously flammable in air.
R 18	In use, may form flammable/explosive vapour-air mixture.
R 19	May form explosive peroxides.
R 20	Harmful by inhalation.
R 21	Harmful in contact with skin.
R 22	Harmful if swallowed.
R 23	Toxic by inhalation.
R 24	Toxic in contat with skin.
R 25	Toxic if swallowed.
R 26	Very toxic by inhalation.
R 27	Very toxic in contact with skin.
R 28	Very toxic if swallowed.
R 29	Contact with water liberates toxic gas.
R 30	Can become highly flammable in use.
R 31	Contact with acids liberates toxic gas.
R 32	Contact with acids liberates very toxic gas.
R 33	Danger of cumulative effects.
R 34	Causes burns.
R 35	Causes sever burns.
R 36	Irritating to eyes.
R 37	Irritating to respiratory system.
R 38	Irritating to skin.
R 39	Danger of very serious irreversible effects.
R 40	Limited evidence of a carcinogenic effect.
R 41	Risk of serious damage to eyes.
R 42	May cause sensitization by inhalation.
R 43	May cause sensitization by skin contact.
R 44	Risk of explosion if heated under confinement.
R 45	May cause cancer.
R 46	May cause heritable genetic damage.
R 48	Danger of serious damage to health by prolonged exposure.
R 49	May cause cancer by inhalation.
R 50	Very toxic to aquatic organisms.
R 51	Toxic to aquatic organisms.
R 52	Harmful to aquatic organisms.
R 53	May cause long-term adverse effects in the aquatic environment.
R 54	Toxic to flora.
R 55	Toxic to fauna.
R 56	Toxic to soil organisms.
R 57	Toxic to bees.
R 58	May cause long-term adverse effects in the environment.
R 59	Dangerous for the ozone layer.
R 60	May impair fertility.
R 61	May cause harm to the unborn child.
R 62	Possible risk of impaired fertility.
R 63	Possible risk of harm to the unborn child.
R 64	May cause harm to breastfed babies.
R 65	Harmful: May cause lung damage if swallowed.
R 66	Repeated exposure may cause skin drynes or cracking.
R 67	Vapours may cause drowsiness and dizziness.
R 68	Possible risks of irreversible effects.

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EXPLANATIONS : SECURITY : RISK AND SAFETY PHRASES

COMBINATION OF RISK PHRASES (R)

R14/15	Reacts violently with water, liberating extremely flammable gases.
R15/29	Contact with water liberates toxic, extremely flammable gas.
R20/21	Harmful by inhalation and in contact with skin.
R20/22	Harmful by inhalation and if swallowed.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R23/24	Toxic by inhalation and in contact with skin.
R23/25	Toxic by inhalation and if swallowed.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R24/25	Toxic in contact with skin and if swallowed.
R26/27	Very toxic by inhalation and in contact with skin.
R26/28	Very toxic by inhalation and if swallowed.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R27/28	Very toxic in contact with skin and if swallowed.
R36/37	Irritating to eyes and respiratory system.
R36/38	Irritating to eyes and skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37/38	Irritating to respiratory system and skin.
R39/23	Toxic: Danger of very serious irreversible effects through inhalation.
R39/24	Toxic: Danger of very serious irreversible effects in contact with skin.
R39/25	Toxic: Danger of very serious irreversible effects if swallowed.
R39/23/24	Toxic: Danger of very serious irreversible effects through inhalation and in contact with skin.
R39/23/25	Toxic: Danger of very serious irreversible effects through inhalation and if swallowed.
R39/24/25	Toxic: Danger of very serious irreversible effects in contact with skin and if swallowed.
R39/23/24/25	Toxic: Danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R39/26	Very toxic: Danger of very serious irreversible effects through inhalation.
R39/27	Very toxic: Danger of very serious irreversible effects in contact with skin.
R39/28	Very toxic: Danger of very serious irreversible effects if swallowed.
R39/26/27	Very toxic: Danger of very serious irreversible effects through inhalation and in contact with skin.
R39/26/28	Very toxic: Danger of very serious irreversible effects through inhalation and if swallowed.
R39/27/28	Very toxic: Danger of very serious irreversible effects in contact with skin and if swallowed.
R39/26/27/28	Very toxic: Danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R40/20	Harmful: Possible risk of irreversible effects through inhalation.
R40/21	Harmful: Possible risk of irreversible effects in contact with skin.
R40/22	Harmful: Posssible risk of irreversible effects if swallowed.
R40/20/21	Harmful: Possible risk of irreversible effects through inhalation and in contact with skin.
R40/20/22	Harmful: Possible risk of irreversible effects through inhalation and if swallowed.
R40/21/22	Harmful: Possible risk of irreversible effects in contact with skin and if swallowed.
R40/20/21/22	Harmful: Possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
R42/43	May cause sensitization by inhalation and skin contact.
R48/20	Harmful: Danger of serious damage to health by prolonged exposure through inhalation.
R48/21	Harmful: Danger of serious damage to health by prolonged exposure in contact with skin.
R48/22	Harmful: Danger of serious damage to health by prolonged exposure if swallowed.
R48/20/21	Harmful: Danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
R48/20/22	Harmful: Danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R48/21/22	Harmful: Danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R48/20/21/22	Harmful: Danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R48/23	Toxic: Danger of serious damage to health by prolonged exposure through inhalation.
R48/24	Toxic: Danger of serious damage to health by prolonged exposure in contact with skin.
R48/25	Toxic: Danger of serious damage to health by prolonged exposure if swallowed.
R48/23/24	Toxic: Danger of serious damage to health by prolonged exposure through inhalaton and in contact with skin.
R48/23/25	Toxic: Danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R48/24/25	Toxic: Danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R48/23/24/25	Toxic: Danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aqutic environment.
R68/20	Harmful: Possible risk of irreversible effects through inhalation.
R68/20/21	Harmful: Possible riks of irreversible effects through inhalation and in contact with skin.
R68/20/21/22	Harmful: Possible risk of irreversible effects trough inhalatin, in contact with skin and if swallowed.
R68/20/22	Harmful: Possible risk of irreversible effects through inhalation and if swallowed.
R68/21	Harmful: Possible risk of irreversible effects in contact with skin.
R68/21/22	Harmful: Possible risk of irreversible effects in contact with skin and if swallowed.
R68/22	Harmful: Possible risk of irreversible effects if swallowed.

Line @ by WURTH 02 372 1545 - 6

EXPLANATIONS : SECURITY : RISK AND SAFETY PHRASES

SAFETY PHRASES (S)

S 1	Keep locked up.
S 2	Keep out of the reach of children.
S 3	Keep in a cool place.
S 4	Keep away from living quarters.
S 5	Keep contents under... (appropriate liqid to be specified by the manufacturer).
S 6	Keep under... (inert gas to be specified by the manufacturer).
S 7	Keep container tightly closed.
S 8	Keep container dry.
S 9	Keep container in a well-ventilated place.
S 12	Do not keep the container sealed.
S 13	Keep away from food, drink and animal feeding stuffs.
S 14	Keep away from ... (incompatible materials to be indicated by the manufacturer) compounds.
S 15	Keep away from heat.
S 16	Keep away from sources of ignition - No smoking.
S 17	Keep away from combustible material.
S 18	Handle and open container with care.
S 20	When using do not eat or drink.
S 21	When using do not smoke.
S 22	Do not breathe dust.
S 23	Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
S 24	Avoid contact with skin.
S 25	Avoid contact with eyes.
S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 27	Take off immediately all contaminated clothing.
S 28	After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).
S 29	Do not empty into drains.
S 30	Never add water to this product.
S 33	Take precautionary measures against static discharges.
S 35	This material and its container must be disposed of in a safe way.
S 36	Wear suitable protective clothing.
S 37	Wear suitable gloves.
S 38	In case of insufficient ventilation, wear suitable respiratory equipment.
S 39	Wear eye/face protection.
S 40	To clean the floor and all objects contaminated by this material use... (to be specified by the manufacturer).
S 41	In case of fire and/or explosion do not breathe fumes.
S 42	During fumigation/spraying wear suitable respiratory equipment (appropriate wording to be specified by the manufacturer).
S 43	In case of fire, use... (indicate the precise type fo fire-fighthing equipment. If water increases risk, and - 'Never use water).
S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possile).
S 46	If swallowed, seek medical advice immediately and show this container or label.
S 47	Keep at temperature not exceeding....ºC (to be specified by the manufacturer).
S 48	Keep wet with... (appropriate material to be specified by the manufacturer).
S 49	Keep only in the original container.
S 50	Do not mix with ... (to be specified by the manufacturer).
S 51	Use only in well-ventilated areas.
S 52	Not recommended for interior use on large surface areas.
S 53	Avoid exposure - obtain special instructions before use. Restricted to professional users.
S 56	Dispose of this material and its container at hazardous or special waste collection point.
S 57	Use appropriate container to avoid environmental contamination.
S 59	Refer to manufacturer/supplier for information on recovery/recycling.
S 60	This material and its container must be disposed of as hazardous waste.
S 61	Avoid release to the environment. Refer to special instructions / Safety data sheets.
S 62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
S 63	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
S 64	If swallowed, rinse mouth with water (only if ther preson is conscious).

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EXPLANATIONS : SECURITY : RISK AND SAFETY PHRASES

COMBINATION OF SAFETY PHRASES (S)

S 1/2	Keep locked up and out of reah of children.
S 3/7	Keep container tightly closed in a cool place.
S 3/9/14/49	Keep in a cool, well-ventilated place away from ...3/9
S3/9/14	Keep only in the original container in a cool, well-ventilated place away from ... (incompatible materials to be indicated by the manufacturer).
S3/9/49	Keep only the original container in a cool, well-ventilated place.
S3/14	Keep in a cool place away from ... (incompatible materials to be indicated by the manufacturer).
S7/8	Keep container tightly closed and dry.
S7/9	Keep container tightly closed and in a well-ventilated place.
S7/47	Keep container tightly closed and at a temperature not exceeding ... ºC (to be specified by the manufacturer).
S20/21	When using do not eat, drink or smoke.
S24/25	Avoid contact with skin and eyes.
S27/28	After contact with skin, take off immediately all contaminated clothing, and wash immedietely with plenty of ... (to be specified by the manufacturer).
S29/35	Do not empty into drains; dispose of this material and its container in a safe way.
S29/56	Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
S36/37	Wear suitable protective clothing and gloves.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S36/39	Wear suitable protective clothing and eye/face protection.
S37/39	Wear suitable gloves and eye/face protection.
S47/49	Keep only in the original container at a temperature not exceeding ... ºC (to be specified by the manufacturer)>

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Chemical list : A

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ARSENIC

Synonyms :

Physical data:
- Density: ~ 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 2

Safety:
- R: 45-36/38
- S: 53-26-37-45

Transport/storage:
- ADR: 8 CT1 II UN 2922
- IMDG: 8 II UN 2922
- IATA/ICAO: 8 II UN 2922
- PAX: 808
- CAO: 812
- LGK: 6.1B

Special regulations:
- Restricted chemical

1 ml = 1000±5 mg/l

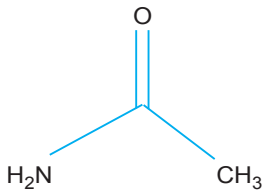
A1001-0 Arsenic standard solution 1000mg/l for AA (arsenic (III) oxide in nitric acid 0.5 mol.l)

HS-No: 3822 00 00 00

Code	Capacity
A1001-0-0500	500 ml

ACETAMIDE

Synonyms : Acetic acid amide



- C_2H_5NO
- M = 59.07 g/mol-
- CAS [60-35-5]
- EC number: 200-473-5

Physical data:
- Solub. in water (20 °C): soluble
- Melting point: 78 - 81 °C
- Boiling point: (13hPa) 105 °C
- Vapour pressure: (65 °C) 1.33 hPa
- pH (H_2O) 7

Toxicological data:
- LD 50 (orat, rat): 7000 mg.kg
- WGK: 1

Safety:
- EC Index no.: 616-022-00-4
- R: 40
- S: 36/37
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 9

A1003-1 Acetamide, reagent grade

HS-NO: 2924 19 00 90

Assay (C_2H_5NO)	min. 98.5%	Free acid (as CH_3COOH)	max. 0.2%
Crystallizing poing	min. 77 °C	Acetic salts (CH_3COO)	max. 0.2%
Insoluble matter in water	max. 0.2%	Heavy metals (as Pb)	max. 0.001%
Chloride (Cl)	max. 0.002%	Residue after ignition (as sulfate)	max. 0.1%
Sulfate (SO_4)	max. 0.002%		

Code	Capacity
A1003-1-0100	100 g
A1003-1-0500	500 g

A1003-3 Acetamide, extra pure

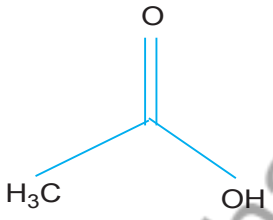
HS-NO: 2924 19 00 90

Assay	min. 99 %	Copper (Cu)	max. 0.0005 %
Free acid (as CH_3COOH)	max. 0.5 %	Lead (Pb)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Insoluble in ethanol	passes test	Nickel (Ni)	max. 0.0005 %
Chlorides (Cl)	max. 0.001 %	Calcination residue (as SO_4)	max. 0.01 %
Sulfates (SO_4)	max. 0.002 %	Water	max. 0.3 %

Code	Capacity
A1003-3-0500	500 g

ACETIC ACID GLACIAL

Synonyms : Methane carboxylic acid Methylformic acid



- CH_3COOH
- M = 60.05 g/mol
- CAS [64-19-7]
- EC number: 200-580-7

Physical data:
- Density: 1.05 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 17 °C
- Boilling point: 117 °C
- Flash point: 38 °C
- Ignition temp: 485 °C
- Vapour pressure: (20 °C) 15.4 hPa
- Refraction index: (20 °C) 1.37
- Expl. limit (upper): 19.9 Vol%
- Expl. limit (lower): 4 Vol%
- pH (50 g/l H_2O, 20 °C) 2.5

Toxicological data:
- LD 50 (oral, rat): 3310 mg/kg
- MAK: 10 ml/m^3, 25 mg.m^3
- WGK 1

Safety:
- EC Index no.: 607-002-00-6
- R: 10-35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage
- ADR: 8 CF1 II UN 2789
- IMDG: 8 II UN 2789
- IATA.ICAO: 8 II UN 2789
- Pax: 809
- CAO: 813
- LGK: 3A
- Disposal: 4

Line @thanhsou2552 Tel. 02 372 1545 - 6

A1020-1 Acetic acid glacial, reagent grade

HS-No: 2915 21 00 00

Assay	min. 99.8 %	Callium (Ga)	max. 0.05 ppm
Colour	max. 10 Hazen	Germanium (Ge)	max. 0.02 ppm
Acetaldehyde	max. 2 ppm	Indium (In)	max. 0.05 ppm
Acetic anhydride	max. 100 ppm	Potassium (K)	max. 0.1 ppm
Chloride (Cl)	max. 0.4 ppm	Lithium (Li)	max. 0.01 ppm
Phosphate (PO_4)	max. 0.4 ppm	Magnesium (Mg)	max. 0.05 ppm
Sulphate (SO_4)	max. 0.4 ppm	Manganese (Mn)	max. 0.01 ppm
Arsenic and Antimony (as AS)	max. 0.005 ppm	Molybdenum (Mo)	max. 0.01 ppm
Silver (Ag)	max. 0.005 ppm	Sodium (Na)	max. 0.2 ppm
Aluminium (Al)	max. 0.02 ppm	Nickel (Ni)	max. 0.02 ppm
Gold (Au)	max. 0.01 ppm	Lead (Pb)	max. 0.01 ppm
Boron (B)	max. 0.1 ppm	Platinum (Pt)	max. 0.1 ppm
Barium (Ba)	max. 0.01 ppm	Tin (Sn)	max. 0.05 ppm
Beryllium (Be)	ma.x. 0.005 ppm	Strontium (Sr)	max. 0.01 ppm
Bismuth (Bi)	max. 0.05 ppm	Titanium (Ti)	max. 0.05 ppm
Calcium (Ca)	max. 0.1 ppm	Thallium (Tl)	max. 0.02 ppm
Cadmium (Cd)	max. 0.02 ppm	Vanadium (V)	max. 0.01 ppm
Cobalt (Co)	max. 0.01 ppm	Zinc (Zn)	max. 0.03 ppm
Chromium (Cr)	max. 0.02 ppm	Zirconium (Zr)	max. 0.05 ppm
Copper (Cu)	max. 0.01 ppm	Non-volatile matter	max. 5 ppm
Iron (Fe)	max. 0.05 ppm	Substances reducing $KMnO_4$	max. 20 ppm

Code	Capacity
A1020-1-1000	1.0 L
A1020-1-2500	2.5 L
A1020-1-4000	4.0 L

A1020-3 Acetic acid glacial, extra pure

HS-No: 2915 21 00 00

Assay (acidimetric	min. 99.8 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	passes test	Iron (Fe)	max. 0.0005 %
Formic acid	max. 0.1 %	Mercury (Hg)	max. 0.0001 %
Chloride (Cl)	max. 0.0002 %	Lead (Pb)	max. 0.00005 %
Sulphate (SO_4)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Arsenic and Antimony (as As)	max. 0.0001 %	Non-volatile matter	max. 0.001 %
Aluminium (Al)	max. 0.00005 %	$KMnO_4$ red. Matter (as O)	max. 0.005 %

Code	Capacity
A1020-3-2500	2.5 L
A1020-3-2501	2.5 L

A1020-4 Acetic acid glacial, HPLC

HS-No: 2915 21 00 00

See specification in Solvents Specification - 30

Code	Capacity
A1020-4-2501	1.0 L
A1020-4-4001	4.0 L

A1020-7 Acetic acid glacial, EC-10

HS-No: 2915 21 00 00

Code	Capacity
A1020-7-2500	2.5 L

Assay (acidimetric)	min. 99.7 %	Titration
Colour	max. 10 Hazen	Colorimetric
Chloride (Cl)	max. 1.0 ppm	Iron Chromatography
Phosphate (PO_4)	max. 0.5 ppm	Iron Chromatography
Sulphate (SO_4)	max. 0.5 ppm	Iron Chromatography
Aluminium (Al)	max. 20 ppb	ICP-MS
Arsenic (As)	max. 10 ppb	ICP-MS
Barium (Ba)	max. 50 ppb	ICP-MS
Calcium (Ca)	max. 300 ppb	ICP-MS
Cadmium (Cd)	max. 10 ppb	ICP-MS
Cobalt (Co)	max. 10 ppb	ICP-MS
Chromium (Cr)	max. 10 ppb	ICP-MS
Copper (Cu)	max. 20 ppb	ICP-MS
Gallium (Ga)	max. 10 ppb	ICP-MS
Germanium (Ge)	max. 50 ppb	ICP-MS
Gold (Au)	max. 10 ppb	ICP-MS
Iron (Fe)	max. 100 ppb	ICP-MS
Indium (In)	max. 10 ppb	ICP-M

Lead (Pb)	max. 200 ppb	ICP-MS
Lithium (Li)	max. 50 ppb	ICP-MS
Magnesium (Mg)	max. 300 ppb	ICP-MS
Manganese (Mn)	max. 20 ppb	ICP-MS
Molybdenum (Mo)	max. 10 ppb	ICP-MS
Nickel (Ni)	max. 50 ppb	ICP-MS
Platinum (Pt)	max. 50 ppb	ICP-MS
Potassium (K)	max. 100 ppb	ICP-MS
Silver (Ag)	max. 10 ppb	ICP-MS
Sodium (Na)	max. 200 ppb	ICP-MS
Strontium (Sr)	max. 10 ppb	ICP-MS
Tin (Sn)	max. 50 ppb	ICP-MS
Titanium (Ti)	max. 200 ppb	ICP-MS
Thallium (Tl)	max. 50 ppb	-
Vanadium (V)	max. 10 ppb	Liquid Particle Counter
Zinc (Zn)	max. 50 ppb	
Zirconium (Zr)	max. 50 ppb	
Non-volatile matter	max. 5 ppb	
Particles (>0.5µm)	max. 100 pcs/ml	

ACETIC ACID, SOLUTION 0.1 MOL/L (0.1 N)

Synonyms :

- CH_3COOH
- M = 60.05 g/mol
- CAS [64-19-7]
- EC number: 200-580-7

Physical data:

- Form: Liquid
- Density: ~1.002 g/cm
- Solub. in water (20 °C): miscible

Safety:

- EC Index no.: 607-002-00-6

1 ml = 0.006 g CH_3COOH

A1029-0-1000 Acetic acid, solution 0.1 mol/l (0.1 N)

HS-No: 2915 21 00 00

Code	Capacity
A1029-0-1000	1.0 L

Line@thanhcong2562 Tel. 0237 21545 - 9

ACETIC ACID, SOLUTION 1 MOL/L (1 N)

Synonyms :

- CH_3COOH
- M = 60.05 g/mol
- CAS [64-19-7]
- EC number: 200-580-7

Physical data:
- Form: Liquid
- Density: ~1.01 g/cm

Safety:
- EC Index no.: 607-002-00-6
- Poison class CH (Swiss): 3

1 ml = 0.060 g CH_3COOH

A1030-0-1000 Acetic acid, solution 1 mol/l (1 N)

HS-No: 2915 21 00 00

Code	Capacity
A1030-0-1000	1.0 L

ACETIC ACID, SOLUTION 5 MOL/L (5 N)

Synonyms :

- CH_3COOH
- M = 60.05 g/mol
- CAS [64-19-7]
- EC number: 200-580-7

Physical data:
- Form: Liquid
- Density: ~1.01 g/cm ^{3}

Safety:
- EC Index no.: 607-002-00-6
- Poison class CH (Swiss): 3

1 ml = 0.30025 g CH_3COOH

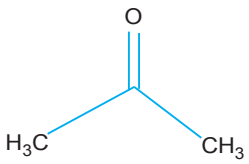
A1031-0-2500 Acetic acid, solution 5 mol/l (5 N)

HS-No: 2915 21 00 00

Code	Capacity
A1031-0-1000	1.0 L

ACETONE

Synonyms : Dimethyl ketone, 2-Propanone



- C_3H_6O
- M = 58.08 g/mol
- CAS [67-64-1]
- EC number: 200-662-2

Physical data:
- Density: 0.79 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -95 °C
- Boiling point: 56 °C
- Flash point: < -20 °C
- Igintion temp.: 540 °C
- Vapour pressure: (20 °C) 233 hPa
- Refraction index: (n 20 °C/D) 1.35868
- Viscosity: (25 °C) 0.31 mPas
- Dipolar moment: (20 °C) 2.7 Debye
- Dielectric const.: (25 °C) 20.7
- Evap. heat: (56 °C) 521 kJ/kg
- Saturation conc.: (20 °C) 533g/m^3
- Expl. limit (upper): 13 Vol%
- Expl. limit (lower): 2.6 Vol%
- pH (395 g/l H_2O, 20 °C) 5 - 6

Toxicological data:
- LD 50 (oral, rat): 5800 mg/kg
- MAK: 500 ml/m, 1200 mg/m
- WGK: 1

Safety:
- EC Index no.: 606-001-00-8
- R: 11-36-66-67
- S: 9-16-26
- VbF class: B
- Poison class CH (Seiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1090
- IMDG: 3 II UN 1090
- I ATA/ICAO: 3 II UN 1090
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

A1084-1 Acetone, reagent grade

HS-No: 2914 11 00 00

Purity (GC)	min. 99.5 %	Lithium (Li)	max. 0.02 ppm
Free Acid (as CH_3COOH)	max. 20 ppm	Magnesium (Mg)	max. 0.1 ppm
Free Alkali (as HN_3)	max. 2.0 ppm	Manganese (Mn)	max. 0.02 pm
Spec. resistance	min. 5.0 MΩcm	Molybdenum (Mo)	max. 0.05 ppm
Heavy metals (as Pb)	max. 0.2 ppm	Sodium (Na)	max. 0.5 ppm
Silver (Ag)	max. 0.02 ppm	Nickel (Ni)	max. 0.02 ppm
Aluminium (Al)	max. 0.2 ppm	Lead (Pb)	max. 0.05 ppm
Arsenic (As)	max. 0.01 ppm	Platinum (Pt)	max. 0.2 ppm
Gold (Au)	max. 0.1 ppm	Antimony (Sb)	max. 0.01 ppm
Boron (B)	max. 0.01 ppm	Tin (Sn)	max. 0.1 ppm
Barium (Ba)	max. 0.1 ppm	Strontium (Sr)	max. 0.02 ppm
Beryllium (Be)	max. 0.02 ppm	Titanium (Ti)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Thallium (Tl)	max. 0.05 ppm
Calcium (Ca)	max. 0.5 ppm	Vanadium (V)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Zinc (Zn)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Zirconium (Zr)	max. 0.2 ppm
Chromium (Cr)	max. 0.02 ppm	Ethanol (GC)	max. 100 ppm
Copper (Cu)	max. 0.02 ppm	Methanol (GC)	max. 500 ppm
Iron (Fe)	max. 0.1 ppm	Aldehydes (as formaldehyde)	max. 10.0 ppm
Gallium (Ga)	max. 0.02 ppm	Substances reducing $KMnO_4$ (as O)	max. 2.5 ppm
Indium (In)	max. 0.02 ppm	Evaporation residue	max. 5.0 ppm
Potassium (K)	max. 0.1 ppm	Water	max. 0.2%

Code	Capacity
A1084-1-1000	1 L
A1084-1-2500	2.5 L
A1084-1-4000	4 L
A1084-1-920E	200 L

A1084-4 Acetone, HPLC grade

HS-No: 2914 11 00 00

See specification in Solvent Specification - 30

Code	Capacity
A1084-4-1001	1.0 L
A1084-4-2501	4.0 L

Line@thanh0u562 thanh02 372 1545 6

A1084-6 Acetone, EC-100

HS-No: 2914 11 00 00

Purity (GC)	min. 98 %	Lithium (Li)	max. 10 ppb
Free Acid (as CH_3COOH)	max. 20 ppm	Magnesium (Mg)	max. 20 ppb
Free Alkali (as NH_3)	min. 2 cm	Manganese (Mn)	max. 10 ppb
Spec. resistance	max. 5.0 MΩ ppm	Molybdenum (Mo)	max. 10 ppb
Heavy metals (as Pb)	max. 100 %	Sodium (Na)	max. 100 ppb
Silver (Ag)	max. 10 ppm	Nickel (Ni)	max. 10 ppb
Aluminium (Al)	max. 50 ppb	Lead (Pb)	max. 10 ppb
Arsenic (As)	max. 10 ppb	Platinum (Pt)	max. 50 ppb
Gold (Au)	max. 20 ppb	Antimony (Sb)	max. 10 ppb
Boron (B)	max. 10 ppb	Tin (Sn)	max. 20 ppb
Barium (Ba)	max. 20 ppb	Strontium (Sr)	max. 10 ppb
Beryllium (Be)	max. 10 ppb	Titanium (Ti)	max. 20 ppb
Bismuth (Bi)	max. 20 ppb	Thallium (Tl)	max. 10 ppb
Calcium (Ca)	max. 100 ppb	Vanadium (V)	max. 10 ppb
Cadmium (Cd)	max. 10 ppb	Zinc (Zn)	max. 20 ppb
Cobalt (Co)	max. 10 ppb	Zirconium (Zr)	max. 20 ppb
Chromium (Cr)	max. 10 ppb	Ethanol (GC)	max. 100 ppm
Copper (Cu)	max. 10 ppb	Methanol (GC)	max. 500 ppm
Iron (Fe)	max. 10 ppb	Aldehydes (as formaldehyde)	max. 10 ppm
Gallium (Ga)	max. 10 ppb	Substances reducing $KMnO_4$ (as O)	max. 2.5 ppm
Indium (In)	max. 10 ppb	Evaporation residue	max. 3 ppm
Potassium (K)	max. 20 ppb	Water	max. 0.2 %

Code	Capacity
A1084-6-2500	2.5 L
A1084-6-4000	4 L
A1084-6-920E	200 L

A1084-7 Acetone, EC-10

HS-No: 2914 11 00 00

Purity (GC)	min. 99.8 %	Lithium (Li)	max. 10 ppb
Free Acid (as CH_3COOH)	max. 20 ppm	Magnesium (Mg)	max. 20 ppb
Free Alkali (as NH_3)	min. 2 cm	Manganese (Mn)	max. 10 ppb
Spec. resistance	max. 5.0 MΩ ppm	Molybdenum (Mo)	max. 10 ppb
Heavy metals (as Pb)	max. 100 %	Sodium (Na)	max. 100 ppb
Silver (Ag)	max. 10 ppm	Nickel (Ni)	max. 10 ppb
Aluminium (Al)	max. 50 ppb	Lead (Pb)	max. 10 ppb
Arsenic (As)	max. 10 ppb	Platinum (Pt)	max. 50 ppb
Gold (Au)	max. 20 ppb	Antimony (Sb)	max. 10 ppb
Boron (B)	max. 10 ppb	Tin (Sn)	max. 20 ppb
Barium (Ba)	max. 20 ppb	Strontium (Sr)	max. 10 ppb
Beryllium (Be)	max. 10 ppb	Titanium (Ti)	max. 20 ppb
Bismuth (Bi)	max. 20 ppb	Thallium (Tl)	max. 10 ppb
Calcium (Ca)	max. 100 ppb	Vanadium (V)	max. 10 ppb
Cadmium (Cd)	max. 10 ppb	Zinc (Zn)	max. 20 ppb
Cobalt (Co)	max. 10 ppb	Zirconium (Zr)	max. 20 ppb
Chromium (Cr)	max. 10 bbp	Ethanol (GC)	max. 100 ppm
Copper (Cu)	max. 10 ppb	Methanol (GC)	max. 500 ppm
Iron (Fe)	max. 10 ppb	Aldehydes (as formaldehyde)	max. 10 ppm
Gallium (Ga)	max. 10 ppb	Substances reducing $KMnO_4$ (as O)	max. 2.5 ppm
Indium (In)	max. 10 ppb	Evaporation residue	max. 3 ppm
Potassium (K)	max. 20 ppb	Water	max. 0.2%

Code	Capacity
A1084-7-2500	2.5 L
A1084-7-4000	4.0 L
A1084-7-920E	200 L

A1084-11 Acetone, Pesticide Grade

HS-No: 2914 11 00 00

See specification in Solvent Specification - 21

Code	Capacity
A1084-11-1001	1.0 L
A1084-11-4001	4.0 L

A1084-12 Acetone, Ultimate Grade

HS-No: 2914 11 00 00

See specification in Solvent Specification - 10

Code	Capacity
A1084-12-1001	1.0 L
A1084-12-4001	4.0 L

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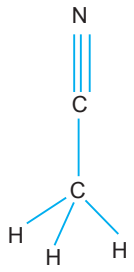
ACETONITRILE

Synonyms : Methyl cyanide, Cyanomethane

A



- CH_3CN
- M= 41.05 g/mol
- CAS [75-05-8]
- EC number: 200-835-2

Physical data:
- Density: 0.786 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -45.7 °C
- Boiling point: 81.6 °C
- Flash point: 5 °C
- Ignition temp.: 524 °C
- Vapour pressure: (20 °C) 97 hPa
- Refraction index: (n 20 °C), 1.3442
- Viscosity: (25 °C) 0.39 mPas
- Dipolar moment: (20 °C) 3.44 Debye
- Dielectric const.: (20 °C) 37.5
- Evap. heat: (81 °C) 833 kJ/kg
- Saturatiion conc.: (20 °C) 163g/m^3
- Expl. limit (upper): 17 Vol%
- Expl. limit (lower): 3.0 Vol%

Toxicological data:
- LD 50 (oral, rat): 2730 - 3800 mg/kg
- MAK: 40 ml/m^3, 68 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 608-001-00-3
- R: 11-20/21/22-36
- S: 16-36/37-46
- VbF class: B
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 3 F1 II UN 1648
- IMDG: 3 II UN 1648
- IATA/ICAO: 3 II UN 1648
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

A1133-1 Acetonitrile, reagent grade

HS-No: 2926 90 95 90

Assay	min. 99.5 %	Copper (Cu)	max. 0.000002 %
Colour	max. 10 Hazen	Iron (Fe)	max. 0.00001 %
Acidity	max. 0.0002 meq/g	Lead (Pb)	max. 0.00001 %
Alkalinity	max. 0.0001 meq/g	Magnesium (Mg)	max. 0.00001 %
Cyanides (CN)	max. 0.005 %	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Tin (Sn)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Zinc (Zn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Reaction to H_2SO_4	passes test
Calcium (Ca)	max. 0.00005 %	Non-volatile matter	max. 0.001 %
Chromium (Cr)	max. 0.000002 %	Water (K.F.)	max. 0.1 %
Cobalt (Co)	max. 0.000002 %		

Code	Capacity
A1133-1-1001	1L
A1133-1-2501	2.5L

A1133-4 Acetonitrile, HPLC grade

HS-No: 2926 90 95 90

See specification in Solvent Specification - 31

Code	Capacity
A1133-4-1001	1.0L
A1133-4-4001	4.0L

A1133-11 Acetonitrile, Pesticide grade

HS-No: 2926 90 95 90

See specification in Solvent Specification - 21

Code	Capacity
A1133-11-1001	1.0L
A1133-11-4001	4.0L

A1133-12 Acetonitrile, Ultimate grade

HS-No: 2926 90 95 90

See specification in Solvent Specification - 10

Code	Capacity
A1133-12-1001	1.0L
A1133-12-4001	4.0L

A1133-13 Acetonitrile, LC-MS grade

HS-No: 2926 90 95 90

See specification in Solvent Specification - 6

Code	Capacity
A1133-13-1001	1.0L
A1133-13-4001	4.0L

A1133-14 Acetonitrile, BIO grade

HS-No: 2926 90 95 90

See specification in Solvent Specification - 55

Code	Capacity
A1133-14-1001	1.0L
A1133-14-4001	4.0L

A1133-15 Acetonitrile, Ultra Dry grade

HS-No: 2926 90 95 90

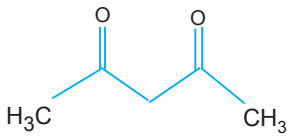
See specification in Solvent Specification - 62

Code	Capacity
A1133-15-1001	1.0L
A1133-15-4001	4.0L

Line @thankyou2562 Tel. 02372 1515 - 6

ACETYLACETONE

Synonyms : 2, 4-Pentanedione, ACAC



- $C_5H_8O_2$
- M= 100.12 g/mol
- CAS [123-54-6]
- EC number: 204-634-0

Physical data:
- Form: Liquid
- Density: 0.97 g/cm^3
- Solub. in water (20 °C): 200 g/l
- Melting point: -23 °C
- Boiling point: 140 °C
- Flash point: 34 °C
- Ignition temp.: 335 °C
- Vapour pressure: (20 °C) 9hPa)
- Reflection index: (n 20 °C) 1.4510
- Dielectric const.: (20 °C) 25.7
- Evap. heat: (139 °C) 750 kJ/kg
- Saturation conc.: (20 °C) 38 g/m^3
- Expl. limit (upper): 11.6 Vol%
- Expl. limit (lower): 2.4 Vol%
- pH (200 g/l H_2O, 20 °C) ~6

Toxicological data:
- LD 50 (oral, rat): 575 mg/kg
- WGK: 1

Safety:
- EC Index no.: 606-029-00-0
- R: 10-22
- S: 21-23.2-51-24/25-46
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3FT1 III UN 2310
- IMDG: 3 III UN 2310
- IATA: 3 III UN 2310
- PAX: 309
- CAO: 310
- LGK: 3A
- Disposal: 1

A1135-1 Acetylacetone, reagent grade

HS-No: 2914 19 90 90

Assay	min. 99.0%	Solubility in water	passes test
Appearance	Clear~Yellowish liquid	Solubility in ethanol	passes test
Identity (IR-spectrum)	passes test	Density (at 20 °C)	0.971~0.976 g/ml
Water	max. 0.2%	Refractive index (at 20 °C)	1.450~1.454
Residue after evaporation	max. 0.03%		

Code	Capacity
A1135-1-1001	1.0L

A1135-2 Acetylacetone, synthesis grade

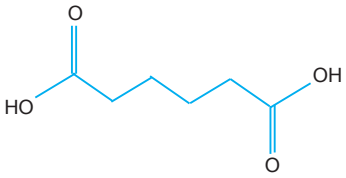
HS-No: 2914 19 90 90

Assay	min. 99 %	Non-volatile matter	max. 0.005
Identity (IR-spectrum)	passes test	Water	max. 0.1 %
Density (20 °/4 °)	0.972 - 0.974		

Code	Capacity
A1135-2-1001	1.0L

ADIPIC ACID

Synonyms : Hexanedioic acid, 1,4-Butanedicarboxylic acid



- $C_6H_{10}O_4$
- M= 146.14 g/mol
- CAS [124-04-9]
- EC number: 204-673-3

Physical data:
- Bulk density: ~700 kg/m^3
- Solub. in water (25 °C): 24 g/l
- Melting point: 150 - 153 °C
- Boiling point: (13 hPa) 205 °C
- Flash point: 196 °C
- Vapour pressure: (151 °C) 0.4 hPa
- pH (25 g/l H_2O, 25 °C) 2.7

Toxicological data:
- LD 50 (oral, rat): ~5700 mg/kg
- WGK: 1

Safety:
- EC Index no.: 607-144-00-9
- R: 36
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

A2001-3 Adipic acid, extra pure

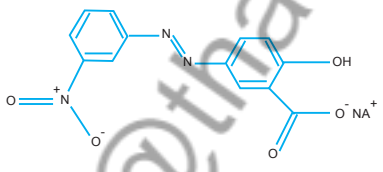
HS-No: 2917 12 10 00

Assay	99.6 -101.0 %	Arsenic (As)	max. 0.0003 %
Chloride (Cl)	max. 0.02 %	Copper (Cu)	max. 0.001 %
Nitrate (NO_3)	max. 0.003 %	Iron (Fe)	max. 0.001 %
Sulphate (SO_4)	max. 0.05 %	Lead (Pb)	max. 0.001 %
Heavy Metals (as Pb)	max. 0.001 %	Zinc (Zn)	max. 0.001 %

Code	Capacity
A2001-3-0500	500 g

ALIZARIN YELLOW

Synonyms : 2-Hydroxy-5 [(3-nitropheny)azo]benzoic acid monosodium salt, Mordant yellow 1



- $C_{13}H_8N_3NaO_5$
- M= 309.21 g/mol
- CAS [584-42-9]
- EC number: 209-536-1

Physical data:
- Form: Liquid
- Bulk density: ~520 kg/m^3
- Solub. in water (25 °C): 12 g/l
- pH (10 g/l H_2O, 25 °C) ~7.9

Transport/storage:
- LGK: 10-13
- Disposal: 3

Toxicological data:
- WGK: 3

A3000-0 Alizarin yellow, C.I. 14025, indicator

HS-No: 3204 19 00 90

pH range (yellow - orange)	10.2 - 12.1
Absorption maximum 1 (pH 10.2)	350 - 355 nm
Absorptivity (A1%/1 cm; 1, pH 10.2, on dried material)	620 - 720
Absorptivity (E1%/1 cm; 2, pH 12.1, on dried material)	800 - 900
Suitability for microbiology	passes test
Loss on drying (110 °C)	max. 1 %

Code	Capacity
A3000-1-0025	25 g

Lisa @thanky0232 Tel. 02 372 1345-6

ALUMINIUM AMMONIUM SULFATE DODECAHYDRATE

Synonyms : Aluminium ammonium sulfate, Ammonium alum

- $NH_4Al(SO_4)_2.12H_2O$
- M = 453.33 g/mol
- CAS [7784-26-1]
- EC number: 232-055-3

Physical data:
- Bulk density: ~700 - 800 kg/m³
- Solub. in water (20 °C): 150 g/l
- Melting point: 93 °C
- Boiling point: 200 °C
- pH (100 g/l H_2O, 25 °C) ~ 2.6

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/safety:
- LGK: 10 - 13
- Disposal: 14

A4007-1 Aluminium ammonium sulfate dodecahydrate, reagent grade

HS-No: 2833 30 00 00

Assay (complexometric)	min. 99.0%	Calcium (Ca)	max. 0.001%
Insoluble matter	max. 0.005%	Iron (Fe)	max. 0.001%
Chloride (Cl)	max. 0.001%	Potassium (K)	max. 0.05%
Heavy Metals (as Pb)	max. 0.05%	Sodium (Na)	max. 0.01%

Code	Capacity
A4007-1-0500	500 g
A4007-1-1000	1 kg

A4007-3 Aluminium ammonium sulfate dodecahydrate, extra pure

HS-No: 2833 30 00 00

Assay	min. 99 %	Copper (Cu)	max. 0.002 %
Insoluble in H_2O	max. 0.02 %	Heavy metals (as Pb)	max. 0.002 %
Chloride (Cl)	max. 0.005 %	Iron (Fe)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Precipitable compounds with ammonia (as sulfate)	max. 0.3 %	Nickel (Ni)	max. 0.002 %
Arsenic (As)	max. 0.0002%	Loss on drying (300 °C)	45 - 48 %

Code	Capacity
A4007-3-0500	500 g
A4007-3-1000	1 kg

ALUMINIUM CHLORIDE HEXAHYDRATE

Synonyms : Hydrochloric acid aluminium salt hexahydrate

- $AlCl_3.6H_2O$
- M = 241.43 g/mol
- CAS [7784-13-6]
- EC number: 231-208-1

Physical data:
- Spec. density: ~2.40 g/m³
- Bluk density: ~800 kg/m³

- Solub. in water (20 °C): 1330 g/l
- Melting point: ~100 °C
- pH (50 g/l H_2O, 20 °C) ~ 2.5

Toxicological data:
- LD 50 (oral, rat): 3311 mg/kg
- WGK: 1

Safety:
- R: 36/38
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

A4010-1 Aluminium chloride hexahydrate, reagent grade

HS-No: 2827 32 00 00

Assay	min. 97.0 %	Ammonium (NH_4)	max. 0.002 %
Reaction in water solution	passes test	Iron (Fe)	max. 0.001 %
Appearance of solution	passes test	Heavy metals (as Pb)	max. 0.0005 %
Insolubility matter in water	max. 0.025 %	Alkali metals and alkali earth metals (as sulfate)	max. 0.2 %
Sulfates (SO_4)	max. 0.01 %		

Code	Capacity
A4010-1-0500	500 g

A4010-3 Aluminium chloride hexahydrate, extra pure

HS-No: 2827 32 00 00

Assay (complexometric)	min. 99 %	Iron (Fe)	max. 0.0005 %
Appearance of solution	passes test	Magnesium (Mg)	max. 0.01 %
pH (5%, H_2O)	2.5 - 3.5	Potassium (K)	max. 0.01 %
Sulfates (SO_4)	max. 0.01 %	Sodium (Na)	max. 0.1 %
Ammonium (NH_4)	max. 0.01 %	Non-precipitable with ammonia (as SO_4)	max. 0.2 %
Arsenic (As)	max. 0.0004 %	Water	45 - 48 %
Calcium (Ca)	max. 0.02 %		
Heavy metals (as Pb)	max. 0.001 %		

Code	Capacity
A4010-3-0500	500 g
A4010-3-1000	1 kg

ALUMINIUM HYDROXIDE

Synonyms : Hydrargillite

- $Al(OH)_3$
- M= 78.00 g/mol
- CAS [21645-5-2]
- EC number: 244-492-7

Physical data:
- Spec. density: 2.42 g/cm³
- Bulk density: ~600 kg/m³
- Solub. in water (20 °C): ~0.0015 g/l

- Melting point: 300 °C (release of crystalline water)
- Vapour pressure: (20 °C)< 0.1 hPa
- pH (100 g/l H_2O, 20 °C) ~ 8 - 9

Toxicological data:
- LD 50 (oral, rat): > 5000 mg/kg
- MAK: 1.5 mg/m³
- WGK: 0

Safety:
- Poison class CH (Swiss): F
- LGK: 10 - 13

A4014-1 Aluminium hydroxide, reagent grade

HS-No: 2818 30 00 90

Assay (complexometric)	min. 90 %	Lead (Pb)	max. 0.002 %
Arsenic (As)	max. 0.0003 %	Nickel (Ni)	max. 0.002 %
Copper (Cu)	max. 0.002 %	Calcination Residue	32 - 35 %
Iron (Fe)	max. 0.005 %		

Code	Capacity
A4014-1-0500	500 g

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ALUMINIUM NITRATE NONAHYDRATE

Synonyms :

- $Al(NO_3)_3.9H_2O$
- M = 375-13 g/mol
- CAS [7784-27-2]
- EC number: 236-751-8

Physical data:
- Bulk density: ~ 880 kg/m^3
- Solub. in water (20 °C): 419 g/l
- Melting point: 73 °C
- Boiling point: 135 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 2 - 4

Toxicological data:
- LD 50 (oral, rat): 3671 mg/kg
- WGK: 1

Safety:
- R: 8-36/38
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1438
- IMDG: 5.1 III UN 1438
- IATA/ICAO: 5.1 III UN 1438
- PAX: 516
- COA: 518
- LGK: 5.1B
- Disposal: 14

A4018-1 Aluminium nitrate nonahydrate, reagent grade

HS-No: 2834 29 80 00

Assay (precipitation titration, NH_4F)..	min. 98.0 %	Heavy metals (Pb)	max. 0.001 %
pH (5%, H_2O)	2 - 4	Iron (Fe)	max. 0.002 %
Chloride (Cl)	max. 0.001 %	Potassium (K)	max. 0.002 %
Sulfate (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.005 %
		Ammonium (NH_4)	max. 0.05 %

Code	Capacity
A4018-1-0500	500 g
A4018-1-1000	1 kg

A4018-3 Aluminium nitrate nonahydrate, extra pure

HS-No: 2834 29 80 00

Assay (complexometric).....	min. 98.0 %	Iron (Fe)	max. 0.005 %
Insoluble in water	max. 0.02 %	Lead (Pb)	max. 0.001 %
pH (5%, H_2O)	2.5 - 3.5	Magnesium (Mg)	max. 0.005 %
Chloride (Cl)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Sulfate (SO_4)	max. 0.005 %	Potassium (K)	max. 0.05 %
Ammonium (NH_4)	max. 0.05 %	Sodium (Na)	max. 0.01 %
Arsenic (As)	max. 0.0001 %	Non-precipitable with ammonia	
Calcium (Ca)	max. 0.02 %	(as SO_4)	max. 0.5 %
Copper (Cu)	max.. 0.001 %		

Code	Capacity
A4018-3-0500	500 g
A4018-3-1000	1 kg

ALUMINIUM OXIDE

Synonyms : Alum earth, Alumina, Good crucibles

- Al_2O_3
- M= 101.96 g/mol
- CAS [1344-28-1]
- EC number: 215-691-6

Physical data:
- Form: Solid
- Bulk density: ~ 90-190 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: ~ 1760 °C

Toxicological data:
- MAK: 1.5 mg/m^3
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

A4024-1 Aluminium oxide, reagent grade

HS-No: 2818 20 00 00

Sulfate (SO_4)	max. 0.05 %	Solubility test in water	max. 0.5 %
Chloride (Cl)	max. 0.01 %	Loss on ignition	max. 5.0 %
Iron (Fe)	max. 0.01 %	Alkali metals and alkali earth metals	
Heavy metals (Pb)	max. 0.005 %	(as sulfate)	max. 0.50 %

Code	Capacity
A4024-1-0500	500 g

ALUMINIUM POTASSIUM SULFATE DODECAHYDRATE

Synonyms : Potassium aluminium sulfate, Alum potassium

- $KAl(SO_4)_2.12H_2O$
- M = 474.39 g/mol
- CAS [7784-24-9
- EC number: 233-141-3

Physical data:
- Spec. density: 1.75 g/cm^3
- Bulk density: ~900 kg/m^3
- Solub. in water (20 °C): 139 g/l
- Melting point: 92 °C
- pH (50 g/l H_2O, 20 °C) ~ 3.0 - 3.5

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10 -13
- Disposal: 14

A4038-1 Aluminium potassium sulfate dodecahydrate, reagent grade

HS-No: 2833 30 00 00

Assay	min. 99.5 %	Cadmium (Cd)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.0005 %
pH (10%, H_2O)	3.0 - 3.5	Heavy metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Ammonium (NH_4)	max. 0.005 %	Lead (Pb)	max. 0.001 %
Arsenic (As)	max. 0.0002 %	Sodium (Na)	max. 0.01 %

Code	Capacity
A4038-1-0500	500 g
A4038-1-1000	1 kg

ALUMINIUM SULFATE

Synonyms :

- $Al_2(SO_4)_3.18H_2O$
- M = 666.42 g/mol
- CAS [7784-31-8]
- EC number: 233-135-0

Physical data:
- Form: Solid
- Bulk density: ~820 kg/m^3
- Solub. in water (20 °C): ~600 g/l
- Melting point: 92 °C
- pH (20 g/l H_2O, 20 °C) ~ 2.5 - 4.0

Toxicological data:
- LD 50 (oral, rat): 9000 mg/kg
- WGK: 1

Transport/storage:
- LGK: 10-13

Safety:
- S: 24/25
- Poison class CH (Swiss): 4

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A4042-3 Aluminium sulfate 18-hydrate, extra pure

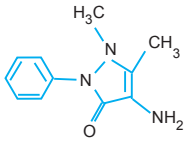
HS-No: 2833 22 00 00

Assay (complexometric, $Al_2(SO_4)_3$)	51 - 59 %
Appearance of solution	passes test
Insoluble in water	passes test
pH (2%, H_2O)	2.5 - 4.0
Alkali and alkaline earth metals	max. 0.4 %
Chloride (Cl)	max. 0.005 %
Ammonium (NH_4)	max. 0.01 %
Arsenic (As)	max. 0.0003 %
Copper (Cu)	max. 0.002 %
Heavy metals (as Pb)	max. 0.002 %
Iron (Fe)	max. 0.005 %
Lead (Pb)	max. 0.002 %
Non-precipitable with ammonia (as SO_4)	max. 0.4 %

Code	Capacity
A4042-3-0500	500 g

4-AMINOANTIPYRINE

Synonyms : 4-Aminoantipyrine



- $C_{11}H_{13}N_3O$
- M = 203.24 g/mol
- CAS [8307-8]
- EC number: 201-452-3

Physical data:
- Solub. in water 56 g/l (20 °C)
- M = 203.25 g/mol
- pH value 7.1 (100 g/l, H_2O, 20 °C) (slurry)
- Melting point 107 - 109 °C
- Bulk density ~ 430 kg/m³

Toxicological data:
- WGK: 1
- LD 50 (oral, rat) 1700 mg/kg

Safety:
- Harmful
- R: 22
- Poison class (CH) 3

Transport/storage:
- LGK: 10-13
- Disposal 3

A5000-1 4-Aminoantipyrine, reagent grade

HS-No: 2933 11 90 00

Melting point	106 - 109 °C
Solubility test in water	passes test
Residue after ignition (as sulfate)	max. 0.05 %
Chlorides (Cl)	max. 0.02 %

Code	Capacity
A5000-1-0025	25 g

AMMONIA SOLUTION 10 - 15%

Synonyms : Ammonia water, Ammonium hydroxide solution

- NH_4OH
- M = 17.03 g/mol
- CAS [1336-21-6]
- EC number: 215-647-6

Physical data:
- Density: 0.93 g/cm³
- Melting point: -57.5 °C
- Boiling point: 37.7 °C
- Flash point: 25 °C

- Vapour pressure: (20 °C) ~ 500 hPa
- Expl. limit (upper): 33.6 vol%
- Expl. limit (lower): 15.4 Vol%
- pH (20 °C) > 12

Toxicological data:
- LD 50 (oral, rat): 350 mg/kg
- MAK: 20 ml/m³, 14 mg/m³
- WGK: 2

Safety:
- EC Index no.: 007-001-01-2

- R: 34-50
- S: 23.2-51-26-36/37/39-45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 2672
- IMDG: 8 III UN 2672
- IATA/ICAO: 8 III UN 2672
- PAX: 819
- CAO: 813
- LGK: 8 A
- Disposal: 13

A5015-1 Ammonia solution 10-15%, reagent grade

HS-No: 2814 20 00 00

Assay	10 - 15 %
Colour	max. 10 Hazen
Chlorides (Cl)	max. 0.00005 %
Phosphates (PO_4)	max. 0.000005 %
Sulfates (SO_4)	max. 0.00005 %
Aluminium (Al)	max. 0.000005 %
Barium (Ba)	max. 0.000001 %
Cadmium (Cd)	max. 0.000005 %
Calcium (Ca)	max. 0.000001 %
Chromium (Cr)	max. 0.000002 %
Copper (Cu)	max. 0.000002%
Iron (Fe)	max. 0.000001 %
Lead (Pb)	max. 0.000002 %
Lithium (Li)	max. 0.000005 %
Magnesium (Mg)	max. 0.000001 %
Manganese (Mn)	max. 0.000002 %
Nickel (Ni)	max. 0.000002 %
Potassium (K)	max. 0.000005 %
Sodium (Na)	max. 0.000005 %
Tin (Sn)	max. 0.000001 %
Zinc (Zn)	max. 0.000005 %
Calcination residue (as SO_4)	max. 0.002%

Code	Capacity
A5015-1-920E	200 L

AMMONIA SOLUTION 25%

Synonyms ; Ammonia water, Ammonium hydroxide solution

- NH_4OH
- M = 17.03 g/mol
- CAS [1336-21-6]
- EC number: 215-647-6

Physical data:
- Density: 0.91 g/cm³
- Melting point: ~57.5 °C
- Boiling point: 37.7 °C
- Flash point: 25 °C

- Vapour pressure: (20 °C) ~ 500 hPa
- Expl. limit (upper): 33.6 Vol%
- Expl. limit (lower): 15.4 Vol%
- pH (20 °C) > 12

Toxicological data:
- LD 50 (oral, rat): 350 mg/kg
- MAK: 20 ml/m³, 14 mg/m³
- WGK: 2

Safety:
- EC Index no.: 007-001-01-2

- R: 34-50
- S: 23.2-51-26-36/37/39-45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 2672
- IMDG: 8 III UN 2672
- IATA/ICAO: 8 III UN 2672
- PAX: 819
- CAO: 813
- LGK: 8 A
- Disposal: 13

A5016-1 Ammonia solution 25%, reagent grade

HS-No: 2814 20 00 00

Assay	min. 25 %
Colour	max. 10 Hazen
Chlorides (Cl)	max. 0.00005 %
Phosphates (PO_4)	max. 0.000005 %
Sulfates (SO_4)	max. 0.00005 %
Aluminium (Al)	max. 0.000005 %
Barium (Ba)	max. 0.000001 %
Cadmium (Cd)	max. 0.000005 %
Calcium (Ca)	max. 0.000001 %
Chromium (Cr)	max. 0.000002 %
Copper (Cu)	max. 0.000002%
Iron (Fe)	max. 0.000001 %
Lead (Pb)	max. 0.000002 %
Lithium (Li)	max. 0.000005 %
Magnesium (Mg)	max. 0.000001 %
Manganese (Mn)	max. 0.000002 %
Nickel (Ni)	max. 0.000002 %
Potassium (K)	max. 0.000005 %
Sodium (Na)	max. 0.000005 %
Tin (Sn)	max. 0.000001 %
Zinc (Zn)	max. 0.000005 %
Calcination residue (as SO_4)	max. 0.002%

Code	Capacity
A5016-1-1000	1 L
A5016-1-2500	2.5 L

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AMMONIA SOLUTION 28%

Synonyms : Ammonia water

- NH_4OH
- M = 17.03 g/mol
- CAS [1336-21-6]
- EC number: 215-647-6

Physical data:
- Density: 0.90 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -63 °C
- Boiling point: 36 °C
- Vapour pressure: (20 °C) 535 hPa
- pH (20 °C) > 12

Toxicological data:
- LD 50 (oral, rat): 350 mg/kg
- MAK: 20 ml/m^3, 14 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 007-001-01-2
- R: 34-50
- S: 23.2-51-26-36/37/39-45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 2672
- IMDG: 8 III UN 2672
- IATA/ICAO: 8 III UN 2672
- PAX: 819
- CAO: 813
- LGK: 8 A
- Disposal: 13

A5023-1 Ammonia solution 28%, reagent grade

HS-No: 2814 20 00 00

Assay (acidimetric)	min. 28.0 %	Indium (In)	max. 0.02 ppm
Carbonate (CO_2)	max. 10 ppm	Potassium (K)	max. 0.10 ppm
Chloride (Cl)	max. 0.5 ppm	Lithium (Li)	max. 0.02 ppm
Phosphate (PO_4)	max. 0.2 ppm	Magnesium (Mg)	max. 0.05 ppm
Sulphate (SO_4)	max. 1.0 ppm	Manganese (Mn)	max. 0.01 ppm
Arsenic anc Antimony (as As)	max. 0.05 ppm	Molybdenum (Mo)	max. 0.01 ppm
Silver (Ag)	max. 0.02 ppm	Sodium (Na)	max. 0.20 ppm
Aluminium (Al)	max. 0.01 ppm	Nickel (Ni)	max. 0.01 ppm
Gold (Au)	max. 0.02 ppm	Lead (Pb)	max. 0.02 ppm
Boron (B)	max. 0.01 ppm	Platinum (Pt)	max. 0.02 ppm
Barium (Ba)	max. 0.02 ppm	Tin (Sn)	max. 0.02 ppm
Bismuth (Bi)	max. 0.02 ppm	Strontium (Sr)	max. 0.02 ppm
Calcium (Ca)	max. 0.10 ppm	Titanium (Ti)	max. 0.05 ppm
Cadmium (Cd)	max. 0.01 ppm	Thallium (Tl)	max. 0.01 ppm
Cobalt (Co)	max. 0.01 ppm	Vanadium (V)	max. 0.01 ppm
Chromium (Cr)	max. 0.01 ppm	Zinc (Zn)	max. 0.05 ppm
Copper (Cu)	max. 0.01 ppm	Zirconium (Zr)	max. 0.02 ppm
Iron (Fe)	max. 0.05 ppm	Residue on ignition (as SO_4)	max. 5 ppm
Gallium (Ga)	max. 0.02 ppm	Subtances reducing $KMnO_4$	max. 3 ppm
Germanium (Ge)	max. 0.05 ppm	Non volatilc matter	max. 3 ppm

Code	Capacity
A5023-1-1000	1 L
A5023-1-2500	2.5 L
A5023-1-2501	2.5 L
A5023-1-4000	4 L

A5023-7 Ammonia solution 29%, electronic grade EC-10

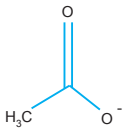
HS-No: 2814 20 00 00

Assay (acidimetric)	min. 28.0 %	Indium (In)	max. 20 ppb
Carbonate (CO_2)	max. 10 ppm	Potassium (K)	max. 50 ppb
Chloride (Cl)	max. 0.5 ppm	Lithium (Li)	max. 20 ppb
Phosphate (PO_4)	max. 0.2 ppm	Magnesium (Mg)	max. 50 ppb
Sulphate (SO_4)	max. 1.0 ppm	Manganese (Mn)	max. 10 ppb
Arsenic anc Antimony (as As)	max. 50 ppb	Molybdenum (Mo)	max. 10 ppb
Silver (Ag)	max. 20 ppb	Sodium (Na)	max. 30 ppb
Aluminium (Al)	max. 50 ppb	Nickel (Ni)	max. 10 ppb
Gold (Au)	max. 20 ppb	Lead (Pb)	max. 20 ppb
Boron (B)	max. 10 ppb	Platinum (Pt)	max. 20 ppb
Barium (Ba)	max. 20 ppb	Tin (Sn)	max. 20 ppb
Bismuth (Bi)	max. 20 ppb	Strontium (Sr)	max. 20 ppb
Calcium (Ca)	max. 150 ppb	Titanium (Ti)	max. 10 ppb
Cadmium (Cd)	max. 10 ppb	Thallium (Tl)	max. 20 ppb
Cobalt (Co)	max. 10 ppb	Vanadium (V)	max. 10 ppb
Chromium (Cr)	max. 10 ppb	Zinc (Zn)	max. 50 ppb
Copper (Cu)	max. 10 ppb	Zirconium (Zr)	max. 10 ppb
Iron (Fe)	max. 50 ppb	Residue on ignition (as SO_4)	max. 5 ppm
Gallium (Ga)	max. 20 ppb	Subtances reducing $KMnO_4$	max. 3 ppm
Germanium (Ge)	max. 50 ppb	Non volatilc matter	max. 3 ppm

Code	Capacity
A5023-7-917E	170 kg
A5023-7-2500	2.5 L
A5023-7-4000	4 L

AMMONIUM ACETATE

Synonyms :



- CH_3COONH_4
- M = 77.08 g/mol
- CAS [631-61-8]
- EC number: 211-162-9

Physical data:
- Spec. density: 1.17 g/cm^3
- Bulk density: ~410 kg/m^3
- Solub. in watr (20 °C): soluble
- Melting point: 114 °C
- Boiling point: 136 °C
- pH (50 g/l H_2O, 20 °C) ~ 6.7 - 7.3

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5034-1 Ammonium acetate, reagent grade

HS-No: 2915 29 00 90

Assay (acidimetric)	min. 98.0 %	Calcium (Cd)	max. 0.001 %
pH (5%, H_2O)	6.7 - 7.6	Heavy metals (Pb)	max. 0.0002 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0002 %
Chloride (Cl)	max. 0.0005 %	$KMnO_4$ red. Matter (as HCOOH)	max. 0.005 %
Nitrates (NO_3)	max. 0.001 %	Calcination residue (as SO_4)	max. 0.01 %
Sulfate (SO_4)	max. 0.001 %	Water	max. 2 %

Code	Capacity
A5034-1-0500	500 g

A5034-3 Ammonium acetate, extra pure

HS-No: 2915 29 00 90

Assay (acidimetric)	min. 96 %	Heavy metals (Pb)	max. 0.0005 %
pH (5%, H_2O)	6.0 - 7.5	Iron (Fe)	max. 0.001 %
chloride (Cl)	max. 0.002 %	Calcination residue (as SO_4)	max. 0.02 %
Sulfate (SO_4)	max. 0.01 %	Water	max. 2.5 %

Code	Capacity
A5034-3-0500	500 g
A5034-3-1000	1 kg

Lit. Rothanky 02560 rel. 02.2015 45-6

A5034-4 Ammonium acetate, HPLC grade

HS-No: 2915 29 00 90

See specification in Solvent Specification - 31

Code	Capacity
A5034-4-1001	1.0 L
A5034-4-4001	4.0 L

AMMONIUM BROMIDE

Synonyms :

- NH_4Br
- M = 97.94 g/mol
- CAS [12124-97-9]
- EC number: 235-183-8

Physical data:
- Spec. density: 2.43 g/m^3
- Bulk density: ~1100 kg/m^3
- Sulub. in water (20 °C): 598 g/l
- Melting point: 542 °C
- pH (50 g/l H_2O, 25 °C) 4.8

Toxicological data:
- WGK: 1

Safety:
- R: 36
- S: 24/25
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13

A5046-1 Ammonium bromide, reagent grade

HS-No: 2827 59 00 00

Assay (argentometric)	min. 99.5 %	Barium (Ba)	max. 0.0005 %
pH (5%, H_2O)	5.0 - 6.0	Calcium (Ca)	max. 0.001 %
Insoluble in water	max. 0.005 %	Heavy metals (Pb)	max. 0.0005 %
Bromates (BrO_2)	max. 0.001 %	Iron (Fe)	max. 0.0001 %
Chloride (Cl)	max. 0.1 %	Magnesium (Mg)	max. 0.002 %
Iodides (I)	max. 0.005 %	$KMnO_4$ red. Matter (as HCOOH)	passes test
Sulfate (SO_4)	max. 0.005 %	Calcination residue (as SO_4)	max. 0.01 %
Sulfides (S)	max. 0.0002 %	Loss on drying (105 °C)	max. 0.1 %

Code	Capacity
A5046-1-0500	500 g

AMMONIUM CARBONATE

Synonyms : Salt of hartshorn

- $(NH_4)_2CO_3$
- M = 96.09 g/mol
- CAS [506-87-6]
- EC number: 208-58-0

Physical data:
- Solub. in water (20 °C): soluble
- Melting point: 58 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) 9.4

Toxicological data:
- LD 50 (oral, rat): 1975 mg/kg
- WGK: 1

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

A5052-1 Ammonium carbonate, reagent grade

HS-No: 2836 10 00 00

Assay (argentometric)	min. 99.5 %	Barium (Ba)	max. 0.0005 %
pH (5%, H_2O)	5.0 - 6.0	Calcium (Ca)	max. 0.001 %
Insoluble in water	max. 0.005 %	Heavy metals (Pb)	max. 0.0005 %
Bromates (BrO_3)	max. 0.001 %	Iron (Fe)	max. 0.0001 %
Chloride (Cl)	max. 0.1 %	Magnesium (Mg)	max. 0.002 %
Iodides (I)	max. 0.005 %	$KMnO_4$ red. Matter (as HCOOH)	passes test
Sulfate (SO_4)	max. 0.005 %	Calcination residue (as SO_4)	max. 0.01 %
Sulfides (S)	max. 0.0002 %	Loss on drying (105 °C)	max. 0.1 %

Code	Capacity
A5052-1-0500	500 g

A5052-4 Ammonium carbonate, HPLC grade

HS-No: 2836 10 00 00

See specification in Solvent Specification - 32

Code	Capacity
A5052-4-0500	500 g
A5052-4-1000	1 Kg

AMMONIUM CERIUM (IV) SULFATE DIHYDRATE

Synonyms : Ceric ammonium sulfate, Cerium (IV) ammonium sulfate, tetra-Ammonium-tetrasulfatocerate (IV)

- $(NH_4)_4[Ce]SO_4)_4].2H_2O$
- M = 632.56 g/mol
- CAS [10378-47-9]
- EC number:

Physical data:
- Form: Solid
- Bulk density: ~800 kg/m^3
- Solub. in water (20 °C): hydrolysis reaction
- pH (100 g/l H_2O, 20 °C) ~1.2

Toxicological data:
- WGK: 3*

Transport/storage:
- LGK: 10-13
- Disposal: 28

A5057-1 Ammonium cerium (IV) sulfate dihydrate, reagent grade

HS-No: 2846 10 00 90

Assay	min. 98.0 %	Aluminium (as Al_2O_3)	max. 0.08 %
Other Cerium Salts (as CeO_2)	max. 0.25 %	Substances not precipitated by ammonium hydroxide (as sulfate)	max. 0.2 %
Other rare earth metals (RxOy)	max. 0.2 %	Iron (Fe)	max. 0.005 %
Insolubility metter in sulfuric acid	max. 0.05 %	Heavy Metals (as Pb)	max. 0.005 %
Chloride (Cl)	max. 0.01 %		

Code	Capacity
A5057-1-0101	100 g

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AMMONIUM CHLORIDE

Synonyms : Sal ammoniac

- NH_4Cl
- M = 53.49 g/mol
- CAS [12125-02-9]
- EC number: 235-186-4

Physical data:
- Spec. density: 1.52 g/cm^3
- Bulk density: ~500 kg/m^3
- Solub. in water (20 °C): 372 g/l
- Melting point: 335 °C (decomposes)
- Ignition temp.: > 400 °C
- Vapour pressure: (30 °C) 1.3 hPa
- pH (50 g/l H_2O, 20 °C) 4.5 - 5.5

Toxicological data:
- LD 50 (oral, rat): 1440 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 017-014-00-8
- R: 22-36
- S: 22-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5058-1 Ammonium chloride, reagent grade

HS-No: 2827 10 00 00

Assay (argentometric)	min. 99.8 %	Heavy metals	max. 0.0005 %
Insoluble matter	max. 0.005 %	Lead (Pb)	max. 0.0002 %
pH (5%, H_2O)	4.5 - 5.5	Magnesium (Mg)	max. 0.0005 %
Nitrates (NO_3)	max. 0.0005 %	Nickel (Ni)	max. 0.0001 %
Phosphates (PO_4)	max. 0.0002 %	Potassium (K)	max. 0.005 %
Sulfate (SO_4)	max. 0.002 %	Sodium (Na)	max. 0.005 %
Calcium (Ca)	max. 0.0005 %	Zinc (Zn)	max. 0.0002 %
Copper (Cu)	max. 0.0002 %	Calcination residue (as SO_4)	max. 0.01 %

Code	Capacity
A5058-1-0500	500 g
A5058-1-1000	1 kg

A5058-3 Ammonium chloride, extra pure

HS-No: 2827 10 00 00

Assay (argentometric)	min. 99.5 %	Calcium (Ca)	max. 0.02 %
Acidly or alkalinely reacting impurities	passes test	Copper (Cu)	max. 0.0025 %
Appearance of solution	clear and colourless	Heavy metals (Pb)	max. 0.001 %
Iodides, bromides (I, Br)	passes test	Iron (Fe)	max. 0.002 %
pH (5%, H_2O)	4.6 - 6.0	Lead (Pb)	max. 0.001 %
Sulfate (SO_4)	max. 0.015 %	Zinc (Zn)	max. 0.0025 %
Thiocyanates (SCN)	max. 0.01 %	Calcination residue (as SO_4)	max. 0.1 %
Arsenic (As)	max. 0.0003 %	Loss on drying (150 °C)	max. 0.5 %

Code	Capacity
A5058-3-0500	500 g
A5058-3-1000	1 kg

AMMONIUM DICHROMATE

Synonyms : Ammonium bichromate, Ammonium pyrochromate

- $(NH_4)_2Cr_2O_7$
- M = 252.07 g/mol
- CAS [7789-09-5]
- EC number: 232-143-1

Physical data:
- Form: Solid
- Spec. density: 2.15 g/m^3
- Solub. in water (20 °C): 360 g/l
- Melting point: 180 °C (decomposes, explosion reaction)
- Ignition temp.: 218 °C
- pH (100 g/l H_2O, 20 °C) 3.45

Toxicological data:
- LD 50 (oral, rat): 53.75 mg/kg
- WGK: 3

Safety:
- EC Index no.: 024-003-00-1
- R: 45-46-60-61.1-8-E21-E25-E26 -34-42/43-E48/23-50/53
- S: 53-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1439
- IMDG: 5.1 II UN 1439
- IATA/ICAO: 5.1 II UN 1439
- PAX: 508
- CAO: 511
- LGK: 4.1A
- Disposal: 15

A5064-1 Ammonium dichromate, reagent grade

HS-No: 2841 50 00 00

Assay	min. 99.0 %	Sodium (Na)	max. 0.005 %
Insolubility matter in water	max. 0.002 %	Potassium (K)	max. 0.07 %
Chloride (Cl)	max. 0.002 %	Calcium (Ca)	max. 0.002 %
Sulfate (SO_4)	max. 0.01 %	Iron (Fe)	max. 0.002 %

Code	Capacity
A5064-1-0500	500 g

AMMONIUM DIHYDROGEN PHOSPHATE

Synonyms : Ammonium biphosphate, Ammonium phosphatemonobasic, Primary ammonium phosphate, Monoammonium ortophosphate

- $(NH_4)H_2PO_4$
- M = 115.30 g/mol
- CAS [7722-76-1]
- EC number: 231-764-5

Physical data:
- Spec. density: 1.80 g/cm^3
- Bulk density: ~800 - 1100 kg/m^3
- Solub. in water (20 °C): 370 g/l
- Melting point: 190 °C
- pH (50 g/l H_2O, 20 °C) 3.8 - 4.4

Toxicological data:
- LD 50 (oral, rat): 2500 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 4
- Disposal: 14

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5067-1 Ammonium dihydrogen phosphate, reagent grade

HS-No: 3105 40 00 00

Assay (acidimetric)	min. 99 %	Arsenic (As)	max. 0.00005 %
Insoluble in water	max. 0.005 %	Heavy metals (Pb)	max. 0.0005 %
pH (5%, H_2O)	3.8 - 4.4	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.0005 %	Potassium (K)	max. 0.005 %
Nitrates (NO_3)	max. 0.001 %	Sodium (Na)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %	Precipitable by ammonia	max. 0.005 %

Code	Capacity
A5067-1-0500	500 g
A5067-1-1000	1 kg

A5067-4 Ammonium dihydrogen phosphate, reagent grade

HS-No: 3105 40 00 00

See specification in Solvent Specification - 32

Code	Capacity
A5067-4-0500	500 g
A5067-4-1000	1 kg

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AMMONIUM FLUORIDE

Synonyms :

- FH_4N
- M = 37.04 g/mol
- CAS [12125-01-8]
- EC number: 235-185-9

Physical data:
- Spec. density: 1.01 g/cm^3
- Bulk density: 250 - 350 kg/m^3

- Solub. in water (20 °C): 820 g/l
- pH (50 g/l H_2O, 20 °C) 6

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storae:
- LGK: 6.1B
- Disposal: 23

A5069-1 Ammonium fluoride, reagent grade

HS-No: 2826 11 00 00

Assay (precipitation titration, NH_4F) ...	min. 98.0 %	Iron (Fe)	max. 0.0005 %
Ammonium hydrogen diflouride	max. 0.5 %	Potassium (K)	max. 0.002 %
Hexafluorosilicate (SiF_6)	max. 0.1 %	Sodium (Na)	max. 0.002 %
Chloride (Cl)	max. 0.0005 %	Water	max. 5 %
Sulfates (SO_4)	max. 0.005 %	Insoluble substances	max. 0.005 %
Heavy metals (Pb)	max. 0.0005 %	Residue on ignition	max. 0.01 %

Code	Capacity
A5069-1-0500	500 g
A5069-1-1000	1 kg

AMMONIUM HEPTAMOLYBDATE TETRAHYDRATE

Synonyms : Ammonium molybdate, Hexammonium heptamolybdate 4-hydrate

- $(NH_4)_6Mo_7O_{24}.4H_2O$
- M = 1235.86 g/mol
- CAS [12027-67-7]
- EC number: 234-722-4

Physical data:
- Spec. density: 2.5 g/cm^3
- Bulk density: ~800 kg/m^3
- Solub. in water (20 °C): 400 g/l

- Melting point: 90 °C (release of crystalline water)
- pH (50 g/l H_2O, 20 °C) ~ 5.3

Toxicological data:
- LD 50 (oral, rat): 3883 mg/kg
- MAK: 5mg/m^3
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

A5071-1 Ammonium heptamolybdate tetrahydrate, reagent grade

HS-No: 2841 70 00 00

Assay [$NH_4]_6Mo_7O_{24}.4H_2O$]	min. 99 %	Sulphate (SO_4)	max. 0.005 %
Assay (MoO_3)	81.0 - 83.0	Copper (Cu)	max. 0.001 %
Insoluble matter	max. 0.005 %	Heavy metals (as Pb)	max. 0.001 %
Chloride (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Nitrate (NO_3)	passes test	Lead (Pb)	max. 0.001 %
Arsenate, phosphate and silicate (as SiO_2)	max. 0.0005 %	Magnesium (Mg)	max. 0.005 %
Phosphate (PO_4)	max. 0.0005 %	Potassium (K)	max. 0.002 %
		Sodium (Na)	max. 0.01 %

Code	Capacity
A5071-1-0500	500 g

AMMONIUM HYDROGEN CARBONATE

Synonyms : Ammonium bicarbonate

- HN_4HCO_3
- M = 79.06 g/mol
- CAS [1066-33-7]
- EC number: 213-911-5

Physical data:
- Spec. density: 2.4 g/cm^3
- Bulk density: ~600 kg/m^3

- Solub. in water (20 °C): 220 g/l
- Melting point: 106 °C
- Vapour pressure: (20 °C) 67 hPa
- pH (50 g/l H_2O, 20 °C) ~ 8

Toxicological data:
- LD 50 (oral, rat): 1576 mg/kg
- WGK: 1

Safe:
- R: 22
- S: 46
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

A5077-1 Ammonium hydrogen carbonate, reagent grade

HS-No: 2836 10 00 00

Assay (acidimetric)	min. 99 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.0005 %	Lead (Pb)	max. 0.001 %
Phosphates (PO_4)	max. 0.0005 %	Magnesium (Mg)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Arsenic (As)	max. 0.0001 %	Potassium (K)	max. 0.001 %
Calcium (Ca)	max. 0.01 %	Sodium (Na)	max. 0.002 %
Copper (Cu)	max. 0.001 %	Calcination residue (as SO_4)	max. 0.05 %

Code	Capacity
A5077-1-0500	500 g
A5077-1-1000	1 kg

AMMONIUM IODIDE

Synonyms :

- NH_4I
- M = 144.94 g/mol
- CAS [12027-06-4]
- EC number: 234-717-7

Physical data:
- Form: Solid
- Spec. density: 2.52 g/cm^3

- Bulk density: ~900 - 1000 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 450 °C
- pH (50 g/l H_2O, 20 °C) 4.5 - 6.5

Toxicological data:
- WGK: 1

Safety:
- poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5080-3 Ammonium iodide, extra pure

HS-No: 2827 60 00 90

Assay (argentometric)	min. 99 %	Thiosulfates (S_2O_3)	max. 0.01 %
pH (5%, H_2O)	4.5 - 6.5	Arsenic (As)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Heavy metals (Pb)	max. 0.001 %
Bromides, chlorides (as Cl)	max. 0.02 %	Iron (Fe)	max. 0.001 %
Iodates (IO_3)	max. 0.01 %	Sulfate Ash	max. 0.1 %
Sulfate (SO_4)	max. 0.01 %	Loss on drying (105 °C)	max. 1 %

Code	Capacity
A5080-3-0500	500 g

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AMMONIUM IRON (II) SULFATE HEXAHYDRATE

Synonyms : Iron (II) ammonium sulfate, Ferrous ammonium sulfate, Mohr's salt

- $(NH_4)_2Fe(SO_4)_2.6H_2O$
- M = 392.14 g/mol
- CAS [7783-85-9]
- EC number: 233-151-8

Physical data:
- Spec. density: 1.86 g/cm^3
- Bulk density: ~900 kg/m^3
- Solub. in water (20 °C): 269 g/l
- Melting point: 100 °C
- pH (50 g/l H_2O, 20°C) 3 - 5

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- disposal: 15

A5086-1 Ammonium iron (II) sulfate hexahydrate, reagent grade

HS-No: 2833 30 00 00

Assay (manganometric)	min. 99 %	Copper (Cu)	max. 0.002 %
pH (5%, H_2O)	3 - 5	Iron (III) (Fe (III))	max. 0.01 %
Insoluble in diluted H_2SO_4	max. 0.01 %	Lead (Pb)	max. 0.001 %
Non precipitable by ammonia (as (SO_4)	max. 0.05 %	Manganese (Mn)	max. 0.01 %
Chloride (Cl)	max. 0.001 %	Potassium (K)	max. 0.01 %
Phosphates (PO_4)	max. 0.002 %	Sodium (Na)	max. 0.01 %
Calcium (Ca)	max. 0.002 %	Zinc (Zn)	max. 0.003 %

Code	Capacity
A5086-1-0500	500 g
A5086-1-1000	1 kg

AMMONIUM IRON (II) SULFATE SOLUTION 0.1 MOL/l (0.1 N)

A5089-0 Ammonium iron (II) sulfate solution 0.1 mol/l (0.1 N)

HS-No: 2833 30 00 00

Synonyms : Iron (II) ammonium sulfate, Iron alum

- $NH_4Fe(SO_4)_2.12H_2O$
- M = 482.19 g/mol
- CAS [7783-83-7]
- EC number: 233-382-4

Physical data:
- Density: 1.025 g/cm^3

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 15

1 ml = 0.04822 g $(NH_4)Fe(SO_4)_2.12H_2O$

Code	Capacity
A5089-0-1000	1 L

AMMONIUM IRON (III) SULFATE DODECAHYDRATE

Synonyms : Iron (III) ammonium sulfate, Alum iron, Ferric ammonium alum, Iron alum, Iron (III) ammonium sulfate, Ferric ammonium sulfate

- $NH_4Fe(SO_4)_2.12H_2O$
- M = 482.19 g/mol
- CAS [7783-83-7]
- EC number: 233-382-4

Physical data:
- Bulk density: ~750 kg/m^3
- Solub. in water (25 °C): 1240 g/l
- Melting point: 39 - 41 °C
- pH (100 g/l H_2O, 20 °C) ~ 1.8

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 16

A5092-1 Ammonium iron (III) sulfate dodecahydrate, reagent grade

HS-No: 2833 30 00 00

Assay (iodometric)	min. 99 %	Iron (II) (Fe (II))	max. 0.001 %
Insoluble in water	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.0005 %	Magnesium (Mg)	max. 0.001 %
Nitrates (NO_3)	max. 0.01 %	Manganese (Mn)	max. 0.005 %
Phosphates (PO_4)	max. 0.002 %	Potassium (K)	max. 0.01 %
Calcium (Ca)	max. 0.002 %	Sodium (Na)	max. 0.01 %
Copper (Cu)	max. 0.001 %	Zinc (Zn)	max. 0.001 %

Code	Capacity
A5092-1-0500	500 g
A5092-1-1000	1 kg

A5092-3 Ammonium iron (III) sulfate dodecahydrate, extra pure

HS-No: 2833 30 00 00

Assay (iodometric)	min. 97.0 %	Iron (II) (Fe (II))	max. 0.002 %
Insoluble in water	max. 0.01 %	Lead (Pb)	max. 0.001 %
Chloride (Cl)	max. 0.002 %	Magnesium (Mg)	max. 0.03 %
Calcium (Ca)	max. 0.03 %	Zinc (Zn)	max. 0.005 %
Copper (Cu)	max. 0.0005 %		

Code	Capacity
A5092-3-0500	500 g
A5092-3-1000	1 kg

AMMONIUM MONOVANADATE

Synonyms : Ammonium metavanadate, Ammonium vanadate

- NH_4VO_3
- M = 116.98 g/mol
- CAS [7803-55-6]
- EC number: 232-261-3

Physical data:
- Bulk density: ~600 kg/m^3
- Solub. in water (15 °C): 5.2 g/l
- Melting point: ~200 °C (decomposes)
- pH (5 g/l H_2O, 20 °C) ~6.5

Toxicological data:
- LD 50 (oral, rat): 169 mg/kg
- WGK: 3

Safety:
- R: 20-25-36/37
- S: 26-37-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 II UN 2859
- IMDG: 6.1 II UN 2859
- IATA/ICAO: 6.1 II UN 2859
- PAX: 613
- CAO: 615
- LGK: 6.1B
- Disposal: 15

A5097-1 Ammonium monovanadate, reagent grade

HS-No: 2841 90 30 00

Assay (titr. with Fe(II))	min. 99.5 %	Copper (Cu)	max. 0.001 %
Chloride (Cl)	max. 0.002 %	Iron (Fe)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.002 %
Cadmium (Cd)	max. 0.001 %	Zinc (Zn)	max. 0.001 %
Cobalt (Co)	max. 0.002 %		

Code	Capacity
A5097-1-0101	100 g
A5097-1-1000	1 kg

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AMMONIUM NITRATE

Synonyms : Nitric acid ammonia, Ammonia nitrate

- NH_4NO_3
- M = 80.04 g/mol
- CAS [6484-52-2]
- EC number: 229-347-8

Physical data:
- Spec. density: 1.72 g/cm^3
- Bulk density: ~600 - 700 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 169 °C
- Boiling point: 302 °C
- pH (100 g/l H_2O, 20 °C) ~5.5

Toxicological data:
- LD 50 (oral, rat): 2462 mg/kg
- WGK: 1

Safety:
- R: 8-9
- S: 15-16-41
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1942
- IMDG: 5.1 III UN 1942
- IATA/ICAO: 5.1 III UN 1942
- PAX: 516
- CAO: 518
- LGK: 5.1C
- Disposal: 14

A5105-1 Ammonium nitrate, reagent grade

HS-No: 3102 30 90 00

Assay (acidimetric)	min. 99 %	Copper (Cu)	max. 0.0005 %
Insoluble matter	max. 0.005 %	Iron (Fe)	max. 0.0001 %
pH (5%, H_2O)	4.5 - 6.0	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.0003 %	Magnesium (Mg)	max. 0.001 %
Nitrites (NO_2)	max. 0.005 %	Potassium (K)	max. 0.001 %
Phosphates (PO_4)	max. 0.0005 %	Sodium (Na)	max. 0.001 %
Sulfates (SO_4)	max. 0.002 %	Zinc (Zn)	max. 0.0005 %
Calcium (Ca)	max. 0.003 %	Calcination residue (as SO_4)	max. 0.01 %
Cadmium (Cd)	max. 0.0005 %	Water	max. 5 %

Code	Capacity
A5105-1-0500	500 g
A5105-1-1000	1 kg

AMMONIUM PEROXODISULFATE

Synonyms : Ammonium persulfate, Peroxodisulfuric acid diammonium salt

- $(NH_4)_2S_2O_8$
- M - 228.20 g/mol
- CAS [7727-54-0]
- EC number: 231-786-5

Physical data:
- Spec. density: 0.98 - 1.15 g/cm^3
- Bulk density: ~900 kg/m^3
- Solub. in water (20 °C): 620 g/l
- Melting point: 120 °C (decomposes)
- pH (100 g/l H_2O, 25 °C) 3.2

Toxicological data:
- LD 50 (oral, rat): 495 mg/kg
- WGK: 1

Safey:
- EC Index no.: 016-060-00-6
- R: 8-22-36/37/38-42-43
- S: 22-24-26-37-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1444
- IMDG: 5.1 III UN 1444
- IATA/ICAO: 5.1 III UN 1444
- PAX: 516
- CAO: 518
- LGK: 5.1B
- Disposal: 22

A5108-1 Ammonium peroxodisulfate, reagent grade

HS-No: 2833 40 00 10

Assay	min. 98.0 %	Chloride and chlorate (as Cl)	max. 0.001 %
Appearance of solution	passes test	Manganese (Mn)	max. 0.00005 %
Insoluble matter in water	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Residue after ignition (as Sulfate)	max. 0.02 %	Heavy Metals (as Pb)	max. 0.0005 %

Code	Capacity
A5108-1-0500	500 g

A5108-3 Ammonium peroxodisulfate, extra pure

HS-No: 2833 40 00 10

Assay (iodometric)	min. 98 %	Iron (Fe)	max. 0.001 %
Insoluble matter	max. 0.02 %	Lead (Pb)	max. 0.001 %
Chloride (Cl)	max. 0.002 %	Manganese (Mn)	max. 0.0002 %
Copper (Cu)	max. 0.005 %	Nickel (Ni)	max. 0.005 %
Heavy metals (as Pb)	max. 0.003 %	Calcination residue (as SO_4)	max. 0.1 %

Code	Capacity
A5108-3-0500	500 g

AMMONIUM OXALATE MONOHYDRATE

Synonyms : Oxalic acid ammonium salt

- $C_2H_8N_2O_4.H_2O$
- M = 142.11 g/mol
- CAS [6009-70-7]
- EC number: 214-202-3

Physical data:
- Spec. density: 1.50 g/cm^3
- Bulk density: ~480 kg/m^3
- Solub. in water (20 °C): ~ 45 g/l
- Melting point: 70 °C
- pH (50 g/l H_2O, 25 °C) ~6.3

Toxicological data:
- WGK: 1

Safey:
- EC Index no.: 607-007-00-3
- R: 21/22
- S: 24/25-37-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T2 III UN 2811
- IMDG: 6.1 III UN 2811
- IATA/ICAO: 6.1 III UN 2811
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 14

A5110-1 Ammonium oxalate monohydrate, reagent grade

HS-No: 2917 11 00 90

Assay (permanganometirc)	min. 99.5 %	Heavy metals (as Pb)	max. 0.0005 %
Insoluble matter	max. 0.005 %	Iron (Fe)	max. 0.0002 %
pH (2.5%, H_2O)	6 - 7	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.0005 %	Magnesium (Mg)	max. 0.001 %
Nitrates (NO_3)	max. 0.0005 %	Sodium (Na)	max. 0.001 %
Sulfates (SO_4)	max. 0.002 %	Potassium (K)	max. 0.001 %
Calcium (Ca)	max. 0.001 %	Zinc (Zn)	max. 0.0005 %
Cadmium (Cd)	max. 0.0005 %	Calcination residue (as SO_4)	max. 0.02%
Copper (Cu)	max. 0.0005 %		

Code	Capacity
A5110-1-0500	500 g

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AMMONIUM SULFATE

Synonyms : Sulfuric acid diammonium salt

- $(NH_4)_2SO_4$
- M = 132.14 g/mol
- CAS [7783-20-2]
- EC number: 231-984-1

Physical data:
- Spec. density: 1.77 g/cm^3
- Bulk density: ~850 kg/m^3
- Solub. in water (20 °C): 754 g/l
- Melting point: 280 °C (decomposes)
- pH (50 g/l H_2O, 25 °C) ~5.6

Toxicological data:
- LD 50 (oral, rat): 4250 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss); 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5116-1 Ammonium sulfate, reagent grade

HS-No: 3102 21 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.0002 %
Insoluble matter	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	5 - 6	Iron (Fe)	max. 0.0002 %
Chloride (Cl)	max. 0.0003 %	Lead (Pb)	max. 0.0002 %
Nitrates (NO_3)	max. 0.001 %	Magnesium (Mg)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0005 %	Zinc (Zn)	max. 0.0001 %
Arsenic (As)	max. 0.00002 %	Calcination residue (as SO_4)	max. 0.005 %
Cadmium (Cd)	max. 0.0001 %	Loss on drying (105 °C)	max. 0.1 %
Calcium (Ca)	max. 0.001 %		

Code	Capacity
A5116-1-0500	500 g
A5116-1-1000	1 kg

AMMONIUM THIOCYANATE

Synonyms : Ammonium sulfocyanate, Ammonium rhodanide, Thiocyanic acid ammonium salt, Ammonium sulfocyanate

- NH_4SCN
- M = 76.12 g/mol
- CAS [1762-95-4]
- EC number: 217-175-6

Physical data:
- Spec. density : 1.31 g/cm^3
- Bulk density: ~600 kg/m
- Solub. in water (20 °C): soluble
- Melting point: 150 °C
- Boiling poing: 170 °C (decomposes)
- pH (50 g/l H_2O, 20 °C): 4.8 - 5.8

Toxicological data:
- LD 50 (oral, rat): 500 mg/kg
- WGK: 1

Safety:
- EC Index no.: 615-004-00-3
- R: 20/21/22-32
- S: 13-36/37-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

A5119-1 Ammonium thiocyanate, reagent grade

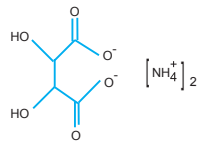
HS-No: 2838 00 00 00

Assay (argentonmetric)	min. 99 %	Copper (Cu)	max. 0.0004 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0001 %
pH (5%, H_2O)	4.8 - 5.8	Lead (Pb)	max. 0.0004 %
Chlorides (Cl)	max. 0.004 %	Calcination residue (as SO_4)	max. 0.025 %
Sulfides (S)	max. 0.001 %	I_2 consuming substances	max. 0.004 meq/g
Sulfates (SO_4)	max. 0.0025 %		

Code	Capacity
A5119-1-0500	500 g

AMMONIUM TARTRATE

Synonyms : Tartaric acid diammonium salt



- $C_4H_{12}N_2O_6$
- M = 184.15 g/mol
- CAS [3164-29-2]
- EC number: 221-618-9

Physical data:
- Spec. density : 1.60 g/cm^3
- Solub. in water (15 °C): 63 g/l
- pH (50 g/l H_2O, 20 °C): 6.5 - 7

Safety:
- S: 24-25
- Poison class CH (Swiss): 4

Transport/storage:
> LGK: 10-13

A5126-1 Ammonium tartrate, reagent grade

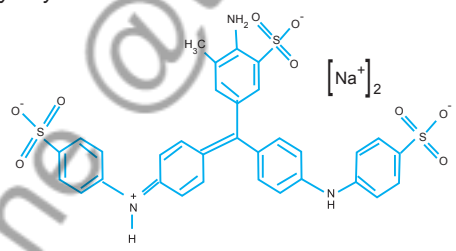
HS-No: 2918 13 00 90

Assay	min. 99.0 %	Calcium (Ca)	max. 0.002 %
pH (5%, H_2O)	5.5 - 6.5	Heavy metals (as Pb)	max. 0.001 %
Chloride (Cl)	max. 0.002 %	Iron (Fe)	max. 0.001 %
Sulfate (SO_4)	max. 0.01 %	Sulfated ash (as SO_4)	max. 0.05 %

Code	Capacity
A5126-1-0500	500 g

ANILINE BLUE

Synonyms : Acid blue 22



- $C_{32}H_{25}N_3Na_2O_9S_3$
- M = 737.72 g/mol
- CAS [28631-66-5]
- EC number: 249-113-9

Physical data:
- Form: solid
- Solub. in water (20 °C): soluble

Transport/storage:
- LGK: 10-13

A5130-0 Aniline blue (water soluble)

HS-No: 3204 12 00 00

Absorption maximum in water	595 - 605 nm	Related substances (TLC)	passes test
Absorptivity (A1%/1cm, max	250 - 500	Loss on drying (110 °C)	max. 7 %

Code	Capacity
A5130-0-0025	25 g

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ANTI BUMPING GRANULES

Synonyms :

CAS [1344-28-1]

Physical data:
- Granular

A5135-0 Anti bumping granules

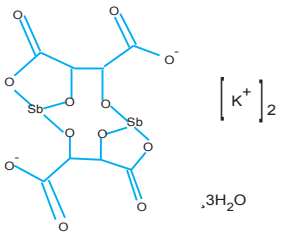
	Standard
Particle size	~ 1 - 3mm

Code	Capacity
A5135-0-0250	250 g

Granules of fused alumina, more effective and easier to use than broken porous pot in preventing boiling liquids form "bymping"

ANTIMONY POTASSIUM TARTRATE

Synonyms : Potassium antimomy (III) oxide tartade trihydrate, Potassium antimonyl tartrate, Tartar emetic, Antimony potasium tartrate



- $C_8H_4K_2O_{12}Sb_2 \cdot 0.5H_2O$
- M = 333.93 g/mol
- CAS [28300-74-5]
- EC number: 234-293-3

Physical data:
- Form: Solid
- Spec. dentity: 2.6 g/cm^3
- Bulk density: ~1250 kg/m^3
- Solub. in water (20 °C): 83 g/l
- pH (50 g/l H_2O, 20 °C) ~4

Toxicological data:
- LD 50 (oral, rat): 115 mg/kg
- MAK: 0.5 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 051-003-00-9
- R: 20/22-51/53
- S: 46/61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 III UN 1551
- IMDG: 6.1 T5 III UN 1551
- IATA/ICAO: 6.1 III UN 1551
- PAX: 619
- CAO: 10-13

A5140-1 Antimony potassium tartrate, reagent grade

Assay	min. 99.5 %	Iron (Fe)	max. 0.0005 %
Solubility test in water	passes test	Lead (Pb)	max. 0.0025 %
Free acid alkali	passes test	Copper (Cu)	max. 0.0025 %
Chloride (Cl)	max. 0.001 %	Arsenic (As)	max. 0.001 %
Sulfate (SO_4)	max. 0.001 %		

HS-No: 2918 13 00 90

Code	Capacity
A5140-1-0500	500 g

A5140-3 Antimony potassium tartrate, extra pure

Assay (iodometric)	min. 98.0 %	Sulfates (SO_4)	max. 0.02 %
Insoluble in water	max. 0.005 %	Arsenic (As)	max. 0.05 %
pH (5%, H_2O)	3.8 - 4.2	Lead (Pb)	max. 0.05 %
Chloride (Cl)	max. 0.01 %		

HS-No: 2918 13 00 90

Code	Capacity
A5140-3-0500	500 g

ANTIMONY TRICHLORIDE

Synonyms :

- $SbCl_3$
- M = 228.11 g/mol
- CAS [10025-91-9]
- EC number: 233-047-2

Physical data:
- Vapour pressure 0.16 hPa (20 °C)
- Spec. dentity: 3.14 g/cm^3 (20 °C)
- Solub. in water 931 g/l (20 °C) (hydrolysis)
- pH value acid

- Melting point 73 °C
- Bulk density ~ 1600 kg/m^3
- Boiling point 233 °C (1013 hPa)
- Water absorption hygroscopic

Safety:
- EC Index No.: 051-001-00-8
- Corrosive, dangerous for the environment
- R: 34-51/53
- S: 26-45-61
- Poison class (CH)

Toxicological data:
- WGK 3*
- LD 50 oral 525 mg/kg

Transport/storage:
- LGK: 8 B
- Packing-cat D
- Disposal 15
- Road/rail 8/11 b
- IMDG-Code 8/11 UN 1733
- IATA/DGR 8

A5144-1 Antimony Trichloride, reagent grade

Assay	min. 99 %	Iron (Fe)	max. 0.002 %
Appearance of solution	passes test	Arsenic (As)	max. 0.005 %
Solubility test in ethanol	passes test	Substances not precipitated by hydrogen sulfide (as sulfat)	max. 0.2 %
Insolubility matter in hydrochloric acid	max. 0.005 %		

HS-No: 2918 13 00 90

Code	Capacity
A5144-1-0500	500 g

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Chemical list : B

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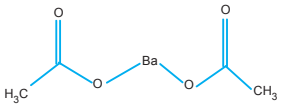
BARIUM ACETATE

Synonyms : Acetic acid barium salt



- $Ba(CH_3COO)_2$
- M = 255.43 g/mol
- CAS [543-80-6]
- EC number: 208-849-0

Physical data:
- Spec. density: ~2.47 g/cm³
- Bulk density: ~1200 kg/m³
- Solub. in water (20 °C): ~720 g/l
- Melting point: ~450 °C
- pH (50 g/l H_2O, 20 °C) ~6.5 - 8.5

Toxicological data:
- LD 50 (oral, rat): 921 mg/kg
- MAK: 0.5 mg/m³
- WGK: 1

Safety:
- EC Index no.: 056-002-00-7
- R: 20/22
- S: 28.1-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 III UN 1564
- IMDG: 6.1 III UN 1564
- IATA/ICAO: 6.1 III UN 1564
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 15

B1001-1 Barium acetate, reagent grade

HS-No: 2915 29 00 90

Assay (complexometric)	min. 99.0 %	Heavy metals (as Pb)	max. 0.0005 %
Insoluble in water	max. 0.01 %	Iron (Fe)	max. 0.0005 %
pH (5%, H_2O)	7.0 - 8.5	Strontium (Sr)	max. 0.15 %
Chloride (Cl)	max. 0.0005 %	Non-precipitable with H_2SO_4 (as SO_4)	
Oxidizing substances (as NO_3)	max. 0.005 %		max. 0.1 %
Calcium (Ca)	max. 0.005 %		

Code	Capacity
B1001-1-0500	500 g
B1001-1-1000	1 kg

BARIUM STANDARD SOLUTION 1000MG/L FOR AA

Synonyms : Barium nitrate in acid

Physical data:
- Form: Liquid
- Density: ~1.01 g/cm³
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 0

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8 B

1 ml = 1000±5 mg/l

B1002-0 Barium standard solution 1000mg/l for AA (barium nitrate in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Composition ..... 1000±5 mg/l

Code	Capacity
B1002-0-0500	500 ml

BARIUM CHLORIDE DIHYDRATE

Synonyms :

- $BaCl_2 \cdot 2H_2O$
- M = 244.28 g/mol
- CAS [10326-27-9]
- EC number: 233-788-1

Physical data:
- Bulk density: ~1200 - 1400 kg/m³
- Solub. in water (20 °C): 357 g/l
- Melting point: 962 °C (release of crystalline water)
- pH (50 g/l H_2O, 20 °C) ~ 5.2 - 8.2

Toxicological data:
- LD 50 (oral, rat): 118 mg/kg (anhydrous substance)
- MAK: 0.5 mg/m³
- WGK: 1

Safety:
- EC Index no.: 056-004-00-8
- R: 20-25
- S: 45
- Poison class CH (Swiss):2

Transport/storage:
- ADR: 6.1 T5 III UN 1564
- IMDG: 6.1 III UN 1564
- IATA/ICAO: 6.1 III UN 1564
- PAX: 619
- CAO: 619
- LGK: 6.1B
- Disposal: 15

B1010-1 Barium chloride dihydrate, reagent grade

HS-No: 2827 39 80 90

Assay (complexometric)	min. 99 %	Lead (Pb)	max. 0.001 %
pH (5%, H_2O)	5.2 - 8.2	Magnesium (Mg)	max. 0.001 %
Total N	max. 0.002 %	Potassium (K)	max. 0.002 %
Oxidizing substances	max. 0.005 %	Sodium (Na)	max. 0.005 %
Heavy metals (as Pb)	max. 0.0005 %	Strontium (Sr)	max. 0.05 %
Calcium (Ca)	max. 0.005 %	Loss on drying (150 °C)	14 - 16
Iron (Fe)	max. 0.0001 %		

Code	Capacity
B1010-1-0500	500 g
B1010-1-1000	1 kg

BARIUM HYDROXIDE OCTAHYDRATE

Synonyms : Caustic baryta, Barium oxide hydrate octahydrate

- $Ba(OH)_2 \cdot 8H_2O$
- M = 315.48 g/mol
- CAS [12230-71-6]
- EC number: 241-234-5

Physical data:
- Spec. density: 2.18 g/cm³
- Bulk density: ~900 - 1100 kg/m³
- Solub. in water (15 °C): 56 g/l
- Melting point: 78 °C
- pH (50 g/l H_2O, 20 °C) ~ 12.5

Toxicological data:
- MAK: 0.5 mg/m³
- WGK: 1

Safety:
- R: 20/22-34
- S: 26-36/37/39-45
- Poison class CH (Swiss):2

Transport/storage:
- ADR: 8 CT2 II UN 2923
- IMDG: 8 II UN 2923
- IATA/ICAO: 8 II UN 2923
- PAX: 814
- CAO: 816
- LGK: 8 B
- Disposal: 28

Line @tianyou562 Tel:13721545.6

B1014-1 Barium hydroxide octahydrate, reagent grade

HS-No: 2816 40 00 00

Assay (acidimetric)	min. 98 %	Heavy metals (as Pb)	max. 0.0005 %
Insoluble in hydrochloric acid	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Carbonates ($BaCO_3$)	max. 2 %	Magnesium (Mg)	max. 0.002 %
Chlorides (Cl)	max. 0.001 %	Potassium (K)	max. 0.005 %
Sulfides (S)	max. 0.0005 %	Sodium (Na)	max. 0.005 %
Calcium (Ca)	max. 0.002 %	Strontium (Sr)	max. 1.5 %
Cadmium (Cd)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Copper (Cu)	max. 0.0005 %	Non precipitable with sulfuric acid	
Iron (Fe)	max. 0.0005 %	(as SO_4)	max. 0.2 %

Code	Capacity
B1014-1-0500	500 g

B1014-3 Barium hydroxide octahydrate, reagent grade

HS-No: 2816 40 00 00

Assay (complexometric)	min. 97 %	Heavy metals (as Pb)	max. 0.001 %
Insoluble in hydrochloric acid	max. 0.01 %	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Sulfides (S)	max. 0.001 %	Nickel (Ni)	max. 0.002 %
Calcium (Ca)	max. 0.005 %	Non precipitable with H_2SO_4 (as SO_4)	
Copper (Cu)	max. 0.002 %		max. 0.2 %

Code	Capacity
B1014-3-1000	1 kg

BARIUM NITRATE

Synonyms : Nitric acid barium salt

- $Ba(NO_3)_2$
- M = 261.35 g/mol
- CAS [10022-31-8]
- EC number: 233-020-5

Physical data:
- Spec. density: 3.2 g/cm^3
- Bulk density: ~ 1750 kg/m^3
- Solub. in water (20 °C): 90 g/l
- Melting point: 592 - 595 °C
- pH (50 g/l H_2O, 20 °C) ~ 5.2

Troxicological data:
- LD 50 (oral, rat): 355 mg/kg
- MAK: 0.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 056-002-00-7
- R: 20/22
- S: 28.1-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 OT2 II UN 1446
- IMDG: 5.1 II UN 1446
- IATA/ICAO: 5.1 II UN 1446
- PAX: 508
- CAO: 511
- LGK: 5.1B
- Disposal: 28

B1020-1 Barium nitrate, reagent grade

HS-No: 2834 29 20 00

Assay (complexometric)	min. 99 %	Iron (Fe)	max. 0.0002 %
pH (5%, H_2O)	5 - 7	Magnesium (Mg)	max. 0.002 %
Chlorides (Cl)	max. 0.0005 %	Potassium (K)	max. 0.005 %
Ammonium (NH_4)	max. 0.001 %	Sodium (Na)	max. 0.005 %
Calcium (Ca)	max. 0.002 %	Strontium (Sr)	max. 0.05 %
Heavy metals (as Pb)	max. 0.0005 %		

Code	Capacity
B1020-1-0500	500 g
B1020-1-0500	500 g

BARIUM SULFATE

Synonyms : Salfueic acid barium salt, Blanc fixe

- $BaSO_4$
- M = 233.40 g/mol
- CAS [7727-43-7]
- EC number: 231-784-4

Physical data:
- Spec. density: 4.5 g/cm^3
- Bulk density: ~700 kg/m^3
- Solub. in water (20 °C): < 0.01 g/l
- Melting point: 1580 °C
- pH (50 g/l H_2O, 20 °C) ~7

Toxicological data:
- LD 50 (oral, rat): >15000 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

B1029-1 Barium sulfate, reagent grade

HS-No: 2833 27 00 00

Sodium matter in hydrochloric acid	max. 0.15%	Iron (Fe)	max. 0.0005%
Loss on ignition	max. 1.5%	Arsenic (As)	max. 0.0001%
Chloride (Cl)	max. 0.005%	Soluble barium salts (as Ba)	max. 0.0001%
Soluble sulfate (as SO_4)	max. 0.005%	Heavy metals (as Pb)	max. 0.0005%
Total nitrogen (N)	max. 0.005%		

Code	Capacity
B1029-1-0500	500 g
B1029-1-1000	1 kg

B1029-3 Barium sulfate, extra pure

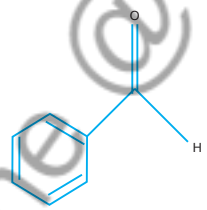
HS-No: 2833 27 00 00

Soluble in acid	max. 0.3 %	Heavy metals (as Pb)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %	Calcination residue (600 °C)	max. 2 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
B1029-3-0500	500 g
B1029-3-1000	1 kg

BENZALDEHYDE

Synonyms : Benzoic aldehyde, Bitter almond oil



- C_7H_6O
- M = 106-13 g/mol
- CAS [100-52-7]
- EC number: 202-860-4

Physical data:
- Density: 1.05 g/cm^3
- Solub. in water (20 °C): 3.3 g/l
- Melting point: -56 °C
- Boiling point: 179 °C
- Flash point: 64 °C
- Ignition temp.: 190 °C
- Vapour pressure: (20 °C) 1.3 hPa
- Refraction index: (n20 °C/D) 1.5450
- Expl. limit (upper): 8.5 Vol%
- Expl. limit (lower): 1.4 Vol%
- pH (1 g/l H_2O, 20 °C) ~5.9

Toxicological data:
- LD 50 (oral, rat): 1300 mg/kg
- WGK: 2

Safety:
- EC Index no.: 605-012-00-5
- R: 22
- S: 24-46
- VbF class: AIII
- Poison class CH (Swiss):4

Transport/storage:
- ADR: 9M11 III UN 1990
- IMDG: 9 III UN 1990
- IATA/ICAO: 9 III UN 1990
- PAX: 907
- CAO: 907
- LGK: 3 B
- Disposal: 1

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B2005-2 Benzaldehyde, synthesis grade

HS-No: 2912 21 00 00

Assay (G.C)	min. 99 %
Water	max. 0.1 %

Code	Capacity
B2005-2-1000	1 L
B2005-2-2500	2.5 L

B2005-3 Benzaldehyde, extra pure

HS-No: 2912 21 00 00

Appearance	Almond Odor Liquid	Density (20 °C)	1.041 ~ 1.050 g/ml
Identification	IR Spcetrometry	Chlorine compounds (as Cl)	max. 0.02 %
Assay (by GC)	min. 99.0 %		

Code	Capacity
B2005-3-1000	1 L
B2005-3-2500	2.5 L

BENZENE

Synonyms : Cyclohexatriene

- C_6H_6
- M = 78.11 g/mol
- CAS [71-43-2]
- EC number: 200-753-7

Physical data:
- Density: 0.88 g/cm^3
- Solub. in water (20 °C): 1.77 g/l
- Melting point: 5.5 °C
- Boiling point: 80.1 °C
- Flash point: -11 °C
- Ignition temp: 555 °C
- Vapour presssure: (20 °C) 101 hPa
- Refraction index: (n 20 °C/D) 1.5011
- Viscosity: (20 °C) 0.66 mPas
- Dielectric const: (20 °C) 2.3
- Evap. heat: (80 °C) 550 KJ/kg
- Saturation conc.: (20 °C) 319 g/m^3
- Expl. limit (upper): 8.0 Vol%
- Expl. limit (lowwer): 1.4 Vol%

Toxicological data:
- LD 50 (oral, rat): 930 mg/kg
- WGK: 3

Safety:
- EC Index no.: 601-020-00-8
- R: 45-11-E48/23/24/25
- S: 53-36/37-45
- VbF class: AI
- Poison class CH (Swiss): 1*

Transport/storage:
- ADR: 3 F1 II UN 1114
- IMDG: 3 II UN 1114
- IATA/ICAO: 3 II UN 1114
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 9

B2027-1 Benzene, reagent grade

HS-No: 2902 20 00 00

Assay	min. 99 %	Thiophene	passes test ~ 1 ppm
Colour	max. 10 APHA	Sulphur compounds (as S)	max. 0.005 %
Residue after evaporation	max. 0.001 %	Water	max. 0.05 %
Substances darkened by Sulphuric acid	passes test		

Code	Capacity
B2027-1-2501	2.5 L

B2027-4 Benzene, HPLC

HS-No: 2902 20 00 00

See specification in Solvents Specification - 30

Code	Capacity
B2027-4-1001	1.0 L
B2027-4-4001	4.0 L

B2027-11 Benzene, Pesticide grade

HS-No: 2902 20 00 00

See specification in Solvents Specification - 21

Code	Capacity
B2027-11-1001	1.0 L
B2027-11-4001	4.0 L

B2027-12 Benzene, Ultimate grade

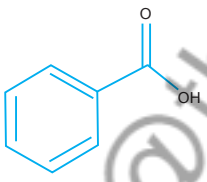
HS-No: 2902 20 00 00

See specification in Solvents Specification - 11

Code	Capacity
B2027-12-1001	1.0 L
B2027-12-4001	4.0 L

BENZOIC ACID

Synonyms : Benzenecarboxylic acid, Phenylformic acid



- $C_7H_6O_2$
- M = 122.12 g/mol
- CAS [65-85-0]
- EC number: 200-618-2

Physical data:
- Spec. density: 1.321 g/cm^3
- Bulk density: ~ 500 kg/m^3
- Solub. in water (20 °C): 3.4 g/l
- Melting point: 121.5 - 123.0 °C
- Boiling point: ~ 249 °C
- Flash point: 121.1 °C
- Ignition temp.: 532 °C
- Vapour pressure: (20 °C) 1.3 hPa
- pH (10 g/l H_2O) 3

Toxicological data:
- LD 50 (oral, rat): 1700 mg/kg
- WGK: 1

Safety:
- R: 22-36
- S: 24-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 4

B2042-1 Benzoic acid, reagent grade

HS-No: 2916 31 00 000

Assay (acidimetric)	min. 99.9 %	Copper (Cu)	max. 0.0005 %
Insoluble in methanol	max. 0.005 %	Iron (Fe)	max. 0.0002 %
Halogen compounds (as Cl)	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
Oxidizable impurities	passes test	Lead (Pb)	max. 0.0002 %
S compounds (as S)	max. 0.002 %	Zinc (Zn)	max. 0.0005 %
Sulfates (SO_4)	max. 0.002 %	Sulfated ash	max. 0.005 %

Code	Capacity
B2042-1-0500	500 g

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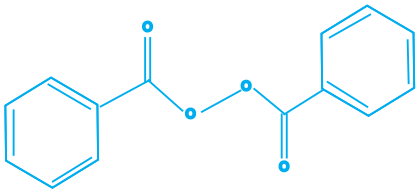
BENZOYL PEROXIDE

Synonyms : Dibenzoyl peroxide



- $C_{14}H_{10}O_4$
- M = 242.23 g/mol
- CAS [94-36-0]
- EC number: 202-327-6

Physical data:
- Form: Solid
- Spec. Density: 0.53 g/cm^3
- Bulk Density: ~500 - 600 g/cm^3
- Solub. in water (20 °C): almost insoluble
- Melting point: 100 - 105 °C (decomposes)

Toxicological data:
- LD 50 (oral, rat): >5000 mg/kg
- MAK: 5 mg/m3
- WGK: 1

Safety:
- EC Index no.: 617-008-00-0
- R: 2-36-43
- S: 3/7-14.9-24-36/37/39
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 5.2 P1 - UN 3104
- IMDG: 5.2 II UN 3104
- IATA/ICAO: 5.2 II UN 3104
- PAX: 510
- CAO: 513
- LGK: 5.2
- Disposal: 10

B2055-1 Benzoyl peroxide, reagent grade

HS-No: 2916 32 10 00

Assay (as dring)	min. 99 %	Loss on drying	30 - 40 %
Melting range (as drying) °C	102 - 106 °C	Phophate (PO_4)	max. 0.5 %
Solubility test in benzene (as drying)	passes test	Acidity and alkalinity	passes test

Code	Capacity
B2055-1-0500	500 g

BISMUTH OXIDE

Synonyms :

- Bi_2O_2
- M = 465.96 g/mol
- CAS [1304-76-3]
- EC number: 215-134-7

Physical data:
- Spec. density: 8.93 g/cm^3
- Bulk density: ~1000 kg/m^3
- Solub. in water (20 °C): almost insoluble
- Melting point: 817 °C
- Boiling point: 1890 °C

Toxicological data:
- LD 50 (oral, rat): 5000 mg/kg
- WGK: 1

Transport/storage:
- LGK: 10-13

B3012-1 Bismuth oxide, reagent grade

HS-No: 2825 90 80 00

Assay (complexometric)	min. 99.5 %	Copper (Cu)	max. 0.005 %
Nitrates (NO_3)	max. 0.05 %	Calcination residue (1000 °C)	max. 0.5 %
Arsenic (As)	max. 0.0005 %		

Code	Capacity
B3012-1-0500	500 g

B3012-2 Bismuth oxide, synthesis grade

HS-No: 2825 90 80 00

Assay (complexometric)	min. 99.5 %	Copper (Cu)	max. 0.005 %
Nitrates (NO_3)	max. 0.05 %	Calcination residue (1000 °C)	max. 0.5 %
Arsenic (As)	max. 0.0005 %		

Code	Capacity
B3012-2-0500	500 g

BORIC ACID

Synonyms : Ortoboric acid

- H_3BO_3
- M = 61.84 g/mol
- CAS [10043-35-3]
- EC number: 233-139-2

Physical data:
- Spec. density: 1.51 g/cm^3
- Bulk density: ~ 400 - 600 kg/m^3
- Solub. in water (20 °C): 46.5 g/l
- Melting point: 185 °C (decomposes)
- Vapour pressure: (20 °C) 2.7 hPa
- pH (33 g/l H_2O, 20 °C) 3.8 - 4.8

Toxicological data:
- LD 50 (oral, rat): 2660 mg/kg
- WGK: 1

Safety:
- poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

B5010-1 Boric acid, reagent grade

HS-No: 2810 00 90 00

Assay (acidimetric)	min. 99.8 %	Calcium (Ca)	max. 0.002 %
pH (4%, H_2O)	3.6 - 4.0	Cadmium (Cd)	max. 0.0005 %
Insoluble in methanol	max. 0.005 %	Copper (Cu)	max. 0.0005 %
With Methanol-HCL		Heavy metals (as Pb)	max. 0.0005 %
non-volatile matter	max. 0.05 %	Iron (Fe)	max. 0.0001 %
Chloride (Cl)	max. 0.0003 %	Lead (Pb)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0005 %	Magnesium (Mg)	max. 0.0005 %
Sulfates (SO_4)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Arsenic (As)	max. 0.00005 %		

Code	Capacity
B5010-1-0500	500 g
B5010-1-1000	1 kg

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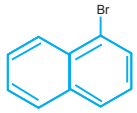
1-BROMONAPHTHALENE

Synonyms : ∝-Naphthyl bromide



- $C_{10}H_7Br$
- M = 207.08 g/mol
- CAS [90-11-9]
- EC number: 201-965-2

Physical data:
- Refractive index 1.6576 (20 °C, 589 nm)
- Spec. density: 1.48 g/cm^3 (20 °C)
- Flash point 66 °C
- Solub. in water (20 °C): insoluble
- Melting point: 0 - 2 °C
- Boiling point 280 - 282 °C
- VbF-class. AIII

Safety:
- EC Index no.: 201-965-2

Transport/storage:
- LGK: 3 B
- Disposal: 2

B6000-3 1-Bromonaphthalene, extra pure

HS-No: 2903 69 90 00

Assay	min. 96 %
Density (d 20°/4°)	1.484 - 1.489 °C
Identity (IR)	conforms

Code	Capacity
B6000-3-0100	100 ml

BROMINE WATER

Synonyms :

- Br_2
- M = 159.92 g/mol
- CAS [7726-95-6]
- EC number: 231-778-1

Physical data:
- Form: solid
- Density: ~1.008 g/cm^3

Safety:
- EC Index no.: 035-001-00-5
- R: 23-36/38-51
- S: 23.2-51-26-37-45-61

Transport/storage:
- ADR: 8 CT1 II UN 2922
- IMDG: 8 II UN 2922
- IATA/ICAO: 8 II UN 2922
- PAX: 808
- CAO: 812

B6007-0 Bromine water, saturated solution

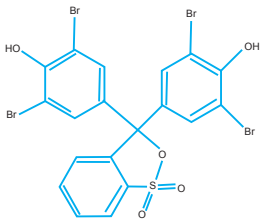
HS-No: 2801 30 90 00

Assay (bromometric)	approx. 3 %

Code	Capacity
B6007-0-0500	500 ml
B6007-0-1000	1 L

BROMOPHENOL BLUE

Synonyms : BPB, 3, 3',5,5',-Tetrabromophenolsulfonphthalein



- $C_{19}H_{10}Br_4O_5S$
- M = 669.96 g/mol
- CAS [115-39-9]
- EC number: 204-086-2

Physical data:
- Form: Solid
- Bulk density: ~730 kg/m^3

- Solub. in water (20 °C): almost insoluble
- Melting point: 273 °C (decomposes)

Transport/storage:
- LGK: 10-13

B6030-0 Bromophenol blue, indicator

HS-No: 2934 99 90 99

pH range (greenish-yellow to blue-violet)	3.1 - 4.4
Absorption maximum 1 (pH 3.0)	434 - 439 nm
Absorption maximum 2 (pH 4.6)	590 - 593 nm
Absorptivity (A1%/1cm; 1 (pH 3.0 on dried material)	350 - 385
Absorptivity (A1%/1cm ; 2 (pH4.6 on dried material)	940 - 1000
Transition range acc. ACS	passes test
Loss on drying (110 °C)	max. 1 %

Code	Capacity
B6030-0-0100	100 g

n-Butyl acetate

Synonyms :

- $CH_3CO_2(CH_2)_3CH_3$
- F.W.: 116.16
- CAS: 123-86-4

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Viscosity (cP, 25 °C): 0.685
- Density (g/ml, 25 °C): 0.876
- Boilling point (°C): 126
- Solubility of water (%, 20 °C): 1.86
- Refractive index (25 °C): 1.392

B6060-4 n-Butyl acetate, HPLC Grade

HS-No: 2915 33 00

See specification in Solvents Specification - 34

Code	Capacity
B6060-4-1001	1.0L
B6060-4-2501	4.0L

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BUFFER SOLUTION

A7011-0 Buffer solution pH 10.00 (Solution carbonate/sodium hydrogen carbonate)

Synonyms :

Physical data:
- Form: Solid
- Density: 1.00 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -6 °C
- Boiling point: 110 °C
- pH (H_2O, 20 °C) 10.0

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 10.00 ± 0.02 at 20 °C

HS-No: 3822 00 00 00

Code	Capacity
A7011-0-1000	1 L

Deviations of pH (ΔpH) at various temperatures:

- 0 °C	10.25	- 30 °C	9.93
- 5 °C	10.18	- 35 °C	9.91
- 10 °C	10.12	- 40 °C	9.89
- 15 °C	10.06	- 45 °C	9.83
- 20 °C	10.00	- 50 °C	9.78
- 25 °C	9.97		

A7013-0 Buffer solution pH 10.00 (boric acid/potassium chloride/sodium hydroxide)

Synonyms :

Physical data:
- Density: 1.00 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -6 °C
- Boiling point: 110 °C
- pH (H_2O, 20 °C) 10.0

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 10.00 ± 0.02 at 25 °C
Certified traceable to N.I.S.T buffers

HS-No: 3822 00 00 00

Code	Capacity
A7013-0-1000	1 L

Deviations of pH (ΔpH) at various temperatures:

- 0 °C	10.32	- 30 °C	9.97
- 10 °C	10.18	- 40 °C	9.89
- 20 °C	10.06	- 50 °C	9.83
- 25 °C	10.00		

A7029-0 Buffer solution pH 4.00 (potassium hydrogen phthalate)

Synonyms :

Physical data:
- Density: 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) 4.00

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 4.00 ± 0.02 at 20 °C
Certified traceable to N.I.S.T buffers

HS-No: 3822 00 00 00

Code	Capacity
A7029-0-1000	1 L

Deviations of pH (Δ pH) at various temperatures:

- 0 °C	+ 0.05	- 20 °C	+/- 0
- 5 °C	+ 0.04	- 25 °C	+ 0.01
- 10 °C	+ 0.02	- 30 °C	+ 0.01
- 15 °C	+ 0.01	- 35 °C	+ 0.01

A7034-0 Buffer solution pH 4.01 (potassium hydrogen phthalate)

Synonyms :

Physical data:
- Form: Solid
- Density: 1 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) 4.01

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 4.01 ± 0.02 at 25 °C

HS-No: 3822 00 00 00

Code	Capacity
A7034-0-1000	1 L

Deviations of pH (ΔpH) at various temperatures:

- 0 °C	4.00	- 50 °C	4.06
- 10 °C	4.00	- 60 °C	4.09
- 20 °C	4.00	- 70 °C	4.13
- 25 °C	4.01	- 80 °C	4.16
- 30 °C	4.02	-950 °C	4.20
- 40 °C	4.04		

A7035-0 Buffer solution pH 5.00 (citrate/sodium hydroxide)

Synonyms :

Physical data:
- Spec. density 1.01g/cm^3
- Solub. in water (20 °C): soluble
- pH value 5.0 (20 °C)

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 5.00 ± 0.02 at 20 °C

HS-No: 3822 00 00 00

Code	Capacity
A7035-0-1000	1 L

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Deviations of pH (pH) at various temperatures:

- 0 °C	+ 0.06	- 25 °C	+/- 0
- 5 °C	+ 0.05	- 30 °C	+/- 0
- 10 °C	+ 0.02	- 35 °C	+/- 0
- 15 °C	+ 0.01	- 40 °C	+/- 0
- 20 °C	+/- 0	- 50 °C	+ 0.01

A7039-0 Buffer solution pH 7.00 (potassium hydrogen phthalate/di-sodium hydrogen phosphate)

Synonyms :

HS-No: 3822 00 00 00

Physical data:
- Density: 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- Melting poing: -5 °C
- Boiling poing: 109 °C
- pH (20 °C) 7.00

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 7.00 ± 0.02 at 25 °C
Certified traceable to N.I.S.T buffers

Code	Capacity
A7039-0-1000	1 L

Deviations of pH (pH) at various temperatures:

- 0 °C	7.12	- 40 °C	6.98
- 10 °C	7.06	- 50 °C	6.97
- 20 °C	7.02	- 60 °C	6.98
- 25 °C	7.00	- 70 °C	6.98
- 30 °C	6.99		

A7049-0 Buffer solution pH 9.00 (boric acid/potassium chloride/sodium hydroxide)

Synonyms :

HS-No: 3822 00 00 00

Physical data:
- Density: ~ 1.00 g/cm^3
- Solub. in water (20 °C): miscible
- pH (H_2O, 20 °C) 9.0

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 9.00 ± 0.02 at 20 °C
Certified traceable to N.I.S.T buffers

Code	Capacity
A7049-0-1000	1 L

Deviations of pH (pH) at various temperatures:

- 0 °C	9.24	- 30 °C	8.91
- 5 °C	9.16	- 35 °C	8.88
- 10 °C	9.11	- 40 °C	8.85
- 15 °C	9.05	- 45 °C	8.82
- 20 °C	9.00	- 50 °C	8.79
- 25 °C	8.95		

A7049-6 Buffer solution pH 9.00 EC grade

Synonyms :

HS-No: 3822 00 00 00

Physical data:
- Density: ~ 1.00 g/cm^3
- Solub. in water (20 °C): miscible
- pH (H_2O, 20 °C) 9.0

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

pH = 9.00 ± 0.02 at 20 °C
Certified traceable to N.I.S.T buffers

Code	Capacity
A7049-6-1000	1 L

Deviations of pH (pH) at various temperatures:

- 0 °C	9.23	- 50 °C	8.78
- 10 °C	9.10	- 60 °C	8.73
- 20 °C	9.00	- 70 °C	8.69
- 30 °C	8.91	- 80 °C	8.66
- 40 °C	8.84	- 90 °C	8.62

1-BUTANOL

Synonyms : n-Butyl alcohol, Propylcarbinol

- $C_4H_{10}O$
- M = 74.12 g/mol
- CAS [71-36-3]
- EC number: 200-751-6

Physical data:
- Density: 0.81 g/cm^3
- Solub. in water (20 °C): 79 g/l
- Melting poing: -89.5 °C
- Boiling poing: 118 °C
- Flash poing: 30 °C
- Ignition temp.: 340 °C
- Vapour pressure: (20 °C) 6.7 hPa
- Refraction index: (n 20 °C/D) 1.3993
- Viscosity: (20 °C) 2.95 mPas
- Dipolar moment: (20 °C) 1.66 Debye
- Dielectric const.: (20 °C) 17.8
- Saturation conc.: (20 °C) 20 g/m^3
- Expl. limit (upper): 11.3 Vol%
- Expl. limit (lower): 1.4 Vol%
- pH (70 g/l H_2O, 20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 790 mg/kg
- MAK: 100ml/m^3, 310 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-004-00-6 [1]
- R: 10-22-37/38-41-67
- S: 7/9-13-26-37/39-46
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 III UN 1120
- IMDG: 3 III UN 1120
- IATA/ICAO: 3 III UN 1120
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

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BU103-1 1 Butanol, reagent grade

HS-NO: 2905 13 00 00

Assay	min. 99.5 %	Lead (Pb)	max. 0.00001 %
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Free Acid (as C_3H_7COOH)	max. 0.005 %	Manganese (Mn)	max. 0.000002 %
Aldehydes	passes test	Nickel (Ni)	max. 0.000002 %
Carbonyl compounds (as CO)	max. 0.01 %	Tin (Sn)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Zinc (Zn)	max. 0.00001 %
Barium (Ba)	max. 0.00001 %	Dibutyl Ether (G.C)	max. 0.1 %
Boron (B)	max. 0.000002 %	2-Butanol (G.C)	max. 0.05 %
Cadmium (Cd)	max. 0.000005 %	Isobutanol (G.C)	max. 0.15 %
Calcium (Ca)	max. 0.00005 %	Butyraldehyde (G.C)	max. 0.01 %
Cobalt (Co)	max. 0.000002 %	Substances Darkened by H_2SO_4	passes test
Copper (Cu)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Chromium (Cr)	max. 0.000002 %	Water	max. 0.1 %
Iron (Fe)	max. 0.0001 %		

Code	Capacity
BU103-1-2500	2.5L

BU103-3 1-Butanol, extra pure

HS-NO: 2905 13 00 00

Assay (G.C)	min. 99.5 %	Nickel (Ni)	max. 0.00002 %
Identity (IR-spectrum)	passes test	Acetone (G.C)	max. 0.02 %
Density (20°/4°)	0.809 - 0.810	Butyraldehyde (G.C)	max. 0.03 %
Acidity	max. 0.0008 meq/g	di-n-Butylether (G.C)	max. 0.2 %
Alkalinity	max. 0.001 meq/g	Iso-Butanol (G.C)	max. 0.25 %
Copper (Cu)	max. 0.00002 %	Non-volatile matter	max. 0.004 %
Iron (Fe)	max. 0.00005 %	Water (K.F)	max. 0.1 %
Lead (Pb)	max. 0.00002 %		

Code	Capacity
BU103-3-2500	2.5L

BU103-4 1-Butanol, HPLC grade

HS-NO: 2905 13 00 00

See specification in Solvent Specification - 33

Code	Capacity
BU103-4-1001	1.0L
BU103-4-4001	4.0L

BU103-11 1-Butanol, Pesticide grade

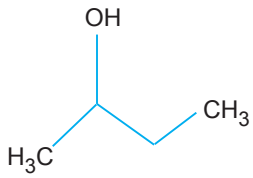
HS-NO: 2905 13 00 00

See specification in Solvent Specification - 21

Code	Capacity
BU103-11-1001	1.0L
BU103-11-4001	4.0L

2-BUTANOL

Synonyms : sec-Butyl alcohol, Butyl alcohol secondary, Ethyl methyl carbinol



- $C_4H_{10}O$
- M = 74.12 g/mol
- CAS [78-92-2]
- EC number: 201-158-5

Physical data:
- Density: 0.81 g/cm^3
- Solub. in water (20 °C): 240 - 250 g/l
- Melting poing: -114 °C
- Boiling poing: 98.5 - 100.5 °C
- Flash poing: 24 °C
- Ignition temp.: 390 °C
- Vapour pressure: (20 °C) 16.5 hPa
- Viscosity: (20 °C) 4.21 mPas
- Dielectric const.: (20 °C) 15.8
- Saturation conc.: (20 °C) 52 g/m^3
- Expl. limit (upper): 9.8 Vol%
- Expl. limit (lower): 1.4 Vol%

Toxicological data:
- LD 50 (oral, rat): 6480 mg/kg
- MAK: 100ml/m^3, 310 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-004-01-3 [1]
- R: 10-36/37-67
- S: 7/9-13-24/25-26-46
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 III UN 1120
- IMDG: 3 III UN 1120
- IATA/ICAO: 3 III UN 1120
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

BU117-1 2-Butanol, reagent grade

HS-NO: 2905 14 90 00

Assay	min. 99.5 %	Lead (Pb)	max. 0.00001 %
Clour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Acidity	max. 0.0005 meq/g	Manganese (Mn)	max. 0.000002 %
Alkalinity	max. 0.0002 meq/g	Nickel (Ni)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Tin (Sn)	max. 0.00001 %
Barium (Ba)	max. 0.00001 %	Zinc (Zn)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Tert-butanol (G.C)	max. 0.1 %
Cadmium (Cd)	max. 0.000005 %	Dibutyl ether (G.C)	max. 0.2 %
Calcium (Ca)	max. 0.00005 %	Methyl ethyl ketone (G.C)	max. 0.1 %
Cobalt (Co)	max. 0.000002 %	2-Propanol (G.C)	max. 0.2 %
Copper (Cu)	max. 0.000002 %	Substances Darkened by H_2SO_4	passes test
Chromium (Cr)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Iron (Fe)	max. 0.00001 %	Water	max. 0.1 %

Code	Capacity
BU117-1-2500	2.5L
BU117-1-2501	2.5L

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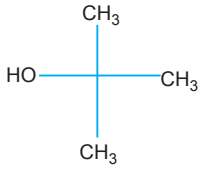
TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)

Synonyms : 2-Methyl-2-propanol, Trimethylcabinol, tert-Butyl alcohol



- $(CH_3)_3COH$
- M = 74.12 g/mol
- CAS [75-65-0]

Physical data:
- Form: Semisolid
- Density: 0.78 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 25.3 °C
- Boiling point: 82 - 83 °C
- Flash point: 14 °C
- Ignition temp.: 490 °C
- Vapour pressure: (20 °C) 40.7 hPa
- Viscosity: (30 °C) 3.35 mPas

-> Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const.: (30 °C) 10.9
- Saturation conx.: (20 °C) 122 g/m^3
- Expl. limit (upper): 8.0 Vol%
- Expl. limit (lower): 2.3 Vol%
- pH (20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 2733 mg/kg
- MAK: 20ml/m^3, 62 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-005-00-1
- R: 11-20
- S: 9-16
- VbF class: B
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1120
- IMDG: 3 II UN 1120
- IATA/ICAO: 3 II UN 1120
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

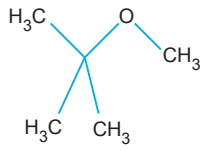
BU122-1 tert-Butyl alcohol (2-Methyl-2-Propanol), reagent grade

Assay	min. 99.0 %	Titrable acid	max. 0.001 meq/g
Colour	20 APHA	Water (coulometric KF)	max. 0.1 %
Residue after evaporation	max. 0.003 %		

Code	Capacity
BU122-1-2500	2.5 L

TERT-BUTYL METHYL ETHER

Synonyms : Methyl tert-butyl ether, MTBE



- $C_3H_{12}O$
- M = 88.15 g/mol
- CAS [1634-04-4]
- EC number: 216-653-1

Physical data:
- Form: Liquid
- Density: 0.74 g/cm^3
- Solub. in water (10 °C): -26 g/l
- Melting point: -108.6 °C
- Boiling point: 55 °C
- Flash point: -28 °C
- Ignitin temp.: 460 °C
- Vapour pressure: (20 °C) 268 hPa
- Viscosity: (20 °C) 0.27 mPas
- Evap. heat: (55 °C) 342 kJ/kg
- Expl. limit (upper): 8.4 Vol%
- Expl. limit (lower): 1.65 Vol%

Toxicological data:
- LD 50 (oral, rat): 3870 mg/kg
- MAK: 50ml/m^3, 180 mg/m^3
- WGK: 1

Safety:
- R: 11-66
- S: 16-23.2-51-29-33
- VbF class: AI

Transport/storage:
- ADR: 3 F1 II UN 2398
- IMDG: 3 II UN 2398
- IATA/ICAO: 3 II UN 2398
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

BU7000-1 Tert-butyl Methyl Ether, reagent grade

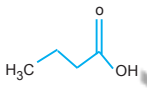
HS-No: 2909 19 00 90

Assay (G.C)	min. 99.5 %	Iron (Fe)	max. 0.00001 %
Acidity	max. 0.0005 meq/g	Lead (Pb)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Magnesium (Mg)	max. 0.00001 %
Barium (Ba)	max. 0.00001 %	Manganese (Mn)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Nickel (Ni)	max. 0.000002 %
Calcium (Ca)	max. 0.00005 %	Tin (Sn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Zinc (Zn)	max. 0.00001 %
Chromium (Cr)	max. 0.000002 %	Peroxides (as H_2O_2)	max. 0.0005 %
Cobalt (Co)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Copper (Cu)	max. 0.000002 %	Water (K.F)	max. 0.03 %

Code	Capacity
B7000-1-2501	2.5 L

BUTYRIC ACID

Synonyms :



- $C_4H_8O_2$
- M = 88.11 g/mol
- CAS [107-92-6]
- EC number: 203-532-3

Physical data:
- Refractive index 1.3969 (20 °C, 589 nm)
- Vapour pressure: 0.9 hPa (20 °C)
- Spec. Density: 0.96 g/cm^3 (20 °C)
- Explosive limits 2.35 - 12.3 Vol%
- Flash point: 75 °C
- Solub. in water (20 °C): soluble
- pH value 3 (10 g/l, H_2O, 20 °C)
- Melting point: -8 - -6 °C
- Boiling point: 162 - 165 °C

Toxicological data:
- LD 50 (oral, rat): 2940 mg/kg
- WGK: 1

Safety:
- Corrosive
- EC-Index-No. 607-135-00-X

Transport/storage:
- LGK: 8 A
- Packing-cat A
- Disposal: 4
- Road/Rail 8/32 c
- IMDG-Code : 8 III UN 2820
- IATA/DGR: 8 III UN 2820
- CAO 820 PAX 818
- SAX: 6.606

B7001-1 Butyric acid, reagent grade

HS-No: 2915 60 19 00

Assay	max. 99 %
Density (d 20°/4°)	0.956 - 0.958
Water	max. 0.2
Identity (IR)	conforms

Code	Capacity
B7001-1-0500	500 ml

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Chemical list : C

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CADMIUM STANDARD SOLUTION 1000MG/L FOR AA

Synonyms :

Physical daty:
- FormL Liquid
- Density: ~ 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- R: 20/21/22-36/38-52
- S: 26-36/37-46
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T4 III UN 3287
- IMDG: 6.1 III UN 3287
- IATA/ICAO: 6.1 III UN 3287
- PAX: 611
- CAO: 618
- LGK: 8B

1 ml = 1000±5 mg/l

C1005-0 Cadmium standard solution 1000mg/l for AA (cadmium nitrate in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Code	Capacity
C1005-0-0500	500 ml

COPPER STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Form: Liquid
- Density: ~ 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8B

1 ml = 1000±5 mg/l

C1007-0 Copper standard solution 1000mg/l for AA (copper (II) nitrate in nitric acid 0.5 mol/l)

HS-No: 3288 00 00 00

Composition ..... 1000±5 mg/l

Code	Capacity
C1007-0-0500	500 ml

CHROMIUM STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Density: ~ 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- R: 36/38
- S: 26-37

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8B

1 ml = 1000±5 mg/l

C1009-0 Chromium standard solution 1000mg/l for AA (chromium (III) nitrate in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Composition ..... 1000±5 mg/l

Code	Capacity
C1009-0-0500	500 ml

CALCIUM CARBONATE PRECIPITATED

Synonyms : Lime, Chalk, Marble

- $CaCO_3$
- M = 100.09 g/mol
- CAS [471-34-1]
- EC number: 207-439-9

Physical data:
- Spec. density: 2.71 g/cm^3
- Bulk density: ~ 400 - 700 kg/m^3
- Solub. in water (20 °C): 14 mg/l
- Melting point: 825 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) ~ 9.5 - 10.5

Toxicological data:
- LD 50 (oral, rat): 6450 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

C1041-1 Calcium carbonate precipitated, reagent grade

HS-No: 2836 50 00 00

Assay	min. 99 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.01 %	Lead (Pb)	max. 5 ppm
Phosphorus (P)	max. 0.005 %	Magnesium (Mg)	max. 0.02 %
Silicon (Si)	max. 0.002 %	Potassium (K)	max. 0.01 %
Sulfur (S)	max. 0.01 %	Sodium (Na)	max. 0.02 %
Nitrogen Compounds (N)	max. 0.01 %	Zinc (Zn)	max. 0.001 %
Copper (Cu)	max. 5 ppm		

Code	Capacity
C1041-1-0500	500 g

C1041-3 Calcium carbonate precipitated, extra pure

HS-No: 2836 50 00 00

Assay(complexometric, on dried subs.)	min. 98.5 %	Barium (Ba)	max. 0.002 %
Insoluble in acetic acid	max. 0.2 %	Cadmium (Cd)	max. 0.0001 %
Insoluble in hydrochloric acid	max. 0.2 %	Chromium (Cr)	max. 0.002 %
Chloride (Cl)	max. 0.025 %	Copper (Cu)	max. 0.001 %
Fluorides (F)	max. 0.005 %	Iron (Fe)	max. 0.02 %
Sulfates (SO_4)	max. 0.025 %	Lead (Pb)	max. 0.0003 %
Heavy metals (as Pb)	max. 0.002 %	Mercury (Hg)	max. 0.00005 %
Antimony (Sb)	max. 0.002 %	Zinc (Zn)	max. 0.001 %
Arsenic (As)	max. 0.0003 %	Non precipitable with $(NH_4)_2C_2)_4$	max. 1 %
		Loss on drying (200 °C, 4 h)	max. 2 %

Code	Capacity
C1041-3-0500	500 g

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CALCIUM CHLORIDE ANHYDROUS

Synonyms : Chloro calcium

- $CaCl_2$
- M = 110.99 g/mol
- CAS [10043-52-4]
- EC number: 233-140-8

Physical data:
- Spec. density: 2.15 g/cm^3
- Solub. in water (20 °C): 740 mg/l
- Melting point: 772 °C
- Boiling point: > 1600 °C
- pH (100 g/l H_2O, 20 °C) ~8 - 10

Toxicological data:
- LD 50 (oral, rat): 1000 mg/kg
- WGK: 1

Safety:
- EC Index no.: 017-013-00-2
- R: 36
- S: 22-24
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

C1051-1 Calcium chloride anhydrous, reagent grade

HS-No: 2827 20 00 00

Assay (complexometric)	min. 95 %	Copper (Cu)	max. 0.0005 %
Acidity (as HCL)	max. 0.005 %	Iron (Fe)	max. 0.0025 %
Alkalinity (as $Ca(OH)_2$)	max. 0.5 %	Lead (Pb)	max. 0.0005 %
Nitrates (NO_3)	max. 0.01 %	Magnesium (Mg)	max. 0.1 %
Phosphates (PO_4)	max. 0.001 %	Manganese (Mn)	max. 0.0005 %
Sulfates (SO_4)	max. 0.02 %	Potassium (K)	max. 0.1 %
Ammonium (NH_4)	max. 0.005 %	Nickel (Ni)	max. 0.0005 %
Arsenic (As)	max. 0.0001 %	Sodium (Na)	max. 0.1 %
Barium (Ba)	max. 0.02 %	Zinc (Zn)	max. 0.01 %

Code	Capacity
C1051-1-0500	500 g
C1051-1-1000	1 kg

CALCIUM CHLORIDE DIHYDRATE

Synonyms :

- $CaCl_2 \cdot 2H_2O$
- M = 147.02 g/mol
- CAS [10035-04-8]
- EC number: 233-140-8

Physical data:
- Spec. density: 1.85 g/cm^3
- Melting point: ~ 176 °C
- pH (100 g/l H_2O, 20 °C) ~ 4.5 - 6.5

Toxicological data:
- LD 50 (oral, rat): 1000 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- EC Index no.: 017-013-00-2
- R: 36
- S: 22-24
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

C1060-1 Calcium chloride dihydrate, reagent grade

HS-No: 2827 20 00 00

Assay (as $CaCl_2$) (complexometric)	74 - 78 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	max. 0.01 %	Iron (Fe)	max. 0.0025 %
Acidity (as HCl)	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Alkalinity (as $Ca(OH)_2$)	max. 0.01 %	Magnesium (Mg)	max. 0.01 %
Nitrates (NO_3)	max. 0.003 %	Manganese (Mn)	max. 0.0005 %
Phosphates (PO_4)	max. 0.001 %	Nickel (Ni)	max. 0.0005 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.01 %
Ammonium (NH_4)	max. 0.005 %	Sodium (Na)	max. 0.02 %
Arsenic (As)	max. 0.0001 %	Zinc (Zn)	max. 0.001 %
Barium (Ba)	max. 0.005 %		

Code	Capacity
C1060-1-0500	500 g
C1060-1-1000	1 kg

CALCIUM FLUORIDE

Synonyms :

- CaF_2
- M = 78.07 g/mol
- CAS [7789-75-5]
- EC number: 233-140-8

Physical data:
- Spec. density: 3.18 g/cm^3 (20 °C)
- Solub. in water 0.016 (18 °C) almost insolube
- pH value ~ 4 (100 g/l H_2O, 20 °C) (slurry)
- Melting poing: ~1418 °C
- Bulk density ~ 350 - 450 kg/m^3
- Boiling poing 2513 °C

Transpowt/storage:
- LGK: 10-13

Toxicological data:
- MAK: 2.5 mg/m^3
- RTECS EW: 1760000
- LD 50 oral rat: 4250 mg/kg
- WGK: nwg

C1062-1 Calcium fluoride, reagent grade

HS-No: 2826 19 00 00

Assay	min. 98.5 %	Silicon (Si)	max. 0.01 %
Sulfate (SO_4)	max. 0.05 %	Total nitrogen (N)	max. 0.005 %
Chloride (Cl)	max. 0.01 %	Loss on drying	max. 0.4 %
Iron (Fe)	max. 0.003 %	Heavy metals (as Pb)	max. 0.003 %

Code	Capacity
C1062-1-0500	500 g

CALCIUM HYDROGEN PHOSPHATE ANHYDROUS

Synonyms : Calcium orthophosphate, Calcium phophate dibasic

- $CaHO_4P$
- M = 136.06 g/mol
- CAS [7757-93-9]
- EC number: 231-826-1

Physical data:
- Solub. in water 0.1 g/l (25 °C)
- Bulk density: ~ 900 kg/m^3

Toxicological data:
- WGK: 1

Safety:
- Poison class CH: 4F

Transport/storage:
- LGK: 10-13

C1065-3 Calcium hydrogen phosphate anhydrous, extra pure

HS-No: 2835 25 10 00

Assay	min. 98.0 %	Barium (Ba)	passes test
Carbonate (as CO_2)	passes test	Iron (Fe)	max. 0.04 %
Chloride (Cl)	max. 0.03 %	Mercury (Hg)	max. 0.0001 %
Fluoride (F)	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Sulphate (SO_4)	max. 0.5 %	Loss on ignition (800 °C)	7.0 - 8.5
Heavy metals	max. 0.001 %	Loss on dring	max. 2.0 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
C1065-3-0250	250 g

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CALCIUM HYDROXIDE

Synonyms :

- $Ca(OH)_2$
- M = 74.09 g/mol
- CAS [1305-62-0]
- EC number: 215-137-3

Physical data:
- pH (20 °C) 12.1 - 12.5

Safety:
- R: 41
- S: 22-24-26-39
- Poison calss CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

C1073-1 Calcium hydroxide, reagent grade

HS-No: 2825 90 19 00

Assay	min. 96 %	Sulfate (SO_4)	max. 0.05 %
Assay of $CaCO_3$	max. 3 %	Matter not precipitated by ammonium oxalate (as sulfate)	max. 2.5 %
Insoluble in HCl	max. 0.03 %	Heavy metals (Pb)	max. 0.0002 %
Copper (Cu)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Iron (Fe)	max. 0.05 %		
Chloride (Cl)	max. 0.005 %		

Code	Capacity
C1073-1-0500	500 g

C1073-3 Calcium hydroxide, extra pure

HS-No: 2825 90 19 00

Assay (acidimetric)	min. 95 %	Sulfates (SO_4)	max. 0.4 %
Insoluble in HCl	max. 0.5 %	Arsenic (As)	max. 0.0004 %
Carbonates (as $CaCO_3$)	max. 5 %	Heavy metals (as Pb)	max. 0.002 %
Chloride (Cl)	max. 0.033 %	Magnesium and alkali metals	max. 4 %

Code	Capacity
C1073-3-0500	500 g
C1073-3-1000	1 kg

CALCIUM NITRATE TETRAHYDRATE

Synonyms : Nitric acid calcium salt tetrahydrate

- $Ca(NO_3)_2 \cdot 4H_2O$
- M = 236.15 g/mol
- CAS [13477-34-4]
- EC number: 233-332-1

Physical data:
- Spec. density: 1.82 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (20 °C): soluble

- Melting point: 42 °C
- pH (50 g/l H_2O, 20 °C) 6.0 (anhydrous substance)

Toxicological data:
- LD 50 (oral, rat): 3900 mg/kg
- WGK: 1

Safety:
- R: 8-36
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1454
- IMDG: 5.1 III UN 1454
- IATA/ICAO: 5.1 III UN 1454
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 14

C1081-1 Calcium nitrate tetrahydrate, reagent grade

HS-No: 2834 29 80 00

Assay (complexometric)	min. 99 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	4.5 - 7	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Nitrites (NO_2)	max. 0.001 %	Magnesium (Mg)	max. 0.015 %
Phosphates (PO_4)	max. 0.001 %	Magnesium and alkali salts (as SO_4)	max. 0.2 %
Sulfates (SO_4)	max. 0.002 %	Potassium (K)	max. 0.005 %
Ammonium (NH_4)	max. 0.005 %	Sodium (Na)	max. 0.02 %
Barium (Ba)	max. 0.005 %	Strontium (Sr)	max. 0.01 %
Copper (Cu)	max. 0.0005 %		

Code	Capacity
C1081-1-1000	1 kg

CALCIUM OXIDE

Synonyms : Lime, caustic; Quicklime

- CaO
- M = 566.08 g/mol
- CAS [1305-78-8]
- EC number: 215-138-9

Physical data:
- Form: Solid
- Spec. density: ~3.37 g/cm³
- Bulk density: ~800 - 1200 kg/m³
- Solub. in water (20 °C): 1.65 g/l (exothermic reaction)

- Boiling point: 2850 °C
- pH (saturation solution H_2O, 20 °C) 12.6

Toxicological data:
- MAK: 5 mg/m³
- WGK: 1

Safety:
- R: 41
- S: 22-24-26-39
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1454
- IMDG: 5.1 III UN 1454
- IATA/ICAO: 5.1 III UN 1454
- PAX: 516
- CAO: 5.1 B
- Disposal: 14

C1089-1 Calcium oxide, reagent grade

HS-No: 2825 90 19 00

Assay	min. 90.0 %	Iron (Fe)	max. 0.1 %
Chloride (Cl)	max. 0.05 %	Lead (Pb)	max. 0.01 %
Sulfate (SO_4)	max. 0.1 %	Nickel (Ni)	max. 0.01 %
Copper (Cu)	max. 0.01 %		

Code	Capacity
C1089-1-0500	500 g

CALCIUM SULFATE DIHYDRATE

Synonyms:

- $CaSO_4 \cdot 2H_2O$
- M = 172.17 g/mol
- CAS [10101-41-4]
- EC number: 231-900-3

Physical data:
- Spec. density: 2.32 g/cm³
- Bulk density: ~400 - 600 kg/m³

- Solub. in water (20 °C): ~ 2 g/l
- pH (50 g/l H_2O, 20 °C) 7.0

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

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C1100-1 Calcium sulfate dihydrate, reagent grade

HS-No: 2833 29 90 00

Assay (complexometric)	min. 99 %	Chlorides (Cl)	max. 0.005 %
Insoluble in HCl	max. 0.01 %	Total N	max. 0.001 %
Appearance of solution		Iron (Fe)	max. 0.001 %
(2.5% in HCl 10%)	passes test	Heavy metals (Pb)	max. 0.002 %
Free Acid (as H_2SO_4)	max. 0.01 %	Magnesium (Mg)	max. 0.01 %
Free Alkali (as $Ca(OH)_2$)	max. 0.01 %	Potassium (K)	max. 0.01 %
Carbonates (CO_3)	passes test	Sodium (Na)	max. 0.1 %

Code	Capacity
C1100-1-0500	500 g
C1100-1-1000	1 kg

C1100-3 Calcium sulfate dihydrate, extra pure

HS-No: 2833 29 90 00

Assay (complexometric)	min. 98 %	Total N	max. 0.001 %
Appearance of solution		Iron (Fe)	max. 0.001 %
(2.5% in HCl 10%)	passes test	Heavy metals (Pb)	max. 0.002 %
Acidity/Alcalinity	max. 0.01 %	Magnesium (Mg)	max. 0.01 %
Free Alkali (as $Ca(OH)_2$)	max. 0.01 %	Potassium (K)	max. 0.01 %
Carbonates (CO_3)	passes test	Sodium (Na)	max. 0.1 %
Chlorides (Cl)	max. 0.005 %		

Code	Capacity
C1100-3-0500	500 g
C1100-3-1000	1 kg

CARBON DISULFIDE

Synonyms : Carbon disulfide, Dithiocarbonic anhydride

- CS_2
- M = 76.14 g/mol
- CAS [75-15-0]
- EC number: 200-843-6

Physical data:
- Density: 1.26 g/cm^3
- Solub. in water (20 °C): 2.1 g/l
- Melting poing:: -111.6 °C
- Boiling point: 46.5 °C
- Flash point: -30 °C
- Ignition temp.: 100 °C
- Vapour pressure: (20 °C) 398 hPa
- Viscosity: (20 °C) 0.36 mPas
- Dielectric const.: (20 °C) 2.6
- Saturation conc.: (20 °C) 1244 g/m^3
- Expl. limit (upper): 60 Vol%
- Expl. limit (lower): 1 Vol%

Toxicological data:
- LD 50 (oral, rat): 3188 mg/kg
- MAK: 5 ml/m^3, 16 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 006-003-00-3
- R: 11-36/38-48/23-62-63
- S: 16-33-36/37-45
- VbF class: AI
- Poison class CH (Swiss): 1

Transport/storage:
- ADR: 3 FT1 I UN 1131
- IMDG: 3 I UN 1131
- IATA/ICAO: forbidden 3 I Un 1131
- PAX: F
- CAO: F
- LGK: 3A
- Disposal: 9

C1116-3 Carbon disulfide, extra pure

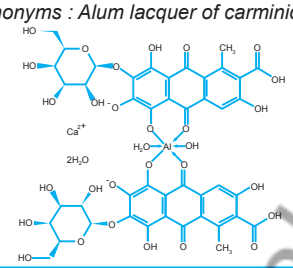
HS-No: 2813 10 00 00

Assay (G.C)	min. 99.5 %	Iron (Fe)	max. 0.00005 %
Benzene (G.C)	max. 0.005 %	Nickel (Ni)	max. 0.00002 %
Toluene (G.C)	max. 0.005 %	Lead (Pb)	max. 0.00002 %
Sulfates (SO_4)	max. 0.0005 %	Non-volatile matter	max. 0.002 %
Sulfites (as SO_2)	max. 0.002 %	Water	max. 0.02 %
Copper (Cu)	max. 0.00002 %		

Code	Capacity
C1116-3-2500	2.5L

CARMINE, C.I. 75470

Synonyms : Alum lacquer of carminic acid



- $C_{44}H_{37}AlCaO_{29}·3H_2O$
- M = 492.38 g/mol
- CAS [1390-65-4]
- EC number: 215-724-4

Physical data:
- Form: Solid
- Bulk density: ~290 kg/m^3
- Solub. in water (20 °C): insoluble

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

C1120-0 Carmine, C.I. 75470, for microscopy

HS-No: 3203 00 90 00

Absorption maximum λ_1 in DMSO	563 - 571 nm	Absorptivity (E1%/1cm; λ_2 max)	100 - 150
Absorption maximum λ_2 in DMSO	525 - 533 nm	Calcination residue	9 - 17
Absorptivity (E1%/1cm; λ_1 max)	70 - 110	Loss on drying (110 °C)	max. 15 %

Code	Capacity
C1120-0-0010	10 g

CERIUM (IV) SULFATE TETRAHYDRATE

Synonyms :

- $Ce(SO_4)_2·4H_2O$
- M = 404.30 g/mol
- CAS [10294-42-5]
- EC number: 237-029-5

Physical data:
- Form: Solid
- Spec. density: 5.02 g/cm^3
- Bulk density: ~ 650 - 850 kg/m^3
- Solub. in water (20 °C): 38 g/l
- Melting poing: 180 - 200 °C (release of crystalline water)
- pH (10 g/l H_2O, 20 °C) ~ 1.6

Toxicological data:
- WGK: 3*

Safety:
- R: 36/38
- S: 26
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

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C2007-3 Cerium (IV) sulfate tetrahydrate, extra pure

HS-No: 2846 10 00 90

Assay (iodometric)	min. 98 %	Iron (Fe)	max. 0.01 %
Chlorides (Cl)	max. 0.003 %	Lead (Pb)	max. 0.01 %
Copper (Cu)	max. 0.01 %	Nickel (Ni)	max. 0.01 %
Heavy metals (as Pb)	max. 0.008 %		

Code	Capacity
C2007-3-0101	100 g

CERIUM (IV) SULFATE

C2009-0 Cerium (IV) sulfate, solution 0.1 mol/l (0.1 N)

HS-No: 2846 10 00 90

Synonyms :

- $Ce(SO_4)_2 \cdot 4H_2O$
- M = 404.30 g/mol
- CAS [10294-42-5]
- EC number: 237-029-5

Physical data:
- Density: 1.06 g/cm^3
- pH (20 °C) 0.4

Toxicological data:
- WGK: 1

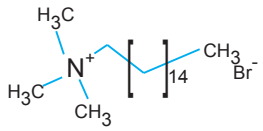
Transport/storage:
- LGK: 10-13
- Disposal: 28

1ml = 0.04043 g $Ce(SO_4)_2 \cdot 4H_2O$

Code	Capacity
C2009-0-1000	1 L

CETYLTRIMETHYLAMMONIUM BROMIDE

Synonyms :



- $C_{19}H_{47}BrN$
- M = 364.46 g/mol
- CAS [57-09-0]
- EC number: 200-311-3

Physical data:
- Solub. in water: 0.192 g/l (20 °C)
- pH value: 5-7 (50 g/l H_2O, 20 °C)
- Melting point: 237-243 °C
- Bulk density: ~ 390 kg/m^3

Toxicological data:
- LD 50 (oral, rat): 410 mg/kg
- WGK: 3

Safety:
- Poison calss CH: 3
- R: 22-36/38-50/53
- S: 26-39-61

Transport/storage:
- Packing-cat: A
- Disposal: 3
- Road/Rail: 9/12 c
- IMDG-Code: 9/III UN 3077
- IATA/DGR: 9 III UN 3077 CAO 911 PAX 911
- LGK: 10-13

C2050-1 Cetyltrimethylammonium bromide, reagent grade

HS-No: 2923 90 00 00

Assay	min. 99 %	Iron (Fe)	max. 0.001 %
Acidity and alkalinity	passes test	Heavy metals (as Pb)	max. 0.0005 %
Solubility test in ethanol	passes test	Residue after ignition (as sulfate)	max. 0.1 %
Water (H_2O)	max. 0.5 %		

Code	Capicity
C2050-1-0100	100 g

CHARCOAL ACTIVATED

Synonyms :

- C
- M = 12.01 g/mol
- CAS [7440-44-0]
- EC number: 231-153-3

Physical data:
- Form: Solid
- Spec density: ~1.8 - 2.1 g/cm^3
- Bulk density: ~ 250 - 350 kg/m^3
- Solub. in water (20 °C): insoluble
- pH (50 g/l H_2O, 20 °C) ~ 4 - 7

Toxicological data:
- MAK: 1.5 mg/m^3
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

C3000-1 Chrcoal activated, granulated

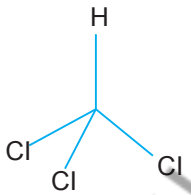
HS-No: 3802 10 00 20

Ash content	max. 3 %	Methylene bue adsorption	min. 21 g/100g
Acid - extractable matter	0.8 %	Calcium (Ca)	max. 0.02 %
pH (5%, H_2O)	4 - 7	Iron (Fe)	max. 0.02 %
Iodine adsorption	1050 mg/g	Moisture	max. 2 %

Code	Capicity
C3000-1-1000	1 kg

CHLOROFORM

Synonyns : Trichloromethane, Formyl trichloride



- $CHCl_3$
- M = 119.38 g/mol
- CAS [67-66-3]
- EC number: 200-663-8

Physical data:
- Density: 1.47 g/cm^3
- Solub. in water (20 °C): 8 g/l
- Melting point: -63 °C
- Boiling point: 61 °C
- Ignition temp.: 982 °C
- Vapour pressure: (20 °C) 213 hPa
- Viscosit: (20 °C) 0.56 mPas
- Dipolar moment: (20 °C) 1.01 Debye
- Dielectric const.: (20 °C) 4.8
- Saturation conc.: (20 °C) 1027 g/m^3

Toxicological data:
- LD 50 (oral, rat): 908 mg/kg
- MAK: 0.5 ml/m^3, 2.5 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 602-006-00-4
- R: 22-38-40-48/20/22
- S: 36/37-46
- Poison class CH (Swiss): 1*

Transport/storage:
- ADR: 6.1 T1 III UN 1888
- IMDG: 6.1 III UN 1888
- IATA/ICAO: 6.1 III UN 1888
- PAX: 610
- CAO: 612
- LGK: 10-13
- Disposal: 2

C3059-1 Chloroform, reagent grade

HS-No: 2903 13 00 00

Assay (G.C)	99.0 - 99.5 %	Calcium (Cd)	max. 0.00005 %
Identity (IR-spectrum)	Passes test	Chromium (Cr)	max. 0.000002 %
Density (20°/4°)	1.476 - 1.479	Cobalt (Co)	max. 0.000002 %
Appearance	clear	Copper (Cu)	max. 0.000002 %
Colour	max. 10 Hazen	Iron (Fe)	max. 0.00001 %
Ethanol (G.C)	0.5 - 10 %	Lead (Pb)	max. 0.00001 %
Free Acid (as HCl)	max. 0.0002 %	Magnesium (Mg)	max. 0.00001 %
Free Chloride (as Cl)	max. 0.00003 %	Manganese (Mn)	max. 0.000002 %
Chloride (Cl)	max. 0.00002 %	Nickel (Ni)	max .0.000002 %
Aluminium (Al)	max. 0.00005 %	Tin (Sn)	max. 0.00001 %
Barium (Ba)	max. 0.00001 %	Zinc (Zn)	max .0.00001 %
Boron (B)	max. 0.000002 %	Water	max. 0.01 %
Cadmium (Cd)	max. 0.000005 %		

Code	Capicity
C3059-1-2501	2.5 L
C3059-1-4001	4 L

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C3059-4 Chloroform, HPLC grade

HS-No: 2903 13 00 00

Assay (G.C)	min. 99 %	Lead (Pb)	max. 0.000005 %
Color	max. 10 Hazen	Non-volatile matter	max. 0.0003 %
Acetone and Aldehyde	max. 0.005 %	Water	max. 0.02 %
Acid and Chloride	passes test	Suitability for use in dithizone test	passes test
Free Chloride (as Cl)	passes test		

Code	Capacity
C3059-4-2501	2.5 L
C3059-4-4001	4.0 L

C3057-4 Chloroform, (Stabilized with Amylene), HPLC grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 35

Code	Capacity
C3057-4-1001	1.0 L
C3057-4-4001	4.0 L

C3057-11 Chloroform, (Stabilized with Amylene), Pesticide grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 22

Code	Capacity
C3057-11-1001	1.0 L
C3057-11-4001	4.0 L

C3057-12 Chloroform, (Stabilized with Amylene), Ultimate grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 11

Code	Capacity
C3057-12-2501	1.0 L
C3057-12-4001	4.0 L

C3058-4 Chloroform, (Stabilized with Alcohol), HPLC grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 35

Code	Capacity
C3058-4-1001	1.0 L
C3058-4-4001	4.0 L

C3058-11 Chloroform, (Stabilized with Alcohol), Pesticide grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 22

Code	Capacity
C3058-11-1001	1.0 L
C3058-11-4001	4.0 L

C3058-12 Chloroform, (Stabilized with Alcohol), Ultimate grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 12

Code	Capacity
C3058-12-1001	1.0 L
C3058-12-4001	4.0 L

C3058-15 Chloroform, (Stabilized with Alcohol), Ultra Dry grade

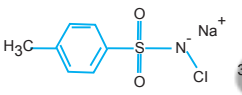
HS-No: 2903 13 00 00

See specification in Solvent Specification - 62

Code	Capacity
C3058-15-1001	1.0 L
C3058-15-4001	4.0 L

CHLORAMINE T TRIHYDRATE

Synonyms : N-Chloro-4-methylbenzenesulfonamide sodium salt, N-Chloro-p-toluenesulfonamide sodium salt, Tosylchloramide sodium. N-Chloro-4-totuenesulfonamide sodium salt



- $C_7H_7ClNaNO_2S{\cdot}3H_2O$
- M = 281.69 g/mol
- CAS [7080-50-4]
- EC number: 204-854-7

Physical data:
- Form: Crystals
- Bulk density: ~ 500 - 600 kg/m^3
- Solub. in water (25 °C): 150 g/l
- Melting point: > 70 °C (decomposes)
- Fresh point: 192 °C
- pH (50 g/l H_2O, 20 °C) ~ 8 - 10

Toxicological data:
- LD 50 (oral, rat): ~1000 mg/kg
- WGK: 2

Safety:
- EC Index no.: 616-010-00-9
- R: 22-31-34-42
- S: 7-22-26-36/37/39-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C8 III UN 3263
- IMDG: 8 III UN 3263
- IATA/ICAO: 8 III UN 3263
- PAX: 822
- CAO: 823
- LGK: 8 A
- Disposal: 3

C3060-1 Chloramine T Trihydrate, reagent grade

HS-No: 2935 00 90 90

Assay	99 - 103 %	Insoluble in ethanol	max. 1.5 %
Identity (IR-spectrum)	passes test	pH (5%, H_2O)	8 - 10
Appearance of aqueous solution	passes test	Suitability for detrmination of bromide (Br)	passes test

Code	Capicity
C3060-1-0250	250 g

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CHLOROPLATINIC ACID

Synonyms :

- $H_2PtCl_6 \cdot 6H_2O$
- M = 517.92 g/mol
- CAS [18497-13-7]

C4000-1 Chloroplatinic acid, reagent grade

Assay (as Pt)	min. 37.0 %	Nitrate (NO_3)	max. 0.04 %
Solubility test in water	passes test	Soluble matter in nitric acid	max. 0.2 %

Code	Capacity
C4000-1-0001	1 g

CHROMIUM (III) CHLORIDE HEXAHYDRATE

Synonyms:

- $CrCl_3 \cdot 6H_2O$
- M = 266.45 g/mol
- CAS [10060-12-5]
- EC number: 233-038-3

Physical data:
- Spec. density: 2.76 g/cm^3
- Bulk density: ~ 700 kg/m^3
- Solub. in water (20 °C): 590 g/l
- Melting point: 95 °C
- pH (50 g/l H_2O, 20 °C) 2 - 3

Toxicological data:
- LD 50 (oral, rat): 1790 mg/kg
- WGK: 2

Safety:
- R: 22
- S: 24/25-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

C3089-3 Chromium (III) chloride hexahydrate, extra pure

HS-No: 2827 39 80 90

Assay (iodometric)	min. 97 %	Iron (Fe)	max. 0.01 %
pH (5%, H_2O)	2 - 3	Lead (Pb)	max. 0.005 %
Sulfates (SO_4)	max. 0.02 %	Non precipitable with ammonia	
Copper (Cu)	max. 0.001 %	(as SO_4)	max. 0.2 %

Code	Capacity
C3089-3-0500	500 g
C3089-3-1000	1 kg

CHROMIUM (III) NITRATE NONAHYDRATE

Synonyms: Chromic nitrate nonahydrate

- $Cr(NO_3)_3 \cdot 9H_2O$
- M = 400.15 g/mol
- CAS [7789-02-8]
- EC number: 236-921-1

Safety:
- R: 8-22
- S: 26-36/37/39-45

Transport/storage:
- ADR: 5.1 O2 III UN 2720
- IMDG: 5.1 III UN 2720
- PAX: 516
- CAO: 518

C3070-1 Chromium (III) nitrate nonahydrate, reagent grade

HS-No: 2834 29 80 00

Assay	min. 98.0 %	Iron (Fe)	max. 0.005 %
pH (5%, H_2O)	2.0 - 3.0	Ammonium (NH_4)	max. 0.002 %
Chloride (Cl)	max. 0.002 %	Substances not precipitated by ammonia	
Sulfates (SO_4)	max. 0.005 %	(as sulphate)	max. 0.05 %
Copper (Cu)	max. 0.001 %		

Code	Capacity
C3070-1-0500	500 g

C3070-3 Chromium (III) nitrate nonahydrate, extra pure

HS-No: 2834 29 80 00

Assay	min. 97 %	Sulfates (SO_4)	max. 0.05 %
pH (5%, H_2O)	2.0 - 3.0	Ammonium (NH_4)	max. 0.01 %
Chloride (Cl)	max. 0.01 %	Iron (Fe)	max. 0.05 %

Code	Capacity
C3070-3-0500	500 g

CHROMIUM (III) POTASSIUM SULFATE DODECAHYDRATE

Synonyms: Alum chrome, Potassium chromium (III) sulfate

- $KCr(SO_4)_2 \cdot 12H_2O$
- M = 499.41 g/mol
- CAS [7788-99-0]
- EC number: 233-401-6

Physical data:
- Spec. density: 1.83 g/cm^3
- Bulk density: ~ 800 - 1000 kg/m^3
- Solub. in water (25 °C): ~250 g/l
- Melting point: 89 °C
- pH (50 g/l H_2O, 20 °C) ~ 3

Toxicological data:
- WGK: 2

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

C3091-1 Chromium (III) potassium sulfate dodecahydrate, reagent grade

HS-No: 2833 30 00 00

Assay (Iodometric)	min. 98 %	Ammonium (NH_4)	max. 0.02 %
Insoluble in water	max. 0.02 %	Copper (Cu)	max. 0.005 %
pH (5%, H_2O)	> 2.5	Iron (Fe)	max. 0.003 %
Chlorides (Cl)	max. 0.1 %	Lead (Pb)	max. 0.01 %
Aluminium (Al)	max. 0.02 %	Nickel (Ni)	max. 0.01 %

Code	Capacity
C3091-1-1000	1 kg

C3091-3 Chromium (III) potassium sulfate dodecahydrate, extra pure

HS-No: 2833 30 00 00

Assay (Iodometric)	min. 98 %	Ammonium (NH_4)	max. 0.03 %
Insoluble in water	max. 0.025 %	Copper (Cu)	max. 0.005 %
pH (5%, H_2O)	> 2.5	Iron (Fe)	max. 0.003 %
Chlorides (Cl)	max. 0.1 %	Lead (Pb)	max. 0.01 %
Aluminium (Al)	max. 0.02 %	Nickel (Ni)	max. 0.01 %

Code	Capacity
C3091-3-1000	1 kg

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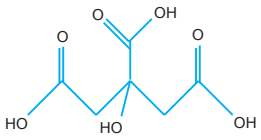
CITRIC ACID ANHYDROUS

Synonyms: 2-Hydroxy-1,2,3-propanetricarboxylic acid, b-Hydroxy tricarboxilic acid,Hydroxytricarballylic acid



- $C_6H_8O_7$
- M = 192.13 g/mol
- CAS [77-92-9]
- EC number: 201-069-1

Physical data:
- Spec. density: (18 °C) 1.67 g/cm³
- Bulk density: ~560 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: ~ 153 °C (decomposes)
- Ignition temp.: 345 °C
- Vapour pressure: (20 °C) < 0.1 hPa
- Expl. limit (upper): 8.0 Vol%
- Expl. limit (lower): 2.3 Vol%
- pH (100 g/l H_2O, 20 °C) ~1.7

Toxicological data:
- LD 50 (oral, rat): 3000 mg/kg
- WGK: 1

Safety:
- R: 36
- S: 26
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13

C3122-1 Citric acid anhydrous, reagent grade

HS-No: 2918 14 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.00005 %
Insoluble in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.001 %	Iron (Fe)	max. 0.0003 %
Oxalates (C_2O_4)	max. 0.03 %	Lead (Pb)	max. 0.0002 %
Phosphates (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.0005 %
Sulfates (SO_4)	max. 0.002 %	Nickel (Ni)	max. 0.0002 %
Arsenic (As)	max. 0.00001 %	Substances darkened by H_2SO_4	passes test
Calcium (Ca)	max. 0.0025	Calcination residue (as SO_4)	max. 0.02 %

Code	Capacity
C3112-1-0500	500 g
C3112-1-1000	1 kg

C3112-3 Citric acid anhydrous, extra pure

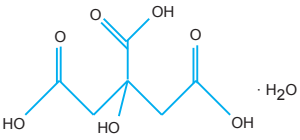
HS-No: 2918 14 00 00

Assay (acidimetric)	min. 99.5 %	Iron (Fe)	max. 0.001 %
Insoluble in water	max. 0.01 %	Lead (Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.005 %	Magnesium (Mg)	max. 0.005 %
Oxalates (C_2O_4)	max. 0.01 %	Mercury (Hg)	max. 0.0001 %
Sulfates (SO_4)	max. 0.01 %	Nickel (Ni)	max. 0.001 %
Tartrates ($C_4H_4O_6$)	passes test	Zinc (Zn)	max. 0.001 %
Arsenic (As)	max. 0.0001 %	Sulfated ash (800 °C)	max. 0.05 %
Barium (Ba)	max. 0.002 %	Water	max. 0.5 %
Calcium (Ca)	max. 0.02 %	Appearance of solution (20%, water)	passes test
Copper (Cu)	max. 0.001 %	Substances darkened by H_2SO_4	passes test
Heavy metals (as Pb)	max. 0.001 %		

Code	Capacity
C3112-3-0500	500 g
C3112-3-1000	1 kg

CITRIC ACID MONOHYDRATE

Synonyms: 2-Hydroxy-1,2,3- propanetricarboxylic acid, monohydrate



- $C_6H_8O_7 \cdot H_2O$
- M = 210.14 g/mol
- CAS [5949-29-1]
- EC number: 201-069-1

Physical data:
- Spec. density: 1.665 g/cm³
- Bulk density: ~800 - 1000 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 135 - 152 °C
- Boiling point: 135 -152 °C (decomposes)
- Ignition temp.: 345 °C
- Vapour presure: (20 °C) < 0.1 hPa
- Expl. limit (lower): 8.0 Vol%
- pH (50 g/l H_2O, 25 °C) ~1.85

Toxicological data:
- LD 50 (oral, rat): 3000 mg/kg
- WGK: 1

Safety:
- R: 36
- S: 24/25
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13

C3127-1 Citric acid monohydrate, reagent grade

HS-No: 2918 14 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.0001 %
Insoluble in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0002 %
Oxalates (C_2O_4)	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Phosphates (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.001 %
Sulfates (SO_4)	max. 0.002 %	Nickel (Ni)	max. 0.0001 %
Tartrates ($C_4H_4O_6$)	passes test	Organic volatile impurities	passes test
Arsenic (As)	max. 0.00001 %	Calcination residue (as SO_4)	max. 0.01 %
Barium (Ba)	passes test	Water	7.5 - 8.8
Calcium (Ca)	max. 0.001 %		

Code	Capacity
C3127-1-0500	500 g
C3127-1-1000	1 kg
C3127-1-5000	5 kg

COBALT (II) ACETATE TETRAHYDRATE

- $CoC_4H_6O_4 \cdot 4H_2O$
- M = 249.08 g/mol
- CAS [6147-53-1]
- EC number: 200-755-8

Physical data:
- Spec. density: 1.70 g/cm³ (20 °C)
- Solub. in water 380 g/l (25 °C)
- M = 249.08 g/mol
- pH value: ~ 7.2 (50 g/l H_2O, 25 °C)
- Melting point: 140 °C (release of crystalline water)
- Bulk density: ~ 850 kg/m³

Toxicological data:
- LD 50 (oral, rat): 780 mg/kg
- WGK: 3*

Safety:
- Harmful, sensitizing
- R: 22-40-42/43
- S: 22-36/37-45
- Poison class CH: 2

Transport/storage:
- LGK: 10-13
- Disposal: 15

C5000-3 Cobalt (II) acetate tetrahydrate, extra pure

HS-No: 2915 23 00 00

Assay	min. 99.0 %	Iron (Fe)	max. 0.01 %
Chloride (Cl)	max. 0.005 %	Nickel (Ni)	max. 0.1 %
Sulfate (SO_4)	max. 0.01 %	Lead (Pb)	max. 0.001 %

Code	Capacity
C5000-3-0500	500 g

Line @thanhnam0562 Tel: 0931521545 - 6

COBALT (II) CHLORIDE HEXAHYDRATE

Synonyms:

- $CoCl_2 \cdot 6H_2O$
- M = 237.93 g/mol
- CAS [7791-13-1]
- EC number: 231-589-4

Physical data:
- Spec. density: (25 °C) 1.92 g/cm³
- Bulk density: ~ 1250 kg/m³
- Solub. in water (20 °C): 76 g/l
- Melting point: 56 °C
- pH (50 g/l H_2O, 25 °C) ~ 4.9

Toxicological data:
- LD 50 (oral, rat): 766 mg/kg
- WGK: 2

Safety:
- EC Index no.: 027-004-00-5
- R: 49-E22-42/43-50/53
- S: 53-22-24-37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 III UN 3288
- IMDG: 6.1 III UN 3288
- IATA/ICAO: 6.1 III UN 3288
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 15

C5002-1 Cobalt (II) chloride hexahydrate, reagent grade

HS-No: 2827 34 00 00

Assay (complexometric)	min. 99.0 %	Magnesium (Mg)	max. 0.001 %
Insoluble in water	max. 0.01 %	Manganese (Mn)	max. 0.001 %
Nitrates (NO_3)	max. 0.01 %	Nickel (Ni)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %	Potassium (K)	max. 0.005 %
Ammonium (NH_4)	max. 0.005 %	Sodium (Na)	max. 0.01 %
Calcium (Ca)	max. 0.005 %	Zinc (Zn)	max. 0.002 %
Copper (Cu)	max. 0.0005 %	Non precipitable with	
Iron (Fe)	max. 0.001 %	$(NH_4)_2S$ (as SO_4)	max. 0.2 %
Lead (Pb)	max. 0.0005 %		

Code	Capacity
C5002-1-0250	250 g
C5002-1-0500	500 g

COBALT (II) NITRATE HEXAHYDRATE

Synonyms: Nitric acid cobalt salt hexahydrate

- $Co(NO_3)_2 \cdot 6H_2O$
- M = 291.04 g/mol
- CAS [10026-22-9]
- EC number: 233-402-1

Physical data:
- Spec. density: 1.87 g/cm³
- Bulk density: ~ 800 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 57 °C
- pH (100 g/l H_2O, 20 °C) ~ 4.0

Toxicological data:
- LD 50 (oral, rat): 434 mg/kg (anhydrous substance)
- WGK: 2

Safety:
- R: 22-40-43
- S: 36/37-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 O2 II UN 1477
- IMDG: 5.1 II UN 1477
- IATA/ICAO: 5.1 II UN 1477
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 15

C5009-1 Cobalt (II) nitrate hexahydrate, reagent grade

HS-No: 2834 29 20 00

Assay (complexometric)	min. 99%	Magnesium (Mg)	max. 0.005%
Insoluble in water	max. 0.005%	Manganese (Mn)	max. 0.002%
Chlorides (Cl)	max. 0.001%	Nickel (Ni)	max. 0.001%
Sulfates (SO_4)	max. 0.005%	Potassium (K)	max. 0.01%
Ammonium (NH_4)	max. 0.05%	Sodium (Na)	max. 0.05%
Calcium (Ca)	max. 0.005%	Zinc (Zn)	max. 0.005%
Copper (Cu)	max. 0.001%	Non precipitable with	
Iron (Fe)	max. 0.001%	$(NH_4)_2S$ (as SO_4)	max. 0.2%
Lead (Pb)	max. 0.001		

Code	Capacity
C5009-1-0250	250 g

COBALT (II) SULFATE HEPTAHYDRATE

Synonyms:

- $CoSO_4 \cdot 7H_2O$
- M = 281.19 g/mol
- CAS [10026-24-1]
- EC number: 233-334-2

Physical data:
- Spec. density: (25 °C) 1.95 g/cm³
- Bulk density: ~ 900 kg/m³
- Solub. in water (20 °C): 260 g/l
- Melting point: 98 °C
- pH (100 g/l H_2O, 20 °C) ~ 4

Toxicological data:
- LD 50 (oral, rat): 582 mg/kg
- WGK: 2

Safety:
- EC Index no.: 027-005-00-0
- R: 49-22-42/43-50/53
- S: 53-22-24/37-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 6.1 B
- Disposal: 15

C5016-1 Cobalt (II) sulfate heptahydrate, reagent grade

HS-No: 2833 29 30 00

Assay (complexometric)	min. 99 %	Lead (Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Magnesium (Mg)	max. 0.01 %
Total (N)	max. 0.002 %	Nickel (Ni)	max. 0.005 %
Calcium (Ca)	max. 0.005 %	Potassium (K)	max. 0.005 %
Copper (Cu)	max. 0.001 %	Sodium (Na)	max. 0.01 %
Iron (Fe)	max. 0.0005 %	Zinc (Zn)	max. 0.005 %

Code	Capacity
C5016-1-0500	0500 g

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COPPER (I) CHLORIDE

Synonyms: Copper monochloride

- CuCl
- M = 98.99 g/mol
- CAS [7758-89-6]
- EC number: 231-842-9

Physical data:
- Spec. density: 3.53 g/cm^3
- Bulk density: ~ 1600 - 1800 kg/m^3
- Solub. in water (25 °C): 0.06 g/l
- Melting point: 422 °C
- Boiling point: 1366 °C
- pH (50 g/l H_2O, 20 °C) ~5

Toxicological data:
- LD 50 (oral, rat): 140 mg/kg
- MAK: 1 mg/m^3
- WGK: 2

Safety:
- EC Indes no.: 029-001-00-4
- R: 22-50/53
- S: 22-46-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 III UN 2802
- IMDG: 8 III UN 2802
- IATA/ICAO: 8 III UN 2802
- PAX: 822
- CAO: 823
- LGK: 8 B
- Disposal: 15

C5040-1 Copper (I) Chloride, reagent grade

HS-No: 2827 39 80 10

Assay (cermetric)	min. 98 %	Iron (Fe)	max. 0.005 %
Insoluble in HCl-HNO_3	max. 0.02 %	Lead (Pb)	max. 0.02 %
Sulfates (SO_4)	max. 0.04 %	Potassium (K)	max. 0.02 %
Arsenic (As)	max. 0.0001%	Sodium (Na)	max. 0.05 %
Calcium (Ca)	max. 0.01 %	Non precipitable with H_2S (as SO_4)	max. 0.2 %

Code	Capacity
C5040-1-0500	500 g

C5040-3 Copper (I) Chloride, extra pure

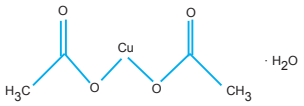
HS-No: 2827 39 80 10

Assay (iodometric)	min. 98.5 %	Iron (Fe)	max. 0.01 %
Insoluble in HCl-HNO_3	max. 0.02 %	Lead (Pb)	max. 0.02 %
Sulfates (SO_4)	max. 0.04 %	Potassium (K)	max. 0.02 %
Arsenic (As)	max. 0.0005 %	Sodium (Na)	max. 0.05 %
Calcium (Ca)	max. 0.01	Non precipitable with H_2S (as SO_4)	max. 0.2 %

Code	Capacity
C5040-3-0500	500 g

COPPER (II) ACETATE MONOHYDRATE

Synonyms: Cupric acetate



- $Cu(CH_3COO)_2 \cdot H_2O$
- M = 199.65 g/mol
- CAS [6046-93-1]
- EC number: 205-553-3

Physical data:
- Spec. density: 1.88 g/cm^3
- Bulk density: ~ 1100 kg/m^3
- Solub. in water (20 °C): 72 g/l
- Melting point: 115 °C
- Boiling point: 240 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~5.5

Toxicological data:
- LD 50 (oral, rat): 710 mg/kg
- MAK: 1mg/m^3
- WGK: 3*

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

C5044-1 Copper (II) acetate monohydrate, reagent grade

HS-No: 2915 29 00 90

Assay (iodometric)	min. 99 %	Lead (Pb)	max. 0.004 %
Insoluble in dil. CH_3COOH	max. 0.01 %	Magnesium (Mg)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Nickel (Ni)	max. 0.002 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.01 %
Total N	max. 0.01 %	Sodium (Na)	max. 0.01 %
Calcium (Ca)	max. 0.005 %	Zinc (Zn)	max. 0.002 %
Iron (Fe)	max. 0.002 %		

Code	Capacity
C5044-1-0500	0500 g

C5044-3 Copper (II) acetate monohydrate, extra pure

HS-No: 2915 29 00 90

Assay (iodometric)	min. 98 %	Iron (Fe)	max. 0.005 %
Insoluble in water	max. 0.02 %	Lead (Pb)	max. 0.002 %
pH (5%, H_2O)	5 - 6	Nickel (Ni)	max. 0.02 %
Chlorides (Cl)	max. 0.01 %	Potassium (K)	max. 0.01 %
Sulfates (SO_4)	max. 0.01 %	Sodium (Na)	max. 0.01 %
Total N	max. 0.01 %	Zinc (Zn)	max. 0.002 %
Calcium (Ca)	max. 0.005 %		

Code	Capacity
C5044-3-0500	0500 g

COPPER (II) CHLORIDE DIHYDRATE

Synonyms: Copper dichloride dihydrate

- $CuCl_2 \cdot 2H_2O$
- M = 170.48 g/mol
- CAS [10125-13-0]
- EC number: 231-210-2

Physical data:
- Spec. density: 2.54 g/cm^3
- Bulk density: ~ 950 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: ~ 100 °C
- pH (50 g/l H_2O, 20 °C) 3.0 - 3.8

Toxicological data:
- LD 50 (oral, rat): 584 mg/kg (anhydrous substance)
- MAK: 1 mg/m^3
- WGK: 2

Safety:
- R: 22-36/37/38
- S: 26-46
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 III UN 2802
- IMDG: 8 III UN 2802
- IATA/ICAO: 8 III UN 2802
- PAX: 822
- CAO: 823
- LGK: 8 B
- Disposal: 15

Line @tranlong2562 Tel: 0903121545 6

C5057-1 Copper (II) chloride dihydrate, reagent grade

HS-No: 2827 39 80 90

Assay (iodeometric)	min. 99 %	Iron (Fe)	max. 0.001 %
Insoluble in matter	max. 0.01 %	Lead (Pb)	max. 0.004 %
pH (5%, H_2O)	3.0 - 3.8	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Potassium (K)	max. 0.01 %
Total N	max. 0.002 %	Sodium (Na)	max. 0.02 %
Arsenic (As)	max. 0.0001 %	Non precipitable with H_2S (as SO_4)	max. 0.1 %
Calcium (Ca)	max. 0.005 %		

Code	Capacity
C5057-1-0500	500 g
C5057-1-1000	1 kg

COPPER (II) HYDROXIDE CARBONATE

Synonyms: Copper (II) carbonate hydroxide, Copper (II) carbonate basic

- $CuCO_3CU(OH)_2$
- M = 221.20 g/mol
- CAS [12069-69-1]
- EC number: 235-113-6

Physical data:
- Form: Solid
- Spec. density: ~4.0 g/cm^3
- Bulk density: ~ 350 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 200 °C
- pH (50 g/l H_2O, 20 °C) ~8 - 9

Toxicological data:
- LD 50 (oral, rat): 1350 mg/kg
- MAK: 0.1 mg/m^3
- WGK: 1

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13

C5045-1 Copper (II) hydroxide carbonate, reagent grade

HS-No: 2836 99 11 00

Assay (iodometry)	min. 95 %	Iron (Fe)	max. 0.005 %
Insoluble matter in H_2SO_4	max. 0.01 %	Lead (Pb)	max. 0.005 %
Chlorides (Cl)	max. 0.002 %	Potassium (K)	max. 0.05 %
Sulfates (SO_4)	max. 0.01 %	Sodium (Na)	max. 0.05 %

Code	Capacity
C5045-1-0500	500 g

C5045-3 Copper (II) hydroxide carbonate, extra pure

HS-No: 2836 99 11 00

Assay (iodometric)	min. 95 %	Nickel (Ni)	max. 0.05 %
Chloride (Cl)	max. 0.01 %	Sodium (Na)	max. 0.5 %
Sulfates (SO_4)	max. 0.05 %	Zinc (Zn)	max. 0.01 %
Iron (Fe)	max. 0.02 %	Non precipitable with H_2S (as SO_4)	max. 1 %
Lead (Pb)	max. 0.005 %		

Code	Capacity
C5045-3-0500	500 g

COPPER (II) NITRATE TRIHYDRATE

Synonyms: Copper dinitrate dihydrate

- $Cu(NO_3)_2 \cdot 3H_2O$
- M = 241.60 g/mol
- CAS [10031-43-3]
- EC number: 221-838-5

Physicasl data:
- Spec. density: 2.32 g/cm^3
- Bulk density: ~ 1050 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: ~ 114 °C
- pH (50 g/l H_2O, 20 °C) ~ 3 - 4

Toxicological data:
- LD 50 (oral, rat): 940 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 2

Safety:
- R: 22-36/38
- S: 46
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1477
- IMDG: 5.1 II UN 1477
- IATA/ICAO: 5.1 II UN 1477
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 15

C5064-1 Copper (II) nitrate trihydrate, reagent grade

HS-NO: 2834 29 30 00

Assay(iodometric)	min. 99.5%	Lead (Pb)	max. 0.001%
Chlorides (Cl)	max. 0.0005%	Nickel (Ni)	max. 0.001%
Sulfates (SO_4)	max. 0.005%	Potassium (K)	max. 0.01%
Calcium (Ca)	max. 0.005%	Sodium (Na)	max. 0.01%
Iron (Fe)	max. 0.002%	Zinc (Zn)	max. 0.001%

Code	Capacity
C5064-1-0500	500 g

C5064-3 Copper (II) nitrate trihydrate, extra pure

HS-NO: 2834 29 30 00

Assay(iodometric)	min. 99%	Iron (Fe)	max. 0.01%
Chlorides (Cl)	max. 0.003%	Lead (Pb)	max. 0.005%
Sulfates (SO_4)	max. 0.01%	Magnesium (Mg)	max. 0.01%
Arsenic (As)	max. 0.0001%	Nickel (Ni)	max. 0.05%
Calcium (Ca)	max. 0.05%	Non precipitable with H_2S (as SO_4)	max. 0.01%

Code	Capacity
C5064-3-0500	500 g

COPPER, POWDER

Synonyms:

- Cu
- M = 63.55 g/mol
- CAS [7440-50-8]
- EC number: 231-159-6

Physical data:
- Solub. in water insoluble
- M = 63.55 g/mol
- Melting point: 1083 °C
- Bulk density: 1290 kg/m^3

Toxicological data:
- WGK: nwg
- MAK: 1 mg/m^3

Safety:
- Poison class CH: F

Transport/storage:
- Packing-cat: A
- Road/Rail: 9/12 c
- IMDG-Code 9/III UN 3077
- IATA/DGR: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 27

C5071-3 Copper, powder, extra pure

HS-NO: 7406 10 00 00

Assay (Iodometric)	min. 99.5 %	Lead (Pb)	max. 0.05 %
Insoluble in HNO_3	max. 0.05 %	Manganese (Mn)	max. 0.002 %
Antimony (Sb)	max. 0.005 %	Nickel (Ni)	max. 0.005 %
Arsenic (As)	max. 0.0002 %	Silver (Ag)	max. 0.005 %
Iron (Fe)	max. 0.005 %	Tin (Sn)	max. 0.005 %

Code	Capacity
C5071-3-0500	500 g

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COPPER (II) OXIDE

Synonyms: Copper monoxide

- CuO
- M = 79.55 g/mol
- CAS [1317-38-0]
- EC number: 215-269-1

Physical data:
- Spec. density: 6.45 g/cm^3
- Bulk density: ~ 1600 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 1336 °C
- pH (50 g/l H_2O, 20 °C) ~ 7

Toxicological data:
- MAK: 1 mg/m^3
- WGK: 1

Safety:
- R: 22
- S: 22-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 27

C5072-3 Copper (II) oxide, extra pure

HS-NO: 2825 50 00 10

Assay (iodometric)	min. 96%	Iron (Fe)	max. 0.05%
Insoluble in HCl	max. 0.05%	Total S (as SO_4)	max. 0.1%
Nitrogen compounds (as N)	max. 0.005%	Non precipitable with H_2S (as SO_4)	max. 1%
Chlorides (Cl)	max. 0.01%		

Code	Capacity
C5072-3-0500	500 g

COPPER (II) SULFATE ANHYROUS

Synonyms: Copper monosulfate anhydrous, Copper vitriol anhydrous

- $CuSO_4$
- M = 159.60 g/mol
- CAS [7758-98-7]
- EC number: 231-847-6

Physical data:
- Spec. density: 3.61 g/cm^3
- Bulk density: ~ 800 kg/m^3
- Solub. in water (20 °C): 203 g/l
- pH (50 g/l H_2O, 20 °C) 3.5 - 4.5

Toxicological data:
- LD 50 (oral, rat): 300 mg/kg
- MAK: 1 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 029-004-00-0
- R: 22-36/38-50/53
- S: 22-46-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 15

C5076-3 Copper (II) sulfate anhydrous, extra pure

HS-NO: 2833 25 00 00

Assay (iodometric)	min. 99 %	Lead (Pb)	max. 0.008 %
Insoluble in water	passes test	Magnesium (Mg)	max. 0.01 %
Chloride (Cl)	max. 0.01 %	Nickel (Ni)	max. 0.01 %
Arsenic (As)	max. 0.0005 %	Potassium (K)	max. 0.01 %
Calcium (Ca)	max. 0.02 %	Non precipitable with H_2S	max. 0.3 %
Iron (Fe)	max. 0.01 %	Loss on drying (250 °C)	max. 1 %

Code	Capacity
C5076-3-0500	500 g

COPPER (II) SULFATE PENTAHYDRATE

Synonyms: Copper monosulfate pentahydrate, Copper vitriol pentahydrate

- $CuSO_4 \cdot 5H_2O$
- M = 249.68 g/mol
- CAS [7758-99-8]
- EC number: 231-847-6

Physical data:
- Spec. density: 2.29 g/cm^3
- Bulk density: ~ 900 - 1200 kg/m^3
- Solub. in water (20 °C): ~ 317 g/l
- pH (50 g/l H_2O, 20 °C) ~ 3.5 - 4.5

Toxicological data:
- LD 50 (oral, rat): 300 mg/kg (anhydrous substance)
- MAK: 1 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 029-004-00-0
- R: 22-36/38-50/53
- S: 22-46-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 15

C5083-1 Copper (II) sulfate pentahydrate, reagent grade

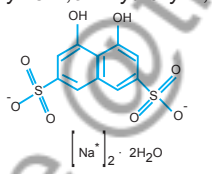
HS-No: 2833 25 00 00

Assay (Iodometric)	min. 99%	Potassium (K)	max. 0.001%
Insoluble matter	max. 0.005%	Sodium (Na)	max. 0.005%
pH (5%, H_2O)	3.7 - 4.5	Nickel (Ni)	max. 0.005%
Arsenic (As)	max. 0.00005%	Lead (Pb)	max. 0.005%
Calcium (Ca)	max. 0.005%	Zinc (Zn)	max. 0.03%
Iron (Fe)	max. 0.003%	Non precipitable with H_2S (as SO_4)	max. 0.1%

Code	Capacity
C5083-1-0500	500 g
C5083-1-1000	1 kg

CHROMOTROPIC ACID, DISODIUM SALT DIHYDRATE

Synonyms: 4,5-Dihydroxy- 2,7-naphthalenedisulfonic acid disodium salt dihydrate



- $C_{10}H_6NaO_8S_2 \cdot 2H_2O$
- M = 400.30 g/mol
- CAS [5808-22-0]
- EC number: 204-972-9

Physical data:
- Form: Solid
- Bulk density: 780 kg/m^3
- Solub. in water (20 °C): 170 g/l
- pH (10 g/l H_2O, 20 °C) ~ 3.6

Toxicological data:
- WGK: 3

Transport/storage:
- LGK: 10-13
- Disposal: 3

C5505-1 Chromotropic acid, disodium salt dehydrate, reagent grade

HS-No: 2908 20 00 90

Assay	min. 98.5 %	Suitability for determination of formaldehyde	passes test
Identity (IR-spectrum)	passes test	Suitability for determination of nitrates	passes test
Appearance	off-white powder	Water	8.5 - 9.5 %
Clarity of solution	passes test		
Sulfates (SO_4)	max. 0.002 %		

Code	Capacity
C5505-1-0025	25 g

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CHROMIUM (VI) OXIDE

Synonyms: Chromium trioxide, Chromic anhydride

- CrO_3
- M = 99.99 g/mol
- CAS [1333-82-0]
- EC number: 215-607-8

Physical data:
- Spec. density: 2.7 g/cm^3
- Bulk density: ~ 900 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 197 °C
- pH (100 g/l H_2O, 20 °C) < 1

Toxicological data:
- LD 50 (oral, rat): 50 mg/kg
- WGK: 3

Safety:
- EC Index no.: 024-001-00-0
- R: 49-8-25-35-43-50/53
- S: 53-26-36/37/39-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 OC2 II UN 1463
- IMDG: 5.1 II UN 1463
- IATA/ICAO: 5.1 II UN 1463
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 15

C6002-3 Chromium (VI) oxide, extra pure

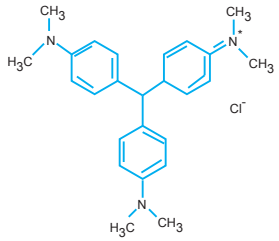
HS-No: 2819 10 00 00

Assay (Iodometric)	min. 99.0 %	Lead (Pb)	max. 0.01 %
Calcium (Ca)	max. 0.02 %	Magnesium (Mg)	max. 0.01 %
Iron (Fe)	max. 0.02 %	Zinc (Zn)	max. 0.01 %
Potassium (K)	max. 0.02 %	Total Sulfur (S)	max. 0.05 %
Sodium (Na)	max. 0.2 %	Total Phosphorus (P)	max. 0.02 %
Copper (Cu)	max. 0.02 %	Chloride (Cl)	max. 0.1 %

Code	Capacity
C6002-3-0500	500 g

CRYSTAL VIOLET

Synonyms: Hexamethylenepararosaniline chloride, Hexamethyl-p- rosanilinium chloride, Metyhl violet 10 B



- $C_{25}H_{30}ClN_3$
- M = 407.99 g/mol
- CAS [548-62-9]
- EC number: 208-953-6

Physical data:
- Spec. density: 1.19 g/cm^3 (20 °C)
- Solub. in water 10 g/l (20 °C)
- M = 407.99 g/mol
- pH value: 2.5 - 3.5 (10 g/l H_2O, 20 °C)
- Melting point: 189 - 194 °C
- Bulk density: ~ 220 - 400 kg/m^3

Toxicological data:
- LD 50 (oral, rat): 420 mg/kg

Safety:
- Harmful, irritant, dangerous for the environment
- R: 22-40-41-50/53
- S: 22-26-36/37/39-61
- WGK: 3
- Poison class CH: 2

Transport/storage:
- Packing-cat:A
- Road/Rail 9/12c
- IATA/DGR: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13

C6009-0 Crystal Violet

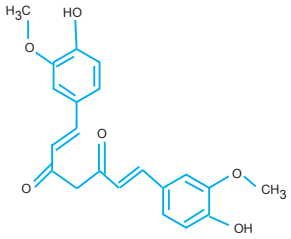
HS-No: 3204 13 00 00

Assay	min. 96 %
Loss on drying	max. 10 %
Residue on ignition (as SO_4)	max. 3 %

Code	Capacity
C6009-0-0025	25 g
C6009-0-0250	250 g

CURCUMIN

Synonyms: 1,7 Bis (4-hydroxy-3-mehoxyphenyl)- 1,6-heptadiene-3,5-dione, Turmeric yellow, Diferuloylmethane



- $C_{21}H_{20}O_6$
- M = 368.39 g/mol
- CAS [458-37-7]
- EC number: 207-280-5

Physical data:
- Solub. in water (20 °C) insoluble
- Melting point: 170 - 175 °C

Transport/storage:
- Beilstein: 8,554, I 757, III 4312, IV 3697
- LGK: 10-13
- Disposal:3

C6010-1 Curcumin, reagent grade

HS-No: 2914 50 00 00

Melting point	181 - 185 °C	Solubility test in alcohols	passes test
Sensitivity test	passes test	Residue after ignition (a sulfate)	max. 0.5 %

Code	Capacity
C6010-1-0005	5 g

CHLOROBENZENE

Synonyns :

- C_6H_5Cl
- F.W.: 112.58
- CAS: 108-90-7

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Polarity index (P'): 2.7
- Density (g/ml, 25 °C): 1.107
- Boilling point (°C): 132
- Refractive index (25 °C): 1.525

C6020-4 Chloroform, HPLC grade

HS-No: 2903 13 00 00

See specification in Solvent Specification - 34

Code	Capicity
C6020-4-1001	1.0 L
C6020-4-4001	4.0 L

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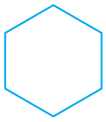
CYCLOHEXANE

Synonyms: Hexahydrobenzene, Hexamethylene, Napthene



- C_6H_{12}
- M = 84.16 g/mol
- CAS [110-82-7]
- EC number: 203-806-2

Physical data:
- Density: 0.78 g/cm^3
- Solub. in water (20 °C): 55 g/l
- Melting point: 6 °C
- Boiling point: 80.7 - 81 °C
- Flash point: -18 °C
- Ignition temp.: 260 °C
- Vapour pressure: (20 °C) 103 hPa
- Refraction index: (n 20 °C/D) 1.4264
- Viscosity: (kinetic, 20 °C) 1.26 mm^2/s
- Dielectric const.: (20 °C) 2.0
- Evap. heat: (81 °C) 389 kJ/kg
- Saturation conc.: (20 °C) 357 g/m^3
- Expl. limit (upper): 8.3 Vol%
- Expl. limit (lower): 1.2 Vol%

Toxicological data:
- LD 50 (oral, rat): 12705 mg/kg
- MAK: 200 ml/m^3, 700 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 601-017-00-1
- R: 11-38-50/53-65-67
- S: 9-16-33-60-61-62
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1145
- IMDG: 3 II UN 1145
- IATA/ICAO: 3 II UN 1145
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

C6033-1 Cyclohexane, reagent grade

HS-No: 2902 11 00 00

Assay (GC)	min. 98 %	Iron (Fe)	max. 0.00001 %
Color	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Acidity	max. 0.0003 meq/g	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Lead (Pb)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Tin (Sn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Aromatics (as benzene)	max. 0.001 %
Calcium (Ca)	max. 0.00005 %	Cyclohexene (G.C)	max. 0.05 %
Zinc (Zn)	max. 0.00001 %	Ethanol (G.C)	max. 0.01 %
Cobalt (Co)	max. 0.000002 %	Substances Darkened by H_2SO_4	passet test
Copper (Cu)	max. 0.000002 %	Non-Volatile Matter	max. 0.0005 %
Chromium (Cr)	max. 0.000002 %	Water (K.F)	max. 0.01 %

Code	Capacity
C6033-1-2501	2.5 L

C6033-4 Cyclohexane, HPLC grade

HS-No: 2902 11 00 00

See specification in Solvent Specification - 36

Code	Capacity
C6033-4-1001	1.0 L
C6033-4-4001	4.0 L

C6033- 11 Cyclohexane, Pesticide grade

HS-No: 2902 11 00 00

See specification in Solvent Specification - 22

Code	Capacity
C6033-11-1001	1.0 L
C6033-11-4001	4.0 L

CYCLOHEXENE

Synonyms: 1,2,3,4-Tetrahydrobenzene

- C_6H_{10}
- M = 82.15 g/mol
- CAS [110-83-8]
- EC number: 203-807-8

Physical data:
- Form: Liquid
- Density: 0.81 g/cm^3
- Solub. in water (20 °C): 0.21 g/l
- Melting point: -104 °C
- Boiling point: 80 °C
- Flash point: -17 °C
- Ignition temp.: 310 °C
- Vapour pressure: (20 °C) 90 hPa
- Refraction index: (n 20 °C/D) 1.446
- Expl. limit (upper): 7.7 Vol%
- Expl. limit (lower): 1.2 Vol%
- pH (0.2 g/l H_2O, 20 °C) 7 - 8

Toxicological data:
- LD 50 (oral, rat): 12705 mg/kg
- MAK: 200 ml/m^3, 700 mg/m^3
- WGK: 1

Safety:
- R: 11-21/22
- S: 16-23.2-51-33-36/37-46
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 2256
- IMDG: 3 II UN 2256
- IATA/ICAO: 3 II UN 2256
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

C6040-2 Cyclohexene, synthesis grade

HS-No: 2902 19 90 00

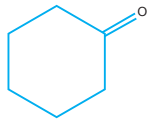
Assay (G.C)	min. 99 %	Density (20°/4°)	0.810 - 0.811
Identity (IR-Spectrum)	passes test	Water	max. 0.03 %

Code	Capacity
C6040-2-1001	1 L

Line @thanksou2562 Tel.0972 1116-6

CYCLOHEXANONE

Synonyms: Pimelic ketone



- $C_6H_{10}O$
- M = 98.15 g/mol
- CAS [108-94-1]
- EC number: 203-637-1

Physical data:

- Form: Liquid
- Density: 0.95 g/cm^3
- Solub. in water (20 °C): ~ 80 g/l
- Melting point: -31 °C
- Boiling point: 156 °C
- Flash point: 43 °C
- Ignition temp.: 430 °C
- Vapour pressure: (20 °C) 4.0 hPa
- Dipolar moment: (20 °C) 2.9 Debye
- Dielectric const.: (25 °C) 18.3
- Saturation conc.: (20 °C)19 g/m^3
- Saturation conc.: (20 °C)19 g/m^3
- Expl. limit (upper): 9.4 Vol%
- Expl. limit (lower): 1.3 Vol%
- pH (50 g/l H_2O) ~ 5

Toxicological data:

- LD 50 (oral, rat): 1300 - 1840 mg/kg
- WGK: 1

Safety:

- EC Index no.: 606-010-00-7
- R: 10-20
- S: 25
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:

- ADR: 3 F1 III UN 1915
- IMDG: 3 III UN 1915
- IATA/ICAO: 3 III UN 1915
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

C6043-1 Cclohexanone, reagent grade

HS-No: 2914 22 00 00

Assay	min. 99.5 %	Mixing test with water	passes test
Refractive index	1.4500 - 1.4510	Non-volatile matter	max. 0.05 %

Code	Capacity
C6043-1-2501	2.5 L

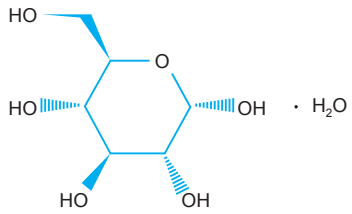
Line @thankyou2562 Tel. 02 372 1241-6

Chemical list : D

Line @thankyou2562 Tel. 02 372 1545 - 6

D(+)-GLUCOSE MONOHYDRATE

Synonyms:



- $C_6H_{12}O_6 \cdot H_2O$
- M = 198.17 g/mol
- CAS [5996-10-1]
- EC number: 200-075-1

Physical data:
- Bulk density: ~ 630 kg/m³
- Solub. in water (20 °C): ~ 470 g/l
- Melting point: ~ 83 °C
- Ignition temp.: ~ 500 °C
- pH (100 g/l H_2O, 20 °C) 6 - 7

Toxicological data:
- LD 50 (oral, rat): 25800 mg/kg (anhydrous substance)
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

D1015-3 D(+)-Gulcose monohydrate, extra pure

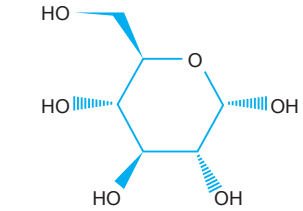
HS-No: 1702 30 51 00

Specific rotation ([a]20 °/D, c=10, H_2O)	+52.6 - +53.2 °
Acidity/Alkalinity	passes test
Insoluble in water	max. 0.01 %
Chlorides (Cl)	max. 0.005 %
Arsenic (As)	max. 0.0001 %
Sulfates (SO_4)	max. 0.01 %
Sulfite (as SO_4)	max. 0.001 %
Calcium (Ca)	max. 0.02 %
Heavy metals (as Pb)	max. 0.0005 %
Lead (Pb)	max. 0.00005 %
Sulfated ash	max. 0.1 %
Water	max. 1 %
Foreign sugars, starch and dextrines	passes test

Code	Capacity
D1015-3-0500	500 g
D1015-3-1000	1 kg

D(+)-GLUCOSE ANHYDROUS

Synonyms: Dextrose



- $C_6H_{12}O_6$
- M = 180.16 g/mol
- CAS [50-99-7]
- EC number: 200-075-1

Physical data:
- Bulk density: ~630 kg/m³
- Solub. in water (20 °C): ~ 470 g/l
- Melting point: ~ 146 °C
- Ignition temp.: ~ 500 °C
- pH (100 g/l H_2O, 20 °C) 6 - 7

Toxicological data:
- LD 50 (oral, rat): 25800 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

D1019-3 D(+)-Gulcose anhydrous, extra pure

HS-No: 1702 30 51 00

Specific rotation ([a]20 °/D, c=10, H_2O)	+52.6 - +53.2 °
Acidity/Alkalinity	passes test
Insoluble in water	max. 0.01 %
Chlorides (Cl)	max. 0.01 %
Arsenic (As)	max. 0.02 %
Sulfates (SO_4)	max. 0.001 %
Sulfite (SO_2)	max. 0.0001 %
Calcium (Ca)	max. 0.02 %
Heavy metals (as Pb)	max. 0.0005 %
Iron (Fe)	max. 0.0005 %
Lead (Pb)	max. 0.00005 %
Sulfated ash	max. 0.1 %
Water	max. 1 %
Foreign sugars, starch and dexttrines	passes test

Code	Capacity
D1019-3-1000	1 kg

2,4-DINTROPHENYLHYDRAZINE

Synonyms: DNP

- $C_{10}H_8O$
- M = 144.17 g/mol
- CAS [1135-19-3]

Physical data:
- Solub. in water (20 °C): almost insoluble
- Melting point: ~ 203 °C
- Bulk density: ~ 680 kg/m³
- Decomposition point above melting point

Toxicological data:
- LD 50 (oral, rat): 654 mg/kg
- WGK: 3*

Safety:
- Harmful, irritant
- R: 2-22-36/38
- S: 35

Transport/storage:
- Packing-cat R
- Road/Rail: 4.1/21 a
- IATA/DGR
- CAO: F
- PAX: F
- LGK: 4.1 A
- Disposal: 3

D3000-1 2,4-Dinitrophenylhydrazine, reagent grade

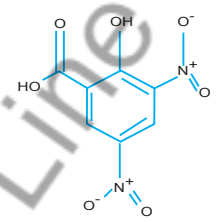
HS-No: 2928 00 90 00

Assay (HPLC, referred to anhydrous substance)	min. 99 %
Identity (IR-spectrum)	passes test
Insoluble in acid	passes test
Iron (Fe)	max. 0.003 %
Chloro-2,4-dinitribenzene (HPLC)	max. 0.05 %
1,3-Dinitrobenzene (HPLC)	max. 0.05 %
Related Substance (TLC)	passes test
Sulfated Ash	max. 0.1 %
Water	30 - 35 %

Code	Capacity
D3000-1-0025	25 g

3,5-DINITROSALICYLIC ACID

Synonyms: 3,5-Dinitro-2-hydroxybenzoic acid, 3,5-Dinitrosalicylic acid



- $C_7H_4N_2O_7$
- M = 228.12 g/mol
- CAS [609-99-4]
- EC number: 210-204-3

Physical data:
- Solub. in water (20 °C): soluble
- pH value: ~ 1.3 - 1.8 (10 g/l, H_2O, 20 °C)
- Melting point: 170 - 174 °C
- Bulk density: ~ 400 kg/m³
- Decomposition point above melting point

Toxicological data:
- LD 50 (oral, rat): 860 mg/kg
- WGK: 3*

Safety:
- Harmful
- R: 22
- S: 24/25

Transport/storage:
- Packing-cat G
- Road/Rail: 6.1/25 b
- IMDG-Code: 6.1/II UN 2811
- IATA/DGR: 6.1 II UN 2811
- CAO: 615
- PAX: 613
- LGK: 10-13
- Disposal: 4

Line @thanhvou2002 Tel 02 372 1545 - 6

D3001-3 3,5-Dinitrosalicylic acid, extra pure

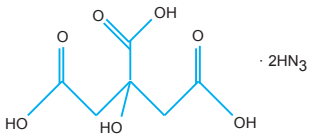
HS-No: 2918 29 90 00

Assay (Acidimetric)	min. 98 %
Identity (IR-spectrum)	passes test
Melting point	170 - 174 °C
Absorption maximum λmax (Ethanol)	334 - 336 nm
Spec. Absorptivity A 1%/1cm (λmax; 0.001%, ethanol abs.)	400 - 440
Performance test (Suitability as reagent for Amylase-and Diastase-determinations)	passes test

Code	Capacity
D3001-3-0025	25 g

DI-AMMONIUM HYDROGEN CITRATE

Synonyms: Ammonium citrate dibasic



- $C_6H_8O_7 \cdot 2NH_3$
- M = 226.19 g/mol
- CAS [3012-65-5]
- EC number: 221-146-3

Physical data:
- Spec. density: 1.48 g/cm³
- Bulk density: ~ 400 - 600 kg/m³

- Solub. in water (20 °C): freely soluble
- pH (50 g/l H_2O, 20 °C) ~ 5.2

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3004-1 di-Ammonium hydrogen citrate, reagent grade

HS-No. 2918 15 00 00

Assay (acidimetric)	min. 99 %	Phosphates (PO_4)	max. 0.001 %
Insoluble matter	max. 0.005 %	Sulfates (SO_4)	max. 0.005 %
pH (5%, H_2O)	4.7 - 5.3	Heavy metals (as Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Oxalates (C_2O_4)	max. 0.05 %	Sulfated ash	max. 0.02 %

Code	Capacity
D3004-1-0500	500 g
D3004-1-1000	1 kg

DI-AMMONIUM HYDROGEN PHOSPHATE

Synonyms: Ammonium biphosphate, Diammonium hydrogen phosphate, Ammonium phosphate dibasic, Fyrex

- $(NH_4)_2HPO_4$
- M = 132.06 g/mol
- CAS [7783-28-0]
- EC number: 231-987-8

Physical data:
- Spec. density: 1.62 g/cm³
- Bulk density: ~ 800 - 1000 kg/m³

- Solub. in water (20 °C): 690 g/l
- Melting point: 155 °C (decomposes)
- pH (50 g/l H_2O, (20 °C) 7.8 - 8.5

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3008-1 di-Ammonium hydrogen phosphate, reagent grade

HS-No. 3105 30 00 00

Assay (acidimeetric)	min. 99 %	Sulfates (SO_4)	max. 0.002 %
Insoluble in water	max. 0.005 %	Arsenic (As)	max. 0.00005 %
Total sulfur (as SO_4)	max. 0.004 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	7.8 - 8.2	Iron (Fe)	max. 0.005 %
Chlorides (Cl)	max. 0.0005 %	Potassium (K)	max. 0.001 %
Nitrates (NO_3)	max. 0.001 %	Sodium (Na)	max. 0.002 %

Code	Capacity
D3008-1-0500	500 g

D3008-3 di-Ammonium hydrogen phosphate, extra pure

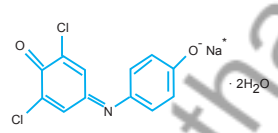
HS-No. 3105 30 00 00

Assay (acidimetric)	min. 99 %	Sulfates (SO_4)	max. 0.02 %
Insoluble in water	max. 0.01 %	Arsenic (As)	max. 0.0001 %
pH (1%, H_2O)	7.8 - 8.2	Heavy metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.002 %	Iron (Fe)	max. 0.001 %
Nitrates (NO_3)	max. 0.01 %		

Code	Capacity
D3008-3-0500	500 g
D3008-3-1000	1 kg

2,6-DICHLOROPHENOL-INDOPHENOL, SODIUM SALT DIHYDRATE

Synonyms:



- $C_{12}H_6Cl_2NNaO_2 \cdot 2H_2O$
- M = 326.11 g/mol
- CAS [620-45-1]
- EC number: 210-640-4

Physical data:
- Form: Solid
- Solub. in water (20 °C): slightly soluble
- Bulk density: 320 kg/m³

Transport/storage:
- LGK: 10-13
- Disposal: 3

D3020-1 2,6-Dichlorophenol-indophenol, sodium salt dehydrate, indicator, reagent grade

HS-No: 2925 20 00 90

Assay (titr. With $HClO_4$, referred to dried substance)	min. 98 %	TLC-test	passes test
Identity (IR-spectrum)	passes test	Interfering dyes	passes test
		Loss on drying (120 °C)	max. 12.0 %

Code	Capacity
D3020-1-0025	25 g

Line @thanhbuu2552 Tel 02172 1545 - 6

1,2-Dichloroethane

Synonyms:

- $ClCH_2CH_2Cl$
- F.W.: 98.96
- CAS: 107-06-2

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.44
- Polarity Index (P'): 3.5
- Viscosity (cP, 25 °C): 0.779
- Density (g/ml, 25 °C): 1.245
- Boilling point (°C): 84
- Solubility of water (%, 20 °C): 0.15
- Refractive index (25 °C): 1.444

Transport/storage:
- IMDG : 9 III UN 3077
- Environmentally Hazardous Substance, Solid, N.O.S.
- Marine Polutant : P

D3025-4 1,2-Dichloroethane, HPLC Grade

HS-No: 2903 15 00

See specification in Solvent Specification - 37

Code	Capacity
D3025-4-1001	1.0 L
D3025-4-4001	4.0 L

o-Dichlorobenzene

Synonyms:

- Formula: $C_6H_4Cl_2$
- F.W.: 147.00
- CAS: 95-50-1

Physical Data:
- Viscosity (cP, 20 °C): 1.32
- Density (g/ml, 25 °C): 1.3058
- Boilling point (°C): 180.5
- Refractive index (20 °C): 1.5514

Transport/storage:
- IMDG: 6.1 III UN 1591
- IATA/ICAO: 6.1 III UN 1591

D3030-4 o-Dichlorobenzene, HPLC Grade

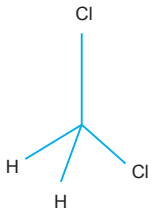
HS-No: 2903 61 00

See specification in Solvent Specification - 36

Code	Capacity
D3030-4-1001	1.0 L
D3030-4-4001	4.0 L

DICHLOROMETHANE

Synonyms: Methylene chloride



- CH_2Cl_2
- M = 84.93 g/mol
- CAS [75-09-2]
- EC number: 200-838-9

Physical data:
- Density: 1.32 g/cm³
- Solub. in water (20 °C): 20 g/l
- Melting point: ~ -95 °C
- Boiling point: 40 °C
- Ignition temp.: 605 °C
- Vapour pressure: (20 °C) 475 hPa
- Viscosity: (20 °C) 0.43 mPas
- Dipolar moment: (20 °C) 1.6 Debye
- Dielectric const.: (20 °C) 9.1
- Evap. heat: (40 °C) 329 kJ/kg
- Saturation conc.: (20 °C) 1549 g/m³
- Expl. limit (upper): 22 Vol%
- Expl. limit (lower): 13 Vol%
- pH (20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 2388 mg/kg
- MAK: 100 ml/m3, 350 mg/m³
- WGK: 2

Safety:
- EC Index no.: 602-004-00-3
- R: 40
- S: 23.2-51-25-36/37
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 6.1 T1 III UN 1593
- IMDG: 6.1 III UN 1593
- IATA/ICAO: 6.1 III UN 1593
- PAX: 605
- CAO: 612
- LGK: 10-13
- Disposal: 2

D3056-1 Dichloromethane, reagent grade (Stabilized with approx. 50 ppm of amylene)

HS-No: 2903 12 00 00

Assay	min. 99.5 %	Titrable acid	max. 0.0003 meq/g
Appearance	clear	Water	max. 0.02 %
Colour	max. 10 APHA	Free Halogens	passes test
Residue After Evaporation	max. 0.002 %		

Code	Capacity
D3056-1-2501	2.5 L

D3056-4 Dichloromethane, HPLC grade

HS-No: 2903 12 00 00

See specification in Solvent Specification - 37

Code	Capacity
D3056-4-1001	1.0 L
D3056-4-4001	4.0 L

D3056-11 Dichloromethane, Pesticide grade

HS-No: 2903 12 00 00

See specification in Solvent Specification - 22

Code	Capacity
D3056-11-1001	1.0 L
D3056-11-4001	4.0 L

D3056-12 Dichloromethane, Ultimate grade

HS-No: 2903 12 00 00

See specification in Solvent Specification - 12

Code	Capacity
D3056-12-1001	1.0 L
D3056-12-4001	4.0 L

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D3056-14 Dichloromethane, BIO grade

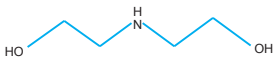
HS-No: 2903 12 00 00

See specification in Solvent Specification - 55

Code	Capacity
D3056-14-1001	1.0 L
D3056-14-4001	4.0 L

DIETHANOLAMINE

Synonyms: 2,2'-Iminodiethanol, Bis(b-hydroxyethyl) anime, 2,2'-Dihydroxydiethylamine



- $C_4H_{11}NO_2$
- M = 105.14 g/mol
- CAS [111-42-2]
- EC number: 203-868-0

Physical data:
- Density: 1.09 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 28 °C
- Boiling point: 269 - 271 °C
- Flash point: 177 °C
- Ignition temp.: 370 °C
- Vapour pressure: (20 °) < 0.01 hPa
- Viscosity: (30 °C) 352 mPas
- Expl. limit (upper): 6.4 Vol%
- Expl. limit (lower): 1.7 Vol%
- pH (10 g/l H_2O, 20 °C) ~ 11

Toxicological data:
> LD 50 (oral, rat): 676 mg/kg
> WGK: 1

Safety:
- EC Index no.: 603-071-00-1
- R: 22-38-41-48/22
- S: 26-36/37/39-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 1

D3083-1 Diethanolamine, reagent grade

HS-No: 2922 12 00 10

Assay (acidimetric)	min. 99 %	Triethanolamine	max. 1 %
Chloride (Cl)	max. 0.0005 %	Orgamoc volatile impurities	passes test
Sulfate (SO_4)	max. 0.002 %	Sulfated ash	max. 0.005 %
Heavy metals (as Pb)	max. 0.0001 %	Water	max. 0.15 %
Iron (Fe)	max. 0.0001 %		

Code	Capacity
D3083-1-0500	500 ml

D3083-2 Diethanolamine, synthesis grade

HS-No: 2922 12 00 10

Assay (acidimetric)	min. 98 %
Sulfated ash	max. 0.01 %
Water	max. 0.5 %

Code	Capacity
D3083-2-2500	2.5 L

1,4-Dioxane

Synonyms:

- Formula: $(CH_2)_4O_2$
- F.W.: 88.11
- CAS: 123-91-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.56
- Polarity index (P'): 4.8
- Viscosity (cP, 25 °C): 1.177
- Density (g/ml, 25 °C): 1.028
- Boilling point (°C): 101.0
- Solubility of water (%,20 °C): Miscible
- Refractive index (25 °C): 1.420

Transport/storage:
- IMDG : 3, III UN 1165
- IATA/ICAO: 3 III UN 1165
- EC No.204-661-8

D3090-4 1,4-Dioxane, HPLC Grade

HS-No: 2932 99 85

See specification in Solvent Specification - 39

Code	Capacity
D3090-4-1001	1.0 L
D3090-4-4001	4.0 L

D3090-15 1,4-Dioxane, Ultra Dry Grade

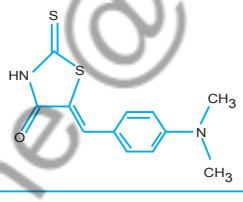
HS-No: 2932 99 85

See specification in Solvent Specification - 62

Code	Capacity
D3090-15-1001	1.0 L
D3090-15-4001	4.0 L

P-DIMETHYLAMINOBENZALRHODANINE

Synonyms: p-Dimethylaminobenzalrhosanine



- $C_{12}H_{12}N_2OS_2$
- M = 264.37 g/mol
- CAS [536-17-4]
- EC number: 208-625-2

Physical data:
- Form: Solid
- Bulk density: ~ 225 g/cm^3
- Solub. in water (20 °C): almost insoluble

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 3

D3100-1 p-Dimethylaminobenzalrhodanine, reagent grade

HS-No: 2934 10 00 90

Assay (of S)	min. 98 %	Sulfated Ash	max. 0.1 %
Identity (IR-spectrum)	passes test	Suitability for determination of Ag	passes test
Insoluble in acetone	passes test		

Code	Capacity
D3100-1-0025	25 g

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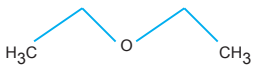
DIETHYL ETHER

Synonyms: Ethyl ether, Ethyl oxide, Ether



- $C_4H_{10}O$
- M = 74.12 g/mol
- CAS [60-29-7]
- EC number: 200-467-2

Physical data:
- Density: 0.71 g/cm^3
- Solub. in water (20 °C): 69 g/l
- Melting point: -116.3 °C
- Boiling point: 34.6 °C
- Flash point: -40 °C
- Ignition temp.: 170 °C
- Vapour pressure: (20 °C) 587 hPa
- Viscosity: (20 °C) 0.23 mPas
- Dipolar moment: (20 °C) 1.25 Debye
- Dielectric const.: (20 °C) 4.3
- Evap. heat: (35 °C) 392 kJ/kg
- Saturation conc.: (20 °C) 1776 g/m^3
- Expl. limit (upper): 36 Vol%
- Expl. limit (lower): 1.7 Vol%

Toxicological data:
- LD 50 (oral, rat): 1215 mg/kg
- MAK: 400 ml/m^3, 1200 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-022-00-4
- R: 12-19-22-66-67
- S: 9-16-29-33-46
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 I UN 1155
- IMDG: 3 I UN 1155
- IATA/ICAO: 3 I UN 1155
- PAX: 302
- CAO: 303
- LGK: 3 A
- Disposal: 1

D3103-1 Diethyl ether, reagent grade

HS-No: 2909 11 00 00

Purity (GC)	min. 99.5%	Aluminium (Al)	max. 0.0005%
Identity (IR)	conforms	Boron (B)	max. 0.000002%
Colour	max. 10 Hazen	Barium (Ba)	max. 0.00001%
Acidity	max. 0.0002 meq/g	Calcium (Ca)	max. 0.00005%
Alkalinity	max. 0.0002 meq/g	Cadmium (Cd)	max. 0.000005%
Density (d20 °C/4 °C)	0.712 - 0.714	Cobalt (Co)	max. 0.000002%
Acetone (GC)	max. 0.005%	Chromium (Cr)	max. 0.000002%
Ethanol (GC)	max. 0.05%	Copper (Cu)	max. 0.000002%
Methanol (GC)	max. 0.02%	Iron (Fe)	max. 0.00001%
Aldehydes (as CH_3CHO)	max. 0.001%	Magnesium (Mg)	max. 0.00001%
Carbonyl Compounds (asCO)	max. 0.001%	Manganese (Mn)	max. 0.000002%
Matter discoloured by (H_2SO_4).	max. 10 Hazen	Nickel (Ni)	max. 0.000002%
Peroxide (as H_2O_2)	max. 0.00003%	Lead (Pb)	max. 0.00001%
Evaporation Residue	max. 0.001%	Tin (Sn)	max. 0.00001%
Water	max. 0.005%	Zinc (Zn)	max. 0.00001%

Code	Capacity
D3103-1-2501	2.5 L

D3103-4 Diethyl ether, HPLC grade

HS-No: 2909 11 00 00

See specification in Solvent Specification - 41

Code	Capacity
D3103-4-1001	1.0 L
D3103-4-4001	4.0 L

D3103-11 Diethyl ether, Pesticide grade

HS-No: 2909 11 00 00

See specification in Solvent Specification - 23

Code	Capacity
D3103-11-1001	1.0 L
D3103-11-4001	4.0 L

D3103-12 Diethyl ether, Ultimate grade

HS-No: 2909 11 00 00

See specification in Solvent Specification - 13

Code	Capacity
D3103-12-1001	1.0 L
D3103-12-4001	4.0 L

D3103-15 Diethyl ether, Ultra Dry grade

HS-No: 2909 11 00 00

See specification in Solvent Specification - 63

Code	Capacity
D3103-15-1001	1.0 L
D3103-15-4001	4.0 L

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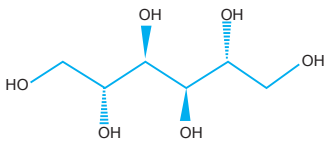
D(-)-MANNITOL

Synonyms: Manna sugar



- $C_6H_{14}O_6$
- M = 182.17 g/mol
- CAS [69-65-8]
- EC number: 200-711-8

Physical data:
- Spec. density: 1.49 g/cm^3
- Bulk density: ~ 400 - 500 kg/m^3
- Solub. in water (25 °C): 213 g/l
- Melting point: 164 - 169 °C
- Boiling poing: (4 hPa) 290 - 295 °C
- pH (100 g/l H_2O, 20 °C) 5 - 7

Toxicological data:
- LD 50 (oral, rat): 13500 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

D3110-1 D-(-)-Mannitol, reagent grade

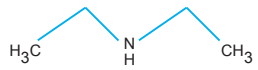
HS-NO. 2905 43 00 00

Assay (Iodometric)	min. 98 %	Arsenic (As)	max. 0.0001 %
Specific rotation ([a]20°/D, c=10, sodium borate)	+23 - +25 °	Copper (Cu)	max. 0.001 %
		Calcium (Ca)	max. 0.001 %
Red impurities (as glucose)	max. 0.05 %	Heavy metals (as Pb)	max. 0.0005 %
Sulfated Ash	max. 0.1 %	Lead (Pb)	max. 0.00005 %
Chlorides (Cl)	max. 0.005 %	Nickel (Ni)	max. 0.0001 %
Sulfates (SO_4)	max. 0.01 %	Zinc (Zn)	max. 0.0005 %

Code	Capacity
D3110-1-0500	500 g

DIETHYLAMINE

Synonyms: N-Ethylethanamine



- $C_4H_{11}N$
- M = 73.14 g/mol
- CAS [109-89-7]
- EC number: 203-716-3

Physical data:
- Density: 0.71 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -48 °C
- Boiling point: 56 °C
- Flash point: -25 °C
- Ignition temp.: 310 °C
- Vapour pressure: (20 °C) 260 hPa
- Refraction index: (n 20 °C/D) 1.3861
- Expl. limit (upper): 10.1 Vol%
- Expl. limit (lower): 1.7 Vol%
- pH (100 g/l H_2O, 20 °C) > 12

Toxicological data:
- LD 50 (oral, rat): 540 mg/kg
- MAK: 5 ml/m^3, 15 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 612-003-00-X
- R: 11-20/21/22-35
- S: 3-16-26-29-36/37/39-45
- VbF class: B
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 3 FC II UN 1154
- IMDG: 3 II UN 1154
- IATA/ICAO: 3 II UN 1154
- PAX: 306
- CAO: 308
- LGK: 3 A
- Disposal: 5

D3123-1 Diethylamine, reagent grade

HS-No: 2921 12 00 00

Assay	min. 99.5 %	Heavy metals (as Pb)	max. 0.00005 %
Chlorides (Cl)	max. 0.0005 %	Non-volatile matter	max. 0.0005 %
Ammonum (NH_4)	max. 0.02 %	Water	max. 0.1 %

Code	Capacity
D3123-1-1000	1 L

D3123-3 Diethylamine, extra pure

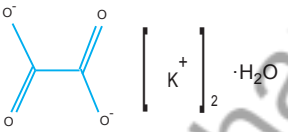
HS-No: 2921 12 00 00

Assay (by GC)	min. 99.5%	Density (20°C)	0.703 - 0.709 g/ml
Appearance	Colorless liquid ammonia smell	Water	max. 0.3
		Residue after evaporation	max. 0.001%
Solubility in water	passes test		

Code	Capacity
D3123-3-1000	1 L

DI-POTASSIUM OXALATE MONOHYDRATE

Synonyms: Oxalic acid dipotassium salt monohydrate



- $C_2K_2O_4 \cdot H_2O$
- M = 184.24 g/mol
- CAS [6487-48-5]
- EC number: 209-506-8

Physical data:
- Spec. density: 2.13 g/cm^3
- Bulk density: ~ 700 - 1100 kg/m^3
- Solub. in water (20 °C): 360 g/l
- pH (50 g/l H_2O, 20 °C) ~ 7.0 - 8.5

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 607-007-00-3
- R: 21/22
- S: 24/25-37-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T3 III UN 3282
- IMDG: 6.1 III UN 3282
- IATA/ICAO: 6.1 III UN 3282
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

D3124-1 di-Potassium oxalate monohydrate, reagent grade

HS-No: 2917 11 00 90

Assay	min. 99.8 %	Copper (Cu)	max. 0.0001 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Substances Darkened by H_2SO_4	passes test	Ammonium (NH_4)	max. 0.001 %
Chloride (Cl)	max. 0.002 %	Sodium (Na)	max. 0.002 %
Sulfates (SO_4)	max. 0.002 %	Nickel (Ni)	max. 0.0001 %
Heavy metals (Pb)	max. 0.001 %	Loss on drying (105 °C)	max. 0.01 %

Code	Capacity
D3214-1-0500	500 g

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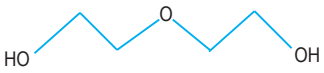
DIETHYLENE GLYCOL

Synonyms: 2,2'-Oxydiethanol, 2,2'-Dihydroxydiethyl ether, Diglycol



- $C_4H_{10}O_3$
- M = 106.12 g/mol
- CAS [111-46-6]
- EC number: 203-872-2

Physical data:
- Form: Liquid
- Density: 1.12 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -10 °C
- Boiling point: 244 - 252 °C
- Flash point: > 135 °C
- Ignition temp.: ~ 230 °C
- Vapour pressure: (20 °C) 0.013 hPa
- Refraction index: (n 20 °C/D) 1.4475
- Dielectric const.: (20 °C) 32
- Saturation conc.: (20 °C) 0.12 g/m^3
- Expl. limit (upper): 22 Vol%
- Expl. limit (lower): 0.7 Vol%
- pH (H_2O) 7

Toxicological data:
- LD 50 (oral, rat): 12565 mg/kg
- MAK: 10 ml/m3, 44 mg/m^3
- WGK: 1

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 1

D3129-1 Diethylene Glycol, reagent grade

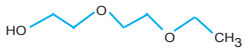
HS-NO. 2909 41 00 00

Assay (G.C)	min. 99 %	Sulfated Ash	max. 0.005 %
Identity (IR-spectrum)	passes test	Water	max. 0.3 %
Density (20°/4°)	1.115 - 1.117		

Code	Capacity
D3129-1-2500	2.5 L

DIETHYLENE GLYCOL MONOETHYL ETHER

Synonyms: Ethyl diglycol, 2-(2-Ethoxyethoxy)-ethanol, Carbitol



- $C_6H_{14}O_3$
- M = 134.18 g/mol
- CAS [111-90-0]
- EC number: 203-919-7

Physical data:
- Form: Liquid
- Density: 0.99 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -80 °C
- Boiling point: 207 °C
- Flash point: 94 °C
- Ignition temp.: 190 °C
- Vapour pressure: (20 °C) 0.13 hPa
- Refraction index: (n 20 °C/D) 1.427
- Viscosity: (20 °C) 4.95 mPas
- Dielectric const.: (20 °C) 12.6
- Evap. heat: (202 °C) 403 kJ/kg
- Expl. limit (upper): 12.2 Vol%
- Expl. limit (lower): 1.8 Vol%

Toxicological data:
- LD 50 (oral, rat): 8690 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage
- LGK: 10-13
- Disposal: 1

D3130-1 Diethylene glycol monoethyl monoethyl ether, reagent grade

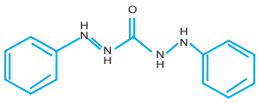
HS-No: 2909 43 00 90

Distillation range (95%)	200 - 203 °C	Residue after ignition	max. 0.01 %
Density (20 °C)	0.987 - 0.990 g/ml	Free acid (as H+), mmol/100 g	max. 0.15 %
Solubility test in water	passes test	Water	max. 0.1 %
Solubility test in ethanol	passes test		

Code	Capacity
D3130-1-1000	1.0 L

1,5-DIPHENYLCARBAZIDE

Synonyms: 1,5 Dphenylcarbonic dihydrazide



- $C_{13}H_{14}N_4O$
- M = 242.28 g/mol
- CAS [140-22-7]
- EC number: 205-403-7

Physical data:
- Form: Solid
- Bulk density: ~ 420 kg/m^3
- Solub. in water (20 °C): slightly soluble
- Melting point: 170 -172 °C

Toxicological data:
- WGK: 3*

Transport/sotrage:
- LGK: 10-13
- Disposal: 3

D3140-1 1,5-Diphenylcarbazide, reagent grade

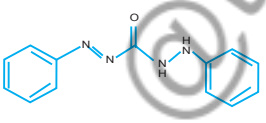
HS-No: 2928 00 90 90

Assay (HPLC)	min. 98 %	Diphenylcarbazone	passes test
Identity (IR-spectrum)	passes test	Sensitivity to Chromates	passes test
Melting point	173 - 176 °C	Suitability for determination of Hg	passes test
Solubility in Aqueous Acetone	passes test	Sulfated Ash	max. 0.05 %
Insoluble in Ethanol	passes test		

Code	Capacity
D3140-1-0025	25 g

1,5-DIPHENYLCARBAZONE

Synonyms: Phenyldiazenecarboxylic acid 2-phenylhydrazide, Phenylazoformic acid 2-phenylhydrazide



- $C_{13}H_{12}N_4O$
- M = 240.27 g/mol
- CAS [538-62-5]
- EC number: 208-698-0

Physical data:
- Form: Solid
- Solub. in water (20 °C): insoluble
- Melting point: 153 - 158 °C (decomposes)

Toxicological data:
- WGK: 2

Transport/storage:
- LGK: 10-13
- Disposal: 3

D3142-1 1,5-Diphenylcarbazone, reagent grade

HS-No: 2928 00 90 90

Assay (HPLC)	35 - 40 %	Insoluble in Ethanol	passes test
Identity (IR-spectrum)	passes test	Sulfated Ash	max. 0.1 %
Melting point	153 - 158 °C	Suitability for determination of Hg	passes test
Solubility in Acetone	passes test		

Code	Capacity
D3142-1-0025	25 g

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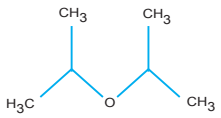
DIISOPROPYL ETHER

Synonyms: Isopropyl ether, 2,2'-Oxybis[propane], 2,2-Propoxypropane



- $C_6H_{14}O$
- M = 102.18 g/mol
- CAS [108-20-3]
- EC number: 203-560-6

Physical data:
- Form: Liquid
- Density: 0.72 g/cm^3
- Solub. in water (20 °C): 12 g/l
- Melting point: -86 °C
- Boiling point: 67 - 70 °C
- Flash point: -28 °C
- Ignition temp.: 405 °C
- Vapour pressure: (20 °C) 175 hPa
- Viscosity: (25 °C) 0.37 mPas
- Dipolar moment: (20 °C) 1.3 Debye
- Dielectric const.: (25 °C) 3.8
- Evap. heat: (68 °C) 285 kJ/kg
- Saturation conc.: (20 °C) 751 g/m^3
- Expl. limit (upper): 21 Vol%
- Expl. limit (lower): 1.0 Vol%
- pH (20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): 8470 mg/kg
- MAK: 200 ml/m^3, 850 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-045-00-X [2]
- R: 11-19-66-67
- S: 9-16-29-33
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1159
- IMDG: 3 II UN 1159
- IATA/ICAO: 3 II UN 1159
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

D3150-2 Diisopropyl Ether, synthesis grade

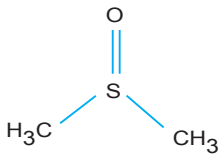
HS-No: 2909 19 00 90

Assay (G.C)	min. 99 %	Peroxides (as H_2O_2)	max. 0.005 %
Identity (IR-spectrum)	passes test	Non-volatile matter	max. 0.005 %
Density (20°/4°)	0.722 - 0.724		

Code	Capacity
D3150-2-2501	2.5 L

DIMETHYL SULPHOXIDE

Synonyms: DMSO, Sulfinyl bis (methane), Methylsulfoxide, Methysufinylmethane



- C_2H_6SO
- M = 78.13 g/mol
- CAS [67-68-5]
- EC number: 200-664-3

Physical data:
- Form: Liquid
- Density: 1.10 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 18.5 °C
- Boiling point: (33 hPa) 85 - 87 °C
- Flash point: 95 °C
- Ignition temp.: 300 - 302 °C
- Vapour pressure: (20 °C) 0.6 hPa
- Refraction index: (n 20 °C/D) 1.48
- Viscosity: (25 °C) 1.98 mPas
- Saturation conc.: (20 °C) 8.0 g/m^3
- Expl. limit (upper): 63.0 Vol%
- Expl. limit (lower): 1.8 Vol%

Toxicological data:
- LD 50 (oral, rat): 14500 mg/kg
- WGK: 1

Safety:
- R: 36/38
- S: 26
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 1

D3161-1 Dimethyl sulphoxide, reagent grade

HS-No: 2930 90 70 90

Assay	min. 99.9 %	Titrable acid	max. 0.001 meq/g
Appearance	clear & colourless	Water (coulometric KF)	max. 0.1 %
Residue after evaporation	max. 0.01 %		

Code	Capacity
D3161-1-2501	2.5 L

D3161-4 Dimethyl sulphoxide, HPLC grade

HS-No: 2930 90 70 90

See specification in Solvent Specification - 39

Code	Capacity
D3161-4-1001	1.0 L
D3161-4-4001	4.0 L

D3161-14 Dimethyl sulphoxide, BIO grade

HS-No: 2930 90 70 90

See specification in Solvent Specification - 62

Code	Capacity
D3161-14-1001	1.0 L
D3161-14-4001	4.0 L

DI-POTASSIUM HYDROGEN PHOSPHATE ANHYDROUS

Synonyms: Dipotassium hydrogen phoshpate, Potassium phosphate dibasic

- K_2HPO_4
- M = 174.18 g/mol
- CAS [7758-11-4]
- EC number: 231-834-5

Physical data:
- Spec. density: 2.44 g/cm^3
- Bulk denstiy: ~ 700 - 1000 kg/m^3
- Solub. in water (20 °C): soluble
- pH (10 g/l H_2O, 20 °C) 8.7 - 9.4

Toxicological data:
- WGK: 1

Safety:
- Poison calss CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3203-1 di-Potassium hydrogen phosphate anhydrous, reagent grade

HS-No: 2835 24 00 00

Assay (acidimetric, on dried substance)	min. 99 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	8.7 - 9.3	Iron (Fe)	max. 0.001 %
Total N	max. 0.001 %	Sodium (Na)	max. 0.5 %
Chloride (Cl)	max. 0.003 %	Loss on drying (105 °C)	max. 1 %
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
D3203-1-0500	500 g

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DI-POTASSIUM HYDROGEN PHOSPHATE TRIHYDRATE

Synonyms: Secondary potassium phosphate, Potassium phosphate dibasic

- $K_2HPO_4 \cdot 3H_2O$
- M = 228.23 g/mol
- CAS [16788-57-1]
- EC number: 231-834-5

Physical data:
- Bulk density: ~ 800 kg/m^3
- Solub. in water (20 °C): freely soluble
- pH (50 g/l H_2O, 20 °C) 9.2 - 9.4

Toxicological data:
- WGK: 1

Safety:
- Poison calss CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3211-1 di-Potassium hydrogen phosphate trihydrate, reagent grade

HS-No: 2835 24 00 00

Assay (acidimetric)	min. 99 %	Arsenic (As)	max. 0.00005 %
Insoluble in water	max. 0.01 %	Copper (Cu)	max. 0.003 %
pH (5%, H_2O)	9.1 - 9.3	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Lead (Pb)	max. 0.003 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Total N (as N)	max. 0.001 %	Sodium (Na)	max. 0.1 %

Code	Capacity
D3211-1-0250	250 g

DI-SODIUM HYDROGEN PHOSPHATE ANHYDROUS

Synonyms: Disodium hydrogen phosphate, Sodium phosphate dibasic, Sodium monohydrogen phosphate

- Na_2HPO_4
- M = 141.96 g/mol
- CAS [7558-79-4]
- EC number: 231-448-7

Physical data:
- Spec. density: 1.53 g/cm^3
- Bulk density: ~ 880 kg/m^3

- Solub. in water (20 °C): 77 g/l
- Melting point: ~ 250 °C (decomposes)
- pH (20 g/l H_2O, 20 °C) 8.7 - 9.3

Toxicological data:
- LD 50 (oral, rat): 17000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3235-1 di-Sodium hydrogen phosphate anhydrous, reagent grade

HS-No: 2835 22 00 00

Assay	min. 99 %	Copper (Cu)	max. 0.0003 %
Insoluble in water	max. 0.01 %	Heavy metals (as Pb)	max. 0.001 %
pH (5%, H_2O)	8.7 - 9.3	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Lead (Pb)	max. 0.001 %
Flourides (F)	max. 0.001 %	Potassium (K)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %	Zinc (Zn)	max. 0.0005 %
Total N	max. 0.001 %	Loss on drying (105 °C)	max. 0.2 %
Arsenic (As)	max. 0.00005 %		

Code	Capacity
D3235-1-0500	500 g
D3235-1-1000	1 kg

DI-SODIUM HYDROGEN PHOSPHATE DIHYDRATE

Synonyms: Sodium monohydrogen phosphate, Sodium phosphate dibasic

- $Na_2HPO_4 \cdot 2H_2O$
- M = 177.99 g/mol
- CAS [10028-24-7]
- EC number: 231-448-7

Physical data:
- Spec. density: 2.1 g/cm^3
- Bulk density: ~ 850 - 1000 kg/m^3

- Solub. in water (20 °C): 93 g/l
- Melting point: 92.5 °C (release of crystalline water)
- pH (50 g/l H_2O), 20 °C) ~ 9.1 - 9.4

Toxicological data:
- LD 50 (oral, rat): 17000 mg/kg (anhydrous substance)

- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

D3243-1 di-Sodium hydrogen phosphate dihydrate, reagent grade

HS-No: 2835 22 00 00

Assay	min. 99.5 %	Arsenic (As)	max. 0.0001 %
pH (5%, H_2O)	9.0 - 9.2	Copper (Cu)	max. 0.0003 %
Chloride (Cl)	max. 0.001 %	Heavy metals (as Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Total N	max. 0.001 %	Potassium (K)	max. 0.005 %
Ammonium (NH_4)	max. 0.001 %	Loss on drying (105 °C)	20.0 - 20.4

Code	Capacity
D3243-1-0500	500 g
D3243-1-1000	1 kg

D3243-3 di-Sodium hydrogen phosphate dihydrate, extra pure

HS-No: 2835 22 00 00

Assay	min. 98.5 %	Iron (Fe)	max. 0.001 %
pH (5%, H_2O)	9.0 - 9.2	Sodium dihydrogen phosphate (NaH_2PO_4)	max. 1.7 %
Chlorides (Cl)	max. 0.005 %	$KMnO_4$ red. Matter (as O)	max. 0.04 %
Sulfates (SO_4)	max. 0.01 %	Loss on drying (130 °C)	19.5 - 21.0 %
Arsenic (As)	max. 0.0002 %		
Heavy metals (as Pb)	max. 0.001 %		

Code	Capacity
D3243-3-0500	500 g
D3243-3-1000	1 kg

DI-SODIUM HYDROGEN PHOSPHATE DODECAHYDRATE

Synonyms: Sodium monohydrogen phosphate, Sodium phosphate dibasic, Secondary sodium phosphate

- $Na_2HPO_4 \cdot 12H_2O$
- M = 358.14 g/mol
- CAS [10039-32-4]
- EC number: 231-448-7

Physical data:
- Spec. density: 1.52 g/cm^3
- Bulk density: ~ 800 - 900 kg/m^3

- Solub. in water (20 °C): ~ 218 g/l
- Melting point: 35 °C
- pH (50 g/l H_2O, 20 °C) ~ 9.0 -9.4

Toxicological data:
- LD 50 (oral, rat): 17000 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

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D3244-1 di-Sodium hydrogen phosphate dodecahydrate, reagen grade

HS-No: 2835 22 00 00

Assay (acidimetric)	99 -102 %	Copper (Cu)	max. 0.0002 %
Identity	passes test	Heavy metals (as Pb)	max. 0.0005 %
Appearance of solution	clear	Iron (Fe)	max. 0.0005 %
pH (5%, H_2O)	9.0 - 9.4	Lead (Pb)	max. 0.0005 %
Total N (as N)	max. 0.001 %	Potassium (K)	max. 0.005 %
Chlorides (Cl)	max. 0.0005 %	Sodium dihydrogen phosphate	passes test
Sulfates (SO_4)	max. 0.005 %	Reducing substances	passes test
Arsenic (As)	max. 0.00005 %	Water	57 - 61 %

Code	Capacity
D3244-1-0500	500 g
D3244-1-1000	1 kg

D3244-3 di-Sodium hydrogen phosphate dodecahydrate, extra pure

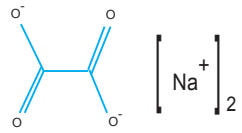
HS-No: 2835 22 00 00

Assay (acidimetric)	min. 98.5 %	Arsenic (As)	max. 0.0001 %
Appearance of solution	passes test	Copper (Cu)	max. 0.001 %
Insoluble in water	max. 0.15 %	Heavy metals (as Pb)	max. 0.0008 %
pH (5%, H_2O)	9.0 - 9.3	Iron (Fe)	max. 0.001 %
Chlorieds (Cl)	max. 0.001 %	Lead (Pb)	max. 0.001 %
Flourides (F)	max. 0.001 %	Potassium (K)	max. 0.005 %
Sodium dihydrogenphosphate		Zinc (Zn)	max. 0.001 %
(NaH_2PO_4)	max. 0.8 %	$KMnO_4$ red. Matter (as O)	max. 0.02 %
Sulfates (SO_4)	max. 0.01 %	Loss on drying (130 °C)	57 - 61 %

Code	Capacity
D3244-3-0500	500 g
D3244-3-1000	1 kg

DI-SODIUM OXALATE

Synonyms: Oxalic acid sodium salt, Soerensen's buffer substances



- $C_2Na_2O_4$
- M = 134.01 g/mol
- CAS [62-76-0]
- EC number: 200-550-3

Physical data:
- Bulk density: ~ 600 kg/m³
- Solub. in water (20 °C): 37 g/l
- Melting point: 250 - 270 °C (decomposes)
- pH (30 g/l H_2O, 20 °C) ~ 8

Toxicological data:
- LD 50 (oral, rat): 7500 mg/kg (oxalic acid)
- WGK: 1

Safety:
- EC Index no.: 607-007-00-3
- R: 21/22
- S: 24/25-3746
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T3 III UN 3282
- IMDG: 6.1 III UN 3282
- IATA/ICAO: 6.1 III UN 3282
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

D3248-1 di-Sodium oxalate, reagent grade

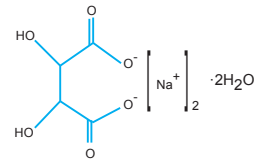
HS-No: 2917 11 00 90

Assay (permanganometric)	min. 99.8 %	Heavy metals (as Pb)	max. 0.001 %
pH (3%, H_2O)	7.5 - 8.5	Lead (Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.002 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.005 %
Total N	max. 0.0005 %	Loss on drying	max. 0.05 %
Copper (Cu)	max. 0.001 %		

Code	Capacity
D3248-1-0500	500 g

DI-SODIUM TARTRATE DIHYDRATE

Synonyms: Tartaric acid sodium salt dihydrate



- $C_4H_4Na_2O_6 \cdot 2H_2O$
- M = 230.08 g/mol
- CAS [6106-24-7]
- EC number: 212-773-3

Physical data:
- Spec. density: ~ 1.82 g/cm³
- Bulk density: ~ 460 kg/m³
- Solub. in water (20 °C): 290 g/l
- Melting point: 154 °C
- pH (50 g/l H_2O, 25 °C) ~ 8

Toxicological data:
- LD 50 (oral, rat): 1290 mg/kg
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 3

D3255-1 di-Sodium tartrate dihydrate, reagent grade

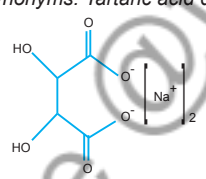
HS-NO: 2918 13 00 90

Assay (acidimetric)	min. 99.5 %	Ammonium (NH_4)	max. 0.001 %
pH (5%, H_2O)	7 - 9	Calcium (Ca)	max. 0.0005 %
Total N	max. 0.002 %	Heavy metals (as Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0005 %	Loss on drying (150 °C, 4h)	15.61 - 15.71 %
Sulfates (SO_4)	max. 0.002 %		

Code	Capacity
D3255-1-0500	500 g

DI-SODIUM TARTRATE ANHYDROUS

Synonyms: Tartaric acid disodium salt



- $C_4H_4Na_2O_6$
- M = 194.06 g/mol
- CAS [868-18-8]
- EC number: 212-773-3

Physical data:
- Solub. in water (20 °C): soluble
- pH (50 g/l H_2O, 20 °C) 7.0 - 9.0

D3259-1 di-Sodium tartrate anhydrous, reagent grade

HS-NO: 2918 13 00 90

Assay (acidimetric)	min. 99 %	Arsenic (As)	max. 0.00005 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.005 %
pH (5%, H_2O)	7 - 9	Copper (Cu)	max. 0.0005 %
Chloride (Cl)	max. 0.005 %	Iron (Fe)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.0005 %
Ammonium (NH_4)	max. 0.003 %		

Code	Capacity
D3259-1-0500	500 g
D3259-1-1000	1 kg

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DI-SODIUM TETRABORATE ANHYDROUS

Synonyms: Sodium biborate, Sodium borate, Borax

- $Na_2B_4O_7$
- M = 201.22 g/mol
- CAS [1330-43-4]
- EC number: 215-540-4

Physical data:
- Spec. density: 2.37 g/cm^3
- Bulk density: ~ 700 kg/m^3
- Solub. in water (20 °C): 25.6 g/l

- Melting point: 742 °C
- Boiling point: 1575 °C (decomposes)
- Vapour pressure: (1200 °C) 7.3 hPa
- pH (25 g/l H_2O, 20 °C) 9.2

Toxicological data:
- LD 50 (oral, rat): 2660 mg/kg (decahydrate substance)
- WGK: 1

Safety:
- S: 24/25
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

D3263-3 di-Sodium tetraborate anhydrous, extra pure

HS-NO: 2840 11 00 00

Assay (acidimetric)	min. 98 %	Heavy metals (as Pb)	max. 0.005 %
Insoluble in water	max. 0.05 %	Iron (Fe)	max. 0.005 %
Chlorides (Cl)	max. 0.05 %	Lead (Pb)	max. 0.02 %
Phosphates (PO_4)	max. 0.005 %	Magnesium (Mg)	max. 0.005 %
Sulfates (SO_4)	max. 0.05 %	Nickel (Ni)	max. 0.05 %
Calcium (Ca)	max. 0.02 %	Potassium (K)	max. 0.05 %
Copper (Cu)	max. 0.005 %		

Code	Capacity
D3263-3-1000	1 kg

DI-SODIUM TETRABORATE DECAHYDRATE

Synonyms: Borax, Sodium biborate decahydrae, Sodium borate decahydrate

- $Na_2B_4O_7 \cdot 10H_2O$
- M = 381.37 g/mol
- CAS [1303-96-4]
- EC number: 215-540-4

Physical data:
- Spec. density: 1.72 g/cm^3
- Bulk density: ~ 750 kg/m^3
- Solub. in water (20 °C): 51.4 g/l

- Melting point: 75 °C
- Boiling point: 1575 °C (anhydrous)
- Vapour pressure: (20 °C) 0.213 hPa
- pH (47 g/l H_2O, 20 °C) 9.2

Toxicological data:
- LD 50 (oral, rat): 2660 mg/kg
- WGK: 1

Safety:
- S: 24/25
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 28

D3265-1 di-Sodium tetraborate decahydrate, reagent grade

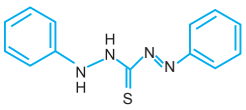
HS-NO: 2840 19 90 00

Assay (acidimetric)	min. 99.5 %	Arsenic (As)	max. 0.0001 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.005 %
pH (4%, H_2O)	9.15 - 9.20	Copper (Cu)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.001 %	Lead (Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
D3265-1-0500	500 g
D3265-1-1000	1 kg

DITHIZONE

Synonyms: Diphenylthiocarbazone



- $C_{13}H_{12}N_4S$
- M = 256.33 g/mol
- CAS [60-10-6]
- EC number: 200-454-1

Physical data:
- Solub. in water in soluble
- Melting point: ~ 168 °C (decomposition)
- Bulk density: ~ 250 kg/m^3

Toxicological data:
- WGK: 3*

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 3

D3700-1 Dithizone, reagent grade

HS-No: 2930 90 70 00

Assay (spectrophotometry)	min. 75.0 %	Residue after ignition (as sulfate)	max. 0.1 %
Sensitivity test	passes test	Solubility test in chloroform	passes test
Loss on drying	max. 5.0 %	Heavy metals (as Pb)	max. 0.0005 %

Code	Capacity
D3700-1-0005	5 g

Line @thaikyou2562 Tel. 02 372 1645 - 6

Chemical list : E

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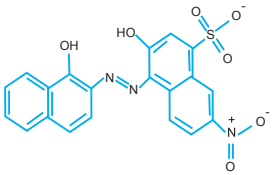
ERIOCHROME BLACK T

Synonyms: Chrome black T, 2-Hydroxy-1-(1-hydroxy-2-naphthylazo) 6-nitronaphthalene-4-sulfonic acid sodium salt



- $C_{20}H_{12}N_3NaO_2S$
- M = 461.38 g/mol
- CAS [1787-61-7]
- EC number: 217-250-3

Physical data:
- Form: Solid
- Bulk density: ~ 400 - 600 kg/cm^3
- Solub. in water (20 °C): ~ 50 g/l
- pH (10 g/l H_2O, 20 °C) 3.7

Toxicological data:
- LD 50 (oral, rat): 17590 mg/kg
- WGK: 3*

Safety:
- R: 36-51/53
- S: 26-61

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 3

E5000-1 Eriochrome black T, C.I. 14645

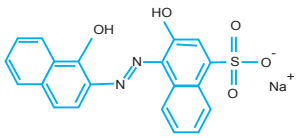
HS-No: 3204 19 00 90

Absorption maximum λ(pH +10.0) ..... 612 - 616 nm
Absorptivity (A1%/1cm; λ max; pH10.0 on dried material) ..... 320 - 420
Suitability as metal indicator ..... passet test
Loss on drying ..... max. 7 %

Code	Capacity
E5000-1-0025	25 g

ERIOCHROME BLUE-BLACK B

Synonyms: 2-Hydroxy-1-(1-hydroxy-2-naphthylazo)-naphthalene-4-sulfonic acid sodium salt



- $C_{20}H_{13}N_2NaO_5S$
- M = 166.85 g/mol
- CAS [3564-14-5]
- EC number: 222-639-6

Physical data:
- Form: Solid
- Bulk density: 540 kg/cm^3
- Solub. in water (20 °C): ~ 20 g/l
- pH (20 g/l H_2O, 20 °C) 9.5

Toxicological data:
- LD 50 (oral, rat): > 5000 mg/kg
- WGK: 1

Safety:
- R: 36
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 3

E5001-1 Eriochrome blue-black B, C.I. 14640

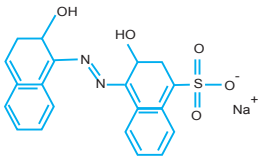
HS-No: 3204 19 00 90

Absorption maximum λ(pH 10.0) ..... 634 - 641 nm
Absorptivity (A1%/1cm; λ max; 0.0025%; pH10.0 on dried material) . 220 - 230
Suitability as indicator for metal titration .. passet test
Loss on drying (110 °C) ..... max. 5 %

Code	Capacity
E5001-1-0025	25 g

ERIOCHROME BLUE-BLACK R

Synonyms: 2-Hydroxy-1-(2-hydroxy-1-naphthylazo) -naphthalene-4-sulfonic acid sodium salt



- $C_{20}H_{13}N_2NaO_5S$
- M = 416.39 g/mol
- CAS [2538-85-4]
- EC number: 219-810-2

Physical data:
- Form: Solid
- Bulk density: 530 kg/cm^3
- Solub. in water (20 °C): ~ 20 g/l
- pH (10 g/l H_2O, 20 °C) 9.4

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 3

E5002-1 Eriochrome blue-black R, C.I. 15705

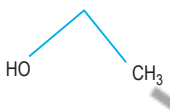
HS-No: 2927 00 00 90

Absorption maximum λ(pH 12.2) ..... 632 - 636 nm
Absorptivity (A1%/1cm; λ max; 0.0015%; pH12.2 on dried material) ... 200 - 300
Suitability as indicator for metal titration passet test
Loss on drying (110 °C) ..... max. 10 %

Code	Capacity
E5002-1-0025	25 g

ETHANOL ABSOLUTE

Synonyms: Ethyl alcohol, Methylcarbinol, Spirit, Spirit of wine



- C_2H_6O
- M = 46.07 g/mol
- CAS [64-17-5]
- EC number: 200-578-6

Physical data:
- Density: 0.79 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -114.5 °C
- Boiling point: 78.3 °C
- Flash point: 12 °C
- Ignition temp.: 425 °C
- Vapour pressure: (20 °C) 59 mPas
- Viscosity: (20 °C) 1.2 mPas
- Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const.: (25 °C) 24.3
- Evap. heat: (78 °C) 855 kJ/kg
- Saturation conc.: (20 °C) 105 g/m^3
- Expl. limit (upper): 15 Vol%
- Expl. limit (lower): 3.5 Vol%
- pH (10 g/l H_2O, 20 °C) 7.0

Toxicological data:
- LD 50 (oral, rat): 6200 mg/kg
- MAK: 500 ml/m^3, 960 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-002-00-5
- R: 11
- S: 7-16
- VbF class: B
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 3 F1 II UN 1170
- IMDG: 3 II UN 1170
- IATA/ICAO: 3 II UN 1170
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

Line @thankyou2562 Tel 02 372 1545-6

E7024-1 Ethyl Alcohol 95 % (Absolute Denatured), reagent grade

HS-No: 2207 10 00 90

Appearance	Clear, Colourless liquid	Acetaldehyde	max. 0.001 %
Identification	IR Spectrometry	Methanol	max. 0.02 %
Assay (by Density)	94.8 ~ 95.8 vol%	Fusel oil	max. 0.004 %
Density at 20 °C	0.808 % 0.812 g/ml	Substances reducing permanganate	passes test
Residue after evaporation	max. 0.001%	Substances darkened by sulfuric acid	passes test
Acidity (as CH_3COOH)	max. 0.002%	Contains Bitrex 5~10 ppm/L	
Alkalinity (as NH_3)	max. 1 ppm		
Heavy metals (as Pb)	max. 1 ppm		

Code	Capacity
E7024-1-2500	2.5 L
E7024-1-9020	20 L

E7025-1 Ethanol 99.9 % (Absolute denatured), reagent grade

HS-No: 2207 10 00 90

Purity (GC)	min. 99.9 %	Indium (In)	max. 0.02 ppm
Identity (IR)	conforms	Lithium (Li)	max. 0.02 ppm
Free Alkali (as NH_3)	max. 3 ppm	Potassium (K)	max. 0.2 ppm
Free Acid (as CH_3COOH)	max. 10 ppm	Magnesium (Mg)	max. 0.1 ppm
Spec. resistance	max. 1 MWcm	Manganese (Mn)	max. 0.02 ppm
Heavy metals (as Pb)	max. 0.2 ppm	Molybdenum (Mo)	max. 0.05 ppm
Silver (Ag)	max. 0.02 ppm	Sodium (Na)	max. 0.5 ppm
A1 Aluminum (Al)	max. 0.2 ppm	Nickel (Ni)	max. 0.02 ppm
Arsenic (As)	max. 0.01 ppm	Lead (Pb)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm	Platinum (Pt)	max. 0.2 ppm
Barium (Ba)	max. 0.1 ppm	Antimony (Sb)	max. 0.01 ppm
Beryllium (Be)	max. 0.02 ppm	Tin (Sn)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Strontium (Sr)	max. 0.02 ppm
Calcium (Ca)	max. 0.6 ppm	Titanium (Ti)	max. 0.1 ppm
Cadmium (Cd)	max. 0.05 ppm	Thallium (Tl)	max. 0.05 ppm
Cobalt (Co)	max. 0.05 ppm	Vanadium (V)	max. 0.05 ppm
Chromium (Cr)	max. 0.05 ppm	Zinc (Zn)	max. 0.1 ppm
Copper (Cu)	max. 0.02 ppm	Zirconium (Zr)	max. 0.2 ppm
Iron (Fe)	max. 0.1 ppm	Evaporation residue	max. 10 ppm
Gallium (Ga)	max. 0.02 ppm	Water	max. 0.2 %

Code	Capacity
E7025-1-1000	1.0 L
E7025-1-2500	2.5 L
E7025-1-4000	4.0 L

E7026-1 Ethyl alcohol, absolute, 99.9% reagent grade

HS-No: 2207 10 90 90

Purity (GC)	min. 99.9 %	Indium (In)	max. 0.02 ppm
Identity (IR)	conforms	Lithium (Li)	max. 0.02 ppm
Free Alkali (as NH_3)	max. 3 ppm	Potassium (K)	max. 0.2 ppm
Free Acid (as CH_3COOH)	max. 10 ppm	Magnesium (Mg)	max. 0.1 ppm
Spec. resistance	max. 1 MWcm	Manganese (Mn)	max. 0.02 ppm
Heavy metals (as Pb)	max. 0.2 ppm	Molybdenum (Mo)	max. 0.05 ppm
Silver (Ag)	max. 0.02 ppm	Sodium (Na)	max. 0.5 ppm
A1 Aluminum (Al)	max. 0.2 ppm	Nickel (Ni)	max. 0.02 ppm
Arsenic (As)	max. 0.01 ppm	Lead (Pb)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm	Platinum (Pt)	max. 0.2 ppm
Barium (Ba)	max. 0.1 ppm	Antimony (Sb)	max. 0.01 ppm
Beryllium (Be)	max. 0.02 ppm	Tin (Sn)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Strontium (Sr)	max. 0.02 ppm
Calcium (Ca)	max. 0.6 ppm	Titanium (Ti)	max. 0.1 ppm
Cadmium (Cd)	max. 0.05 ppm	Thallium (Tl)	max. 0.05 ppm
Cobalt (Co)	max. 0.05 ppm	Vanadium (V)	max. 0.05 ppm
Chromium (Cr)	max. 0.05 ppm	Zinc (Zn)	max. 0.1 ppm
Copper (Cu)	max. 0.02 ppm	Zirconium (Zr)	max. 0.2 ppm
Iron (Fe)	max. 0.1 ppm	Evaporation residue	max. 10 ppm
Gallium (Ga)	max. 0.02 ppm	Water	max. 0.2 %

Code	Capacity
E7026-1-1000	1.0 L
E7026-1-2500	2.5 L
E7026-1-4000	4.0 L

E7026-4 Ethyl alcohol, absolute, 99.9% HPLC grade

HS-No: 2207 10 90 90

See specification in Solvent Specification - 40

Code	Capacity
E7026-4-1000	1.0 L
E7026-4-4001	4.0 L

ETHANOL, APPROX. 96%

Synonyms: Ethyl alcohol, Methylcarbinol, Spirit, Spirit of wine

- C_2H_6O
- M = 46.07 g/mol
- CAS [64-17-5]
- EC number: 200-578-6

Physical data:
- Density: 0.81 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -117 °C
- Boiling point: 78 °C
- Flash point: 9 °C
- Ignition temp.: 425 °C
- Vapour pressure: (20 °C) ~ 59 hPa
- Viscosity: (20 °C) 1.2 mPas
- Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const.: (25 °C) 24.3
- Saturation conc.: (20 °C) 105 g/m^3
- Expl. limit (upper): 15 Vol%
- Expl. limit (lower): 3.5 Vol%
- pH (10 g/l H_2O, 20 °C) 7.0

Toxicological data:
- LD 50 (oral, rat): 6200 mg/kg (anhydrous substance)
- MAK: 500 ml/m^3, 960 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-002-00-5
- R: 11
- S: 7-16
- VbF class: B
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 3 F1 II UN 1170
- IMDG: 3 II UN 1170
- IATA/ICAO: 3 II UN 1170
- PAX: 305
- CAO: 307
- LGK: 3 A

Line @thanky0222 Tel. 0086 21 1545 - 6

E7045-1 Ethanol approx. 96%, reagent grade

HS-No: 2207 10 00 90

Assay (GC)	95 - 96 %	Tin (Sn)	max. 0.00002 %
Colour	max. 10 Hazen	Zinc (Zn)	max. 0.00002 %
Acidity	max. 0.0005 meq/g	Acetone (G.C.)	max. 0.001 %
Alkalinity	max. 0.0002 meq/g	Iso-amyl alcohol (G.C.)	max. 0.05 %
Aluminium (Al)	max. 0.00005 %	Methanol (G.C.)	max. 0.05 %
Barium (Ba)	max. 0.00002 %	2-Propanol (G.C.)	max. 0.003 %
Boron (B)	max. 0.000005 %	Aldehydes (as CH_3CHO)	max. 0.002 %
Cadmium (Cd)	max. 0.00001 %	Carbonyl cmopounds (as CO)	max. 0.003 %
Calcium (Ca)	max. 0.0001 %	$KMnO_4$ red. Matter (as O)	max. 0.0003 %
Chromium (Cr)	max. 0.000005 %	Substances darkened by H_2SO_4	passes test
Cobalt (Co)	max. 0.000005 %	Furtural	passes test
Copper (Cu)	max. 0.000005 %	Fusel oil	passes test
Iron (Fe)	max. 0.00002 %	Non-volatile matter	max. 0.001 %
Lead (Pb)	max. 0.00002 %	UV spectroscopy	passes test
Magnesium (Mg)	max. 0.00002 %	Water (K.F.)	approx. 5 %
Manganese (Mn)	max. 0.000005 %	Residual solvents (Ph Eur/ICH)	excluded by production process
Nickel (Ni)	max. 0.000005 %		

Code	Capacity
E7045-1-1000	1.0 L
E7045-1-2500	2.5 L
E7045-1-9025	25 L

ETHANOLAMINE

2-Aminoethanol, 2-Hydroxyethylamine, Monoethanolamine

- C_2H_2NO
- M = 61.08 g/mol
- CAS [141-43-5]
- EC number: 205-483-3

Physical data:
- Density: 1.02 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 10.5 °C
- Boiling point: 171 °C
- Flash point: 93 °C
- Ignition temp.: 410 °C
- Vapour pressure: (20 °C) 0.5 hPa
- Refraction index: (n 20 °C/D) 1.4539
- Viscosity: (20 °C) 23 mPas
- Evap. heat: (170 °C) 963 kJ/kg
- Expl. limit (upper): 13.1 Vol%
- Expl. limit (lower): 2.5 Vol%
- pH (100 g/l H_2O, 20 °C) 12.1

Toxicological data:
- LD 50 (oral, rat): 1720 mg/kg
- MAK: 2 ml/m^3, 5.1 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-030-00-8
- R: 20-36/37/38
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C7 III UN 2491
- IMDG: 8 III UN 2491
- IATA/ICAO: 8 III UN 2491
- PAX: 818
- CAO: 820
- LGK: 8 A
- Disposal: 1

E7067-1 Ethanolamine, reagent grade

HS-No: 2922 11 00 10

Assay (GC)	min. 99.5 %	Chromium (Cr)	max. 10.0 %
Identity (IR-spectrum)	passes test	Copper (Cu)	max. 10.0 %
Aluminium (Al)	max. 0.00005 %	Iron (Fe)	max. 10.0 %
Boron (B)	max. 0.000002 %	Magnesium (Mg)	max. 10.0 %
Barium (Ba)	max. 0.00001 %	Manganese (Mn)	max. 10.0 %
Calcium (Ca)	max. 0.00005 %	Nickel (Ni)	max. 10.0 %
Cadmium (Cd)	max. 0.00005 %	Lead (Pb)	max. 10.0 %
Cobalt (Co)	max. 10.0 %	Tin (Sn)	max. 10.0 %

Code	Capacity
E7067-1-1000	1.0 L
E7067-1-2500	2.5 L

E7067-2 Ethanolamine, synthesis grade

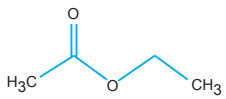
HS-No: 2922 11 00 10

Assay (GC)	min. 98 %	Sulfated Ash	max. 0.01 %
Identity (IR-spectrum)	passes test	Water (K.F)	max. 0.3 %
Density (20°/4°)	1.014 - 1.016		

Code	Capacity
E7067-2-1000	1.0 L
E7067-2-2500	2.5 L

ETHYL ACETATE

Synonyms: Acetic acid ethyl ester, Acetic ether



- $C_4H_8O_2$
- M = 88.10 g/mol
- CAS [141-78-6]
- EC number: 205-500-4

Physical data:
- Density: 0.90 g/cm^3
- Solub. in water (20 °C): 85.3 g/l
- Melting point: -83 °C
- Boiling point: 77 °C
- Flash point: -4 °C
- Ignition temp.: 460 °C
- Vapour pressure: (20 °C) 97 hPa
- Refraction index: (n 20 °C/D) 1.3723
- Viscosity: (20 °C) 0.44 mPas
- Dipolar moment: (20 °C) 1.78 Debye
- Dielectric const.: (25 °C) 6.0
- Evap. heat: (77 °C) 427 kJ/kg
- Saturation conc.: (20 °C) 336 g/m^3
- Expl. limit (upper): 11.5 Vol%
- Expl. limit (lower): 2.1 Vol%

Toxicological data:
- LD 50 (oral, rat): 5620 mg/kg
- MAK: 400 ml/m^3, 1500 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 607-022-00-5
- R: 11-36-66-67
- S: 16-26-33
- VbF calss: AI
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1173
- IMDG: 3 II UN 1173
- IATA/ICAO: 3 II UN 1173
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

E7100-1 Ethyl acetate, reagent grade

HS-No: 2915 31 00 00

Assay	min. 99.5 %	Lead (Pb)	max. 0.00001 %
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Free Acid (as CH_3COOH)	max. 0.005 %	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Tin (Sn)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Zinc (Zn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Ethanol (G.C.)	max. 0.1 %
Calcium (Ca)	max. 0.00005 %	Methanol (G.C.)	max. 0.1 %
Chromium (Cr)	max. 0.000002 %	Methyl Acetate (G.C.)	max. 0.1 %
Cobalt (Co)	max. 0.000002 %	Substances darkened by H_2SO_4	passes test
Copper (Cu)	max. 0.000002 %	Non-Volatile matter	max. 0.001 %
Iron (Fe)	max. 0.00001 %	Water	max. 0.05 %

Code	Capacity
E7100-1-1000	1.0 L
E7100-1-2500	2.5 L
E7100-1-2501	2.5 L
E7100-1-4000	4.0 L

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E7100-4 Ethyl acetate, HPLC grade

HS-No: 2915 31 00 00

See specification in Solvent Specification - 40

Code	Capacity
E7100-4-1001	1.0 L
E7100-4-4001	4.0 L

E7100-11 Ethyl acetate, Pesticide grade

HS-No: 2915 31 00 00

See specification in Solvent Specification - 23

Code	Capacity
E7100-11-1001	1.0 L
E7100-11-4001	4.0 L

E7100-12 Ethyl acetate, Ultimate grade

HS-No: 2915 31 00 00

See specification in Solvent Specification - 13

Code	Capacity
E7100-12-1001	1.0 L
E7100-12-4001	4.0 L

E7100-15 Ethyl acetate, Ultra Dry grade

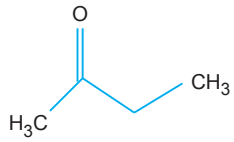
HS-No: 2915 31 00 00

See specification in Solvent Specification - 63

Code	Capacity
E7100-15-1001	1.0 L
E7100-15-4001	4.0 L

ETHYL METHYL KETONE

Synonyms: 2-Butanone, Methyl ethyl ketone, MEK



- C_4H_8O
- M = 72.11 g/mol
- CAS [78-93-3]
- EC number: 201-159-0

Physical data:
- Density: 0.80 g/cm^3
- Solub. in water (20 °C): 292 g/l
- Melting point: -86 °C
- Boiling point: 79.6 °C
- Flash point: -1 °C
- Ignition temp.: 505 °C
- Vapour pressure: (20 °C) 105 hPa
- Viscosity: (15 °C) 0.42 mPas
- Dipolar moment: (20 °C) 2.7 Debye
- Dielectric const.: (20 °C) 18.5
- Saturation conc.: (20 °C) 310 g/m^3
- Expl. limit (upper): 11.5 Vol%
- Expl. limit (lower): 1.8 Vol%
- pH (300 g/l H_2O, 20 °C) ~ 5.5

Toxicological data:
- LD 50 (oral, rat): 2737 mg/kg
- MAK: 200 ml/m^3, 600 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 606-002-00-3
- R: 11-36-66-67
- S: 9-16
- VbF class: AI
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1193
- IMDG: 3 II UN 1193
- IATA/ICAO: 3 II UN 1193
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

E7125-1 Ethyl methyl ketone, reagent grade

HS-NO: 2914 12 00 00

Assay	min. 99.5 %	Cobalt (Co)	max. 0.000002 %
Color	max. 10 Hazen	Copper (Cu)	max. 0.000002 %
Acidity	max. 0.0005 meq/g	Chromium (Cr)	max. 0.000002 %
Alkalinity	max. 0.0002 meq/g	Iron (Fe)	max. 0.00001 %
Evaporation residue	max. 0.001 %	Tin (Sn)	max. 0.00001 %
Water	max. 0.5 %	Magnesium (Mg)	max. 0.000005 %
Aluminium (Al)	max. 0.00002 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Lead (Pb)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Zinc (Zn)	max. 0.00001 %
Calcium (Ca)	max. 0.00005 %		

Code	Capacity
E7125-1-2500	2.5 L
E7125-1-2501	2.5 L
E7125-1-4000	4.0 L
E7125-1-9025	25 L

E7125-7 Ethyl methyl ketone, EC-10

HS-NO: 2914 12 00 00

Purity (GC)	min. 99.5 %	Gallium (Ga)	max. 20 ppb
Free Acid (as CH_3COOH)	max. 20 ppm	Indium (In)	max. 20 ppb
Spec. resistance	max. 10 MWcm	Potassium (K)	max. 100 ppb
Evaporation residue	max. 5 ppm	Lithium (Li)	max. 20 ppb
Water	max. 0.05 %	Magndsium (Mg)	max. 100 ppb
Heavy metals (as Pb)	max. 0.2 ppm	Manganese (Mn)	max. 20 ppb
Silver (Ag)	max. 20 ppb	Molybdenum (Mo)	max. 50 ppb
Aluminium (Al)	max. 200 ppb	Sodium (Na)	max. 500 ppb
Arsenic (As)	max. 10 ppb	Nickel (Ni)	max. 20 ppb
Gold (Au)	max. 100 ppb	Lead (Pb)	max. 50 ppb
Boron (B)	max. 10 ppb	Ptatinum (Pt)	max. 200 ppb
Barium (Ba)	max. 100 ppb	Antimony (Sb)	max. 10 ppb
Beryllium (Be)	max. 20 ppb	Tin (Sn)	max. 100 ppb
Bismuth (Bi)	max. 100 ppb	Strontium (Sr)	max. 20 ppb
Calcium (Ca)	max. 500 ppb	Titanium (Ti)	max. 100 ppb
Cadmium (Cd)	max. 50 ppb	Thallium (Tl)	max. 50 ppb
Cobalt (Co)	max. 20 ppb	Vanadium (V)	max. 50 ppb
Chromium (Cr)	max. 20 ppb	Zinc (Zn)	max. 100 ppb
Copper (Cu)	max. 20 ppb	Zirconium (Zr)	max. 200 ppb
Iron (Fe)	max. 100 ppb		

Code	Capacity
E7125-7-2500	2.5 L

E7125-7 Ethyl methyl ketone, HPLC Grade

HS-No: 2914 12 00 00

See specification in Solvent Specification - 44

Code	Capacity
E7125-4-1001	1.0 L
E7125-4-4001	4.0 L

Lin@rhawk.com.cn Tel: 021-62372154

ETHYLENE GLYCOL MONOBUTYL ETHER

Synonyms: 2-Butoxyethanol, Butyl glycol

- $C_6H_{14}O_2$
- M = 118.18 g/mol
- CAS [111-76-2]
- EC number: 203-905-0

Physical data:
- Density: 0.9 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -70 °C
- Boiling point: 170 - 172 °C
- Flash point: 63 - 64 °C
- Ignition temp.: 230 °C
- Vapour pressure: (20 °C) 0.8 hPa
- Reflection index: (n 20 °C/D) 1.4193
- Viscosity: (20 °C) 5.31 mPas
- Dielectric const.: (20 °C) 9.4
- Saturation conc.: (20 °C) 5 g/m^3
- Expl. limit (upper): 10.3 Vol%
- Expl. limit (lower): 1.9 Vol%
- pH (20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 1480 mg/kg
- MAK: 20 ml/m^3, 98 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-014-00-0
- R: 20/21/22-36/38
- S: 24/25-37-46
- Poison class CH (Swiss): 4

Transport/storage:
- PAX: 611
- CAO: 618
- LGK: 10-13
- Disposal: 1

E7135-2 Ethylene glycol monobutyl ether, synthesis grade

HS-No: 2909 43 00 00

Assay	min. 99.0 %	Aluminium (Al)	max. 0.00005 %
Colour	max. 10 APHA	Calcium (Ca)	max. 0.00005 %
Sulfated ash	max. 0.01 %	Iron (Fe)	max. 0.00005 %
Acidity	max. 0.01 %	Magnesium (Mg)	max. 0.00005 %
Water (KF)	max. 0.1 %	Nickel (Ni)	max. 0.00005%
Non-volatile matter	max. 0.05 %		

Code	Capacity
E7135-2-2500	2.5 L
E7135-2-9025	25 L

ETHYLENE GLYCOL

Synonyms: 1,2-Ethanediol, Glycol

- $C_2H_6O_2$
- M = 62.07 g/mol
- CAS [107-21-1]
- EC number: 203-473-3

Physical data:
- Density: 1.11 g/cm^3
- Solub. in water (20 °C): 1000 g/l (miscible)
- Melting point: -13 °C
- Boiling point: (39 hPa) 117 °C
- Flash point: 111 °C
- Ignition temp.: 410 °C
- Vapour pressure: (20 °C) 0.053 hPa
- Viscosity: (20 °C) 21 mPas
- Dielectric const.: (25 °C) 37.7
- Saturation conc.: (20 °C) 0.15 g/m^3
- Expl. limit (upper): 12.8 Vol%
- Expl. limit (lower): 1.8 Vol%

Toxicological data:
- LD 50 (oral, rat): 4700 mg/kg
- MAK: 10 ml/m3, 26 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-027-00-1
- R: 22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 1

E7152-1 Ethylene glycol, reagent grade

HS-No: 2905 31 00 00

Assay	min. 99.5 %	$KMnO_4$. red. matter (as O)	max. 0.0003 %
Acidity	max. 0.0002 meq/g	Substances darkened by H_2SO_4	passes test
Formaldehyde	max. 0.005 %	Sulfated ash	max. 0.005 %
Chlorides (Cl)	max. 0.00002 %	Water	max. 0.1 %
Iron (Fe)	max. 0.00002 %		

Code	Capacity
E7152-1-1000	1.0 L
E7152-1-2500	2.5 L

ETHYLENE GLYCOL MONOETHYL ETHER

Synonyms: 2-Ethoxyethanol, Ethyl glycol, Ethyl cellosolve

- $C_4H_{10}O_2$
- M = 90.12 g/mol
- CAS [110-80-5]
- EC number: 203-804-1

Physical data:
- Form: Liquid
- Density: 0.93 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -100 °C
- Boiling point: 135 °C
- Flash point: 44 °C
- Ignition temp.: 235 °C
- Vapour pressure: (20 °C) ~ 5 hPa
- Refraction index: (n 20 °C/D) 1.4075
- Viscosity: (20 °C) 2.07 mPas
- Dielectirc const.: (20 °C) 11.9
- Saturation conc.: (20 °C) 18 g/m^3
- Expl. limit (upper): 15.7 Vol%
- Expl. limit (lower): 1.8 Vol%
- pH (20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 2125 mg/kg
- MAK: 5 ml/m^3, 19 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-012-00-X
- R: 60-61-10-E20/21/22
- S: 53-36/37-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 3 F1 III UN 1171
- IMDG: 3 III UN 1171
- IATA/ICAO: 3 III UN 1171
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

E7154-1 Ethylene glycol monoethyl ether, reagent grade

HS-No: 2909 43 00 00

Assay	min. 99.5 %	Lead (Pb)	max. 0.00001 %
Identity (IR-spectrum)	passes test	Magnesium (Mg)	max. 0.00001 %
Density (20°/°4)	0.929 - 0.930	Manganese (Mn)	max. 0.000002 %
Colour	max. 10 Hazen	Nickel (Ni)	max. 0.000002 %
Acidity	max. 0.001 meq/g	Zinc (Zn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Acetaldehyde (CH_3CHO)	max. 0.001 %
Calcium (Ca)	max. 0.00005%	Formaldehyde (HCHO)	max. 0.001 %
Chromium (Cr)	max. 0.000002 %	Peroxides (as H_2O_2)	max. 0.0003 %
Cobalt (Co)	max. 0.000002 %	Non-volatile matter	max. 0.001 %
Copper (Cu)	max. 0.000002 %	Water	max. 0.1 %
Iron (Fe)	max. 0.00001 %		

Code	Capacity
E7154-1-2501	2.5 L

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ETHYLENEDIAMINE DIHYDROCHLORIDE

Synonyms: 1,2-Diaminoethane dihydrochloride, Ethylenediammonium dichloride

- $C_2H_8N_2 \cdot 2HCl$
- M = 133.02 g/mol
- CAS [333-18-6]
- EC number: 206-369-6

Physical data:
- Form: Powder
- Spec. density: 1.11 g/cm³
- Bulk density: 650 kg/m³ ~ 650 kg/m³
- Solub. in water (20 °C) 300 g/l
- pH (100 g/l H_2O, 20 °C) 5

Toxicological data:
- WGK: 2

Safety:
> Poison calss CH (Swiss): 3

Transport/storage:
> LGK: 10-13
> Disposal: 3

E7156-1 Ethylenediamine dihydrochloride, reagent grade

HS-No: 2921 21 00 00

Assay	min. 99.0 %
Solubility test in water	passes test
Residue after ignition (as sulfate)	max. 0.1 %
Heavy metals (as Pb)	max. 0.001 %

Code	Capacity
E7156-1-0100	100 g

E

ETHYLENEDIAMINE DIHYDROCHLORIDE

Synonyms: 1,2-Diaminoethane dihydrochloride, Ethylenediammonium dichloride

- $C_2H_8N_2 \cdot 2HCl$
- M = 133.02 g/mol
- CAS [333-18-6]
- EC number: 206-369-6

Physical data:
- Form: Powder
- Spec. density: 1.11 g/cm³
- Bulk density: 650 kg/m³ ~ 650 kg/m³
- Solub. in water (20 °C) 300 g/l
- pH (100 g/l H_2O, 20 °C) 5

Toxicological data:
- WGK: 2

Safety:
- Poison calss CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 3

E7156-1 Ethylenediamine dihydrochloride, reagent grade

HS-No: 2921 21 00 00

Assay	min. 99.0 %
Solubility test in water	passes test
Residue after ignition (as sulfate)	max. 0.1 %
Heavy metals (as Pb)	max. 0.001 %

Code	Capacity
E7156-1-0100	100 g

ETHYLENE GLYCOL MONOMETHYL ETHER

Synonyms: 2-Methoxyethanol, Methyl glycol Methyl cellosolve

- $C_3H_8O_2$
- M = 76.10 g/mol
- CAS [109-86-4]
- EC number: 203-713-7

Physical data:
- Form: Liquid
- Density: 0.95 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: -85 °C
- Boiling point: 124.5 °C
- Flash point: 39 °C
- Ignition temp.: 285 °C
- Vapour pressure: (20 °C) 11 hPa
- Refraction index: (n 20 °C/D) 1.4021
- Dielectirc const.: (20 °C) 15.4
- Evap. heat: (125 °C) 557 kJ/kg
- Saturation conc.: (20 °C) 33 g/m³
- Expl. limit (upper): 20 Vol%
- Expl. limit (lower): 2.5 Vol%

Toxicological data:
- LD 50 (oral, rat): 2370 mg/kg
- MAK: 5 ml/m³, 16 mg/m³
- WGK: 1

Safety:
- EC Index no.: 603-011-00-4
- R: 60-61-10-E20/21/22
- S: 53-36/37-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 3 F1 III UN 1188
- IMDG: 3 III UN 1188
- IATA/ICAO: 3 III UN 1188
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

E7158-1 Ethylene glycol monomethyl ether, reagent grade

HS-No: 2909 42 00 00

Assay	min. 99.5 %	Iron (Fe)	max. 0.00005 %
Identit (IR-spectrum)	passes test	Lead (Pb)	max. 0.00001 %
Density (20°/4°)	0.964 - 0.968	Magnesium (Mg)	max. 0.00001 %
Colour	max. 10 Hazen	Manganese (Mn)	max. 0.000002 %
Acidity	max. 0.001 meq/g	Nickel (Ni)	max. 0.000002 %
Alkalinity	max. 0.0005 meq/g	Tin (Sn)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Zinc (Zn)	max. 0.00001 %
Barium (Ba)	max. 0.00001 %	Acetaldehyde (CH_3CHO)	max. 0.003 %
Boron (B)	max. 0.000002 %	Formaldehyde	max. 0.001 %
Cadmium (Cd)	max. 0.000005 %	Peroxides (as H_2O_2)	max. 0.002 %
Calcium (Ca)	max. 0.00005 %	Substances darkened by H_2SO_4	passes test
Chromium (Cr)	max. 0.000002 %	Non-volatile matter	max. 0.002 %
Cobalt (Co)	max. 0.000002 %	Water	max. 0.1 %
Copper (Cu)	max. 0.000002 %		

Code	Capacity
E7158-1-2501	2.5 L

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ETHYLENEDIAMINE

Synonyms: 1,2-Ethanediamine, 1,2-Diaminoethane

- $C_2H_8N_2$
- M = 60.10 g/mol
- CAS [107-15-3]
- EC number: 203-468-6

Physical data:
- Density: 0.90 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 11 °C
- Boiling point: 116 - 118 °C
- Flash point: ~ 36 °C
- Ignition temp.: ~ 400 °C
- Vapour pressure: (20 °C) 12 hPa
- Refraction index: (n 20°C/D) 1.4540
- Viscosity: (25 °C) 1.54 mPas
- Dielectric const.: (18 °C) 16
- Eva. heat: (116 °C) 700 kJ/kg
- Saturation conc.: (20 °C) 29 g/m^3
- Expl. limit (upper): 16.3 Vol%
- Expl. limit (lower): 2.5 Vol%
- pH (250 g/l H_2O, 25 °C) ~ 12

Toxicological data:
- LD 50 (oral, rat): 76 mg/kg
- MAK: 10 ml/m^3, 25 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 612-006-00-6
- R: 10-21/22-34-42/43
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 CF1 II UN 1604
- IMDG: 8 II UN 1604
- IATA/ICAO: 8 II UN 1604
- PAX: 808
- CAO: 812
- LGK: 3 A
- Disposal: 5

E7160-2 Ethylenediamine, synthesis grade

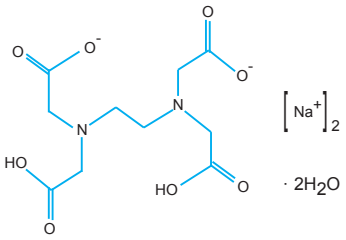
HS-No: 2921 21 00 00

Assay	min. 99 %
Non-volatile matter	max. 0.05 %
Water	max. 0.5 %

Code	Capacity
E7160-2-1000	1 L
E7160-2-2500	2.5 L

ETHYLENEDIAMINETETRAACETIC ACID, EDTA, DISODIUM SALT, DEHYDRATE

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate



- $C_{10}H_{14}N_2NA_2O_8{\cdot}2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Bulk density: ~ 400 - 500 kg/m^3
- Solub. in water (20 °C): 100 g/l
- Melting point: 252 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 4 - 5

Toxicological data:
- LD 50 (oral, rat): 2000 mg/kg
- WGK: 2

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 3

E7174-1 Ethylenediaminetetraacetic acid, EDTA, disodium salt, dehydrate, reagent grade

HS-No: 2922 49 95 90

Assay (complexometric, referred to anhydrous substance)	min. 99 %	Nitriltriacetic acid	max. 0.05 %
Insoluble in water	max. 0.003 %	Calcium (Ca)	passes test
pH (5%, H_2O)	4 - 5	Copper (Cu)	max. 0.0001 %
Chloride (Cl)	max. 0.004 %	Iron (Fe)	max. 0.0005 %
Cyanides (Cn)	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.01 %	Lead (Pb)	max. 0.001 %
		Loss on drying (150 °C, 3h)	9 - 10 %

Code	Capacity
E7174-1-0250	250 g
E7174-1-0500	500 g
E7174-1-1000	1 kg

E7174-3 Ethylenediaminetetraacetic acid, EDTA, disodium salt, dehydrate, synthesis grade

HS-No: 2922 49 95 90

Assay (complexometric, referred to anhydrous substance)	min. 98 %	Sulfates (SO_4)	max. 0.1 %
pH (5%, H_2O)	4 - 5	Heavy metals (as Pb)	max. 0.005 %
Chlorides (Cl)	max. 0.02 %	Lead (Pb)	max. 0.005 %
		Water	9 - 10 %

Code	Capacity
E7174-3-0500	500 g

ETHYLENEDIAMINETETRAACETIC ACID, EDTA, DISODIUM SALT, VOLUMETRIC SOLUTIONS

E7178-0 Ethylenediaminetetraacetic acid, EDTA, disodium salt, solution 0.01 mol/l (0.02 N)

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate

HS-No: 2922 49 95 90

- $C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Density: 0.99 g/cm^3

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13

1 ml = 0.003722 g $[CH_2N(CH_2COOH)CH_2COONA]_2{\cdot}2H_2O$

Code	Capacity
E7178-0-1000	1 L

E7181-0 Ethylenediaminetetraacetic acid, EDTA, disodium salt, solution 0.02 mol/l (0.04 N)

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate

HS-No: 2922 49 95 90

- $C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Density: 0.99 g/cm^3

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13

1 ml = 0.007444 g $[CH_2N(CH_2COOH)CH_2COONA]_2{\cdot}2H_2O$

Code	Capacity
E7181-0-1000	1 L

Line @thermoUK02 Tel. 03 372 1.5.6

E7182-0 Ethylenediaminetetraacetic acid, EDTA, disodium salt, solution 0.025 mol/l (0.05 N)

HS-No: 2922 49 95 90

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate

- $C_{10}H_{14}N_2Na_2O_8.2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13

1 ml = 0.009305 g
$[CH_2N(CH_2COOH)CH_2COONA]_2 \cdot 2H_2O$

Code	Capacity
E7182-0-1000	1.0 L

E7183-0 Ethylenediaminetetraacetic acid, EDTA, disodium salt, solution 0.05 mol/l (0.1 N)

HS-No: 2922 49 95 90

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate

- $C_{10}H_{14}N_2Na_2O_8.2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13

1 ml = 0.01861 g
$[CH_2N(CH_2COOH)CH_2COONA]_2 \cdot 2H_2O$

Code	Capacity
E7183-0-1000	1.0 L
E7183-0-2501	2.5 L

E7185-0 Ethylenediaminetetraacetic acid, EDTA, disodium salt, solution 0.1 mol/l (0.2 N)

HS-No: 2922 49 95 90

Synonyms: Edetic acid disodium salt, Disodium dihydrogen ethylenediaminetetraacetate

- $C_{10}H_{14}N_2Na_2O_8.2H_2O$
- M = 372.24 g/mol
- CAS [6381-92-6]
- EC number: 205-358-3

Physical data:
- Density: 1.00 g/cm^3
- pH (20 °C) ~ 7.5

Toxicological data:
- LD 50 (oral, rat): 2000 mg/kg (EDTA disodium salt)
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1 ml = 0.03722 g
$[CH_2N(CH_2COOH)CH_2COONA]_2 \cdot 2H_2O$

Code	Capacity
E7185-0-1000	1.0 L

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Chemical list : F

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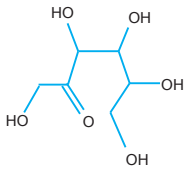
D(-)-FRUCTOSE

Synonyms:



- $C_6H_{12}O_6$
- M = 180.16 g/mol
- CAS [57-48-7]
- EC number: 200-333-3

Physical data:
- Spce. density: ~ 1.65 g/cm^3 (20 °C)
- Solub. in water 500 g/l (20 °C)
- pH value ~ 5 - 6 (100 g/l H_2O, 20 °C)
- Melting point: 100 - 110 °C (decomposition)
- Bulk density ~ 700 - 800 kg/m^3

Toxicological
- WGK: nwg

Safety:
- Poison class CH: F

Transport/storage:
- LGK: 10-13

F

F1000-3 D(-)-Fructose, extra pure

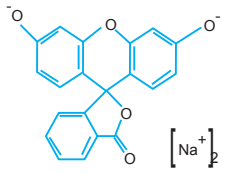
HS-No: 1702 50 50 00

Assay ($C_6H_{12}O_6$)	98.5 -102.0 %	Heavy metals (as Pb)	max. 0.0005 %
Indentity (IR-spectrum)	passes test	Iron (Fe)	max. 0.001 %
Appearance of solution (50%, water)	passes test	Lead (Pb)	max. 0.00005 %
Insoluble in water	passes test	Magnesium (Mg)	max. 0.002 %
Specific rotation ([∝]20°/D, c = 10, water)	-91.0 - -93.5	Nickel (Ni)	max. 0.001 %
Chloride (Cl)	max. 0.005 %	Foreign sugars	passes test
Sulfates (SO_4)	max. 0.005 %	Glucose (HPLC)	max. 0.5 %
Arsenic (As)	max. 0.0001 %	5-Hydroxymethyfurfural and related substances	passes test
Barium (Ba)	max. 0.005 %	Sulfated ash	max. 0.1 %
Calcium (Ca)	max. 0.002 %	Water	max. 0.5 %
Calcium and magnesium (as Ca)	max. 0.005 %	Residual solvents (Ph Eur/ICH) class 3	max. 0.5 %
Copper (Cu)	max. 0.001 %	Other residual solvents (Ph Eur/ICH)	excluded by production process

Code	Capacity
F1000-3-0500	500 g

FLUORESCEIN SODIUM

Synonyns: 3',6'-Dihydroxyspiro-[isobenzofuran -1-(3H),9'-[9H] xanthen] -3-one, Resorcinolphthalein



- $C_{20}H_{10}Na_2O_5$
- M = 376.28 g/mol
- CAS [518-47-8]
- EC number: 208-253-0

Physical data:
- Form: Solid
- Bulk density: ~ 600 g/m^3
- Solub. in water (20 °C): 500 g/l
- Melting point: > 360 °C
- pH (10 g/l, H_2O, 20 °C) ~ 8.3

Toxicological data:
- LD 50 (oral, rat): 6721 mg/kg
- WGK: 3*

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

F4000-01 Fluorescein sodium, C.I. 45350

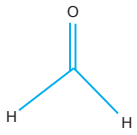
HS-No: 3204 90 00 00

Assay (titr. with $HClO_4$, on dried substance)	min. 95 %	Arsenic (As)	max. 0.005 %
Identity (IR-spectrum)	passes test	Cadmium (Cd)	max. 0.05 %
Absorption maximum (pH 8.0)	490 - 492 nm	Copper (Cu)	max. 0.01 %
Absorptivity (A1%/1cm; λmax, pH 8.0 on dried substance)	1950 - 2150	Lead (Pb)	max. 0.01 %
		Water	max. 10 %

Code	Capacity
F4000-1-0025	25 g

FORMALDEHYDE, SOLUTION 37 %

Synonyms: Formalin solution, Formol, Methanal solution, Methyl aldehyde solution



- CH_2O
- M = 30.03 g/mol
- CAS [50-00-00]
- EC number: 200-001-8

Physical data:
- Density: 1.09 g/cm^3
- Melting point: < -15 °C
- Boiling point: 93 - 96 °C
- Flash point: ~ 62 °C
- Ignition temp.: ~ 300 °C (pure substance)
- Vapour pressure: 1.3 hPa (formaldehyde)
- Expl. limit (upper): 73 Vol% (formaldehyde)
- Expl. limit (lower): 7 Vol% (formaldehyde)
- pH (20 °C) 3 - 4

Toxicological data:
- LD 50 (oral, rat): 100 mg/kg (formaldehyde)
- MAK: 0.5 ml/m^3, 0.62 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 605-001-00-5
- R: 23/24/25-34-39/23/24/25-40-42
- S: 26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C9 III UN 2209
- IMDG: 8 III UN 2209
- IATA/ICAO: 8 III UN 2209
- PAX: 818
- CAO: 820
- LGK: 6.1 A
- Disposal: 7

F5023-1 Formaldehyde solution 37%, reagent grade, stabilized with approx. 10% methanol

HS-No: 2912 11 00 00

Assay (acidimetric after oxidation)	37.0 - 38.0 %	Heavy metals (as Pb)	max. 0.0005 %
Identity	passes test	Iron (Fe)	max. 0.0005 %
Colour	passes test	Methanol (GC)	9.0 - 11.0 %
Free acid as (HCOOH)	max. 0.03 %	Others residual solvents (Ph Eur/ICH)	Excluded by production process
Density (d 20°C/4°C)	1.08 - 1.09 g/ml	Sulfated ash	max. 0.1 %
Chloride (Cl)	max 0.001 %		

Code	Capacity
F5023-1-1000	1.0 L
F5023-1-2501	2.5 L

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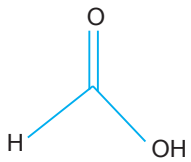
FORMIC ACID, 85%

Synonyms: Methanoic acid, Formylic acid



- CH_2O_2
- M = 46.03 g/mol
- CAS [64-18-6]
- EC number: 200-579-1

Physical data:
- Form: Liquid
- Density: ~ 1.2 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -9 °C
- Boiling point: ~ 107 °C
- Expl. limit (upper): 45.5 Vol%
- Expl. limit (lower): 10 Vol%

Toxicological:
- LD 50 (oral, rat): 730 mg/kg (pure substance)
- MAK: 5 ml/m^3, 9.5 mg/m^3

Safety:
- EC Index no.: 607-001-00-0
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C3 II UN 1779
- IMDG: 8 II UN 1779
- IATA/ICAO: 8 II UN 1779
- PAX: 808
- CAO: 812

F

F5033-3 Formic acid 85%, extra pure

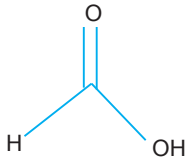
HS-No: 2915 11 00 00

Assay (acidimetric)	min. 85 %	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.002 %	Lead (Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Ammonium (NH_4)	max. 0.01 %	Non-volatile matter	max. 0.01 %
Copper (Cu)	max. 0.001 %		

Code	Capacity
F5033-3-2501	2.5 L

FORMIC ACID, 98-100%

Synonyms: Methanoic acid, Formylic acid



- CH_2O_2
- M = 46.03 g/mol
- CAS [64-18-6]
- EC number: 200-579-1

Physical data:
- Form: Liquid
- Density: 1.22 g/cm^3
- Solub. in water (20° C): miscible
- Melting point: ~ 8 °C
- Boiling point: 101 °C
- Flash point: 48 °C
- Ignition temp.: 480 °C
- Vapour pressure: (20 °C) 42 hPa
- Refraction index: (n 20 °C/D) 1.3714
- Dielectirc const.: (16 °C) 58.5
- Evap. heat: (101 °C) 900 kJ/kg
- Saturaton conc.: (20 °C) 80 g/m^3
- Expl. limit (upper): 38 Vol%
- Expl. limit (lower): 12 Vol%
- pH (10 g/l H_2O, 20 °C) 2.2

Toxicological data:
- LD 50 (oral, rat): 730 mg/kg
- MAK: 5 ml/m^3, 9.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 607-001-00-0
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C3 II UN 1779
- IMDG: 8 II UN 1779
- IATA/ICAO: 8 II UN 1179
- PAX: 808
- CAO: 812
- LGK: 8 A
- Disposal: 4

F5035-1 Formic acid 98-100%, reagent grade

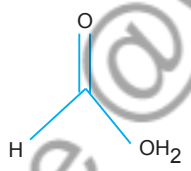
HS-No: 2915 11 00 00

Assay (acidimetric)	min. 98 %	Iron (Fe)	max. 0.0002 %
Colour	max. 10 Hazen	Germanium (Ge)	max. 0.000005 %
Acetic acid (CH_3COOH)	max. 0.005 %	Lithium (Li)	max. 0.000002 %
Chloride (Cl)	max. 0.0005 %	Magnesium (Mg)	max. 0.00005 %
Oxalates (C_2O_4)	max. 0.005 %	Manganese (Mn)	max. 0.000005 %
Sulfates (SO_4)	max. 0.0005 %	Molybdenum (Mo)	max. 0.000002 %
Sulfites (SO_3)	max. 0.001 %	Nickel (Ni)	max. 0.000005 %
Silver (Ag)	max. 0.000002 %	Lead (Pb)	max. 0.000002 %
Alumium (Al)	max. 0.000005 %	Potassium (K)	max. 0.00001 %
Ammonium (NH_4)	max. 0.001 %	Sodium (Na)	max. 0.00005 %
Barium (Ba)	max. 0.000005 %	Stronium (Sr)	max. 0.000002 %
Beryllium (Be)	max. 0.000002 %	Titanium (Ti)	max. 0.00001 %
Bismuth (Bi)	max. 0.00001 %	Thallium (Tl)	max. 0.000005 %
Cadmium (Cd)	max. 0.000005 %	Vanadium (V)	max. 0.000005 %
Calcium (Ca)	max. 0.00002 %	Zinc (Zn)	max. 0.000005 %
Cobalt (Co)	max. 0.000002 %	Zirconium (Zr)	max. 0.00001 %
Copper (Cu)	max. 0.000002 %	Non-volatile matter	max. 0.001 %
Chromium (Cr)	max. 0.000005 %		

Code	Capacity
F5035-1-2501	2.5 L

FORMAMIDE

Synonyms: Methanamide, Methane amide, Carbamaldehyde, Formic acid amide



- CH_3NO
- M = 45.04 g/mol
- CAS [75-12-7]
- EC number: 200-542-0

Physical data:
- Form: Liquid
- Density: 1.13 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 2 °C
- Boiling point: 210 °C
- Flash point: 175 °C
- Ignition temp.: 500 °C
- Vapour pressure: (20 °C) 0.08 hPa
- Dipolar moment: (20 °C) 3.4 Debye
- Dielectric const: (20 °C) 109.5
- Saturation conc.: (20 °C) 0.24 g/m^3
- Expl. limit (upper): 19.0 Vol%
- Expl. limit (lower): 2.7 Vol%
- pH (200 g/l H_2O, 20 °C) 4 - 5

Toxicological data:
- LD 50 (oral, rat): 5800 mg/kg
- WGK: 1

Safety:
- R: 61
- S: 53-24/25-37-45
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 6.1 A
- Disposal: 1

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F5040-1 Formamide, reagent grade

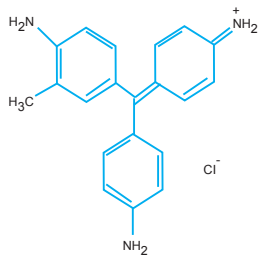
HS-No: 2924 19 00 90

Assay (as N)	min. 99 %	Iron (Fe)	max. 0.0001 %
Identity (IR-spectrum)	passes test	Lead (Pb)	max. 0.0001 %
Density (20°/4°)	1.132 - 1.135	Zinc (Zn)	max. 0.0001 %
Colour	max. 10 Hazen	Formic acid	max. 0.02 %
Melting point	2.0 - 3.0 °C	Ammonium formate	max. 0.1 %
Chloride (Cl)	max. 0.0001 %	Sulfated Ash (600 °C)	max. 0.005 %
Cadmium (Cd)	max. 0.0001 %	Water	max. 0.1 %
Copper (Cu)	max. 0.0001 %		

Code	Capacity
F5040-1-2501	2.5 L

FUCHSIN ACID, C.I. 42510

Synonyms:



- $C_{20}H_{20}ClN_3$
- M = 337.85 g/mol
- CAS [632-99-5]
- EC number: 211-189-6

Physical data:
- From: Solid
- Density: ~ 500 kg/cm³
- Solub. in water (25 °C): 4 g/l
- Melting point: ~ 235 °C (decomposes)
- pH (1 g/l H_2O, 25 °C) 5 - 6

Toxicological data:
- WGK: 3

Transport/storage:
- LGK: 10-13

F6000-9 Fuchsin basic C.I. 42510

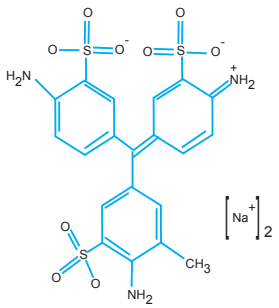
HS-No: 3204 13 00 00

Absorption maximum λ (in ethanol 50%)	549 - 552 nm	Absorptivity (A1%/1cm, λ max)	1600 - 2250
		Loss on drying (135 °C)	max. 15 %

Code	Capacity
F6000-9-0025	25 g

FUCHSIN ACID, C.I. 42685

Synonyms:



- $C_{20}H_{17}N_3Na_2O_9S_3$
- M = 585.54 g/mol
- CAS [3244-88-0]
- EC number: 221-816-5

Physical data:
- Form: Solid
- Bulk Density: ~ 920 kg/cm³
- Solub. in water (20 °C): 200 g/l
- Melting point: > 130 °C (decomposes)
- pH (10 g/l H_2O, 20 °C) ~ 3 - 4

Transport/storage:
- LGK: 10-13

F6001-0 Fuchsin acid, C.I. 42685

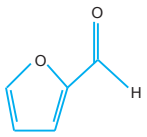
HS-No: 3204 12 00 00

Absorption maximum λ (in HCl 0.005 mol/l)	540 - 545 nm	Absorptivity (A1%/1cm, λ max)	800 - 1300
		Loss on drying (135 °C)	max. 10 %

Code	Capacity
F6001-0-0025	25 g

FURFURAL

Synonyns: 2-Furaldehyde, 2-Furancarbaldehyde, Furymethanal



- $C_5H_4O_2$
- M = 96.09 g/mol
- CAS [98-01-1]
- EC number: 202-627-7

Physical data:
- Form: Liquid
- Density: 1.16 g/cm³
- Solub. in water (20 °C): 83 g/l
- Melting point: -37 °C
- Boiling point: 162 °C
- Flash point: 60 °C
- Ignition temp.: 315 °C
- Vapour pressure: (20 °C) 1 hPa
- Dielectirc const.: (20 °C) 41.9
- Saturation conc.: (20 °C) 5.8 g/m³
- Expl. limit (upper): 19.3 Vol%
- Expl. limit (lower): 2.1 Vol%

Toxicological data:
- LD 50 (oral, rat): 65 mg/kg
- WGK: 2

Safety:
- EC Index no.: 605-010-00-4
- R: 21-23/25-36/37-40
- S: 26-36/37/39
- Vbc class: AII
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 TF1 II UN 1199
- IMDG: 6.1 II UN 1199
- IATA/ICAO: 6.1 II UN 1199
- PAX: 609
- CAO: 611
- LGK: 3 B
- Disposal: 9

Applications: Analytical chemistry, for the detection of: aromatic amines, insectide, fungicide, solvents.

F6005-1 Furfural, reagent grade

HS-No: 2932 12 00 00

Assay	min. 98 %	Sulfated ash	max. 0.005 %
Identity (IR-spectrum)	passes test	Water	max. 0.05 %
Density (20°/4°)	1.158 - 1.160		

Code	Capacity
F6005-1-0501	500 ml

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Chemical list : G

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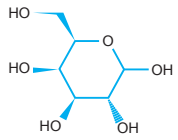
D(+)-GALACTOSE

Synonyms: Lactoglucose, D-Galactopyranose



- $C_6H_{12}O_6$
- M = 180.16 g/mol
- CAS [59-23-4]
- EC number: 200-416-4

Physical data:
- Form: Solid
- Spec. density: 1.5 g/cm^3
- Bulk density: ~ 600 kg/m^3
- Solub. in water (20 °C): 650 g/l
- Melting point: 163 - 169 °C
- pH (H_2O, 20 °C) 4.5 - 6.0

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

G1000-3 D(+)-Galactose, extra pure *HS-No: 2940 00 00 80*

Identity (IR-spectrum)	passes test	Heavy metals (as Pb)	max. 0.0005 %
Acidly or alkalinely reacting impurities	passes test	Lead (Pb)	max. 0.00005 %
Specific rotation ([∝] 20°/D, 10% water, referred to anhydrous substance)	+79 - +81 °C	Sulfated ash	max. 0.1 %
Barium (Ba)	passes test	Related substances (TLC)	passes test
Calcium (Ca)	max. 0.01 %	Loss on drying (105 °C)	max. 0.2 %

Code	Capacity
G1000-3-0250	250 g

GOLD STANDARD SOLUTION 1000MG/L FOR AA

G1001-0 Gold standard solution 1000mg/l for AA (gold (III) trichloride acid in hydrochloric acid 2 mol/l) *HS-No: 3822 00 00 00*

Synonyms:

1 ml = 1000±5 mg/l

Physical data:
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Code	Capacity
G1001-0-0500	500 ml

GELATINE POWDER

Synonyms: Gelatine powder

- CAS [9000-70-8]
- EC number: 232-554-6

Physical data:
- Bulk density: ~ 580 kg/m^3
- Solub. in water: soluble in hot water
- Boiling point: 100 °C

Toxicological data:
- LD 50 (oral, rat): > 5000 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

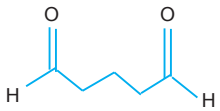
G2001-1 Gelatine powder, reagent grade *HS-No: 3503 00 10 00*

pH (1%, H_2O)	3.8 - 7.6	Peroxides (as H_2O_2)	max. 0.01 %
Sulphur dioxide (SO_2)	max. 0.005 %	Sulfated ash	max. 2 %
Arsenic (As)	max. 0.0001 %	Loss on drying	max. 15 %
Heavy metals (as Pb)	max. 0.001 %	Suitability for microbiology	passes test

Code	Capacity
G2001-1-0500	500 g

GLUTARDIALDEHYDE SOLUTION 25%

Synonyms: Pentanedial, glutaraldehyde, Glutaric dialdehyde



- $C_5H_8O_2$
- M = 100.12 g/mol
- CAS [111-30-8]
- EC number: 203-856-5

Physical data:
- Form: Liquid
- Density: 1.06 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -7 °C
- Boiling point: ~ 100 °C

Toxicological data:
- LD 50 (oral, rat): 134 mg/kg (pure substance)
- MAK: 0.05 ml/m^3, 0.21 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 605-022-00-X
- R: 22-23-34-42/43/50
- S: 26-36/37/39-45-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 TC1 II UN 2927
- IMDG: 6.1 II UN 2927
- IATA/ICAO: 6.1 II UN 2927
- PAX: 609
- CAO: 611
- LGK: 6.1 B
- Disposal: 7

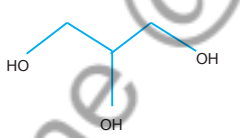
G3001-1 Glutardialdehyde solution 25%, reagent grade *HS-No: 2912 19 00 00*

Assay (methanol of bisulfite)	approx. 25.0 %
Density (20°/4°)	1.060 - 1.065

Code	Capacity
G3001-1-0500	500 g

GLYCEROL

Synonyms: Glycerin, 1,2,3-Propanetriol



- $C_3H_8O_3$
- M = 92.10 g/mol
- CAS [56-81-5]
- EC number: 200-289-5

Physical data:
- Density: 1.26 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 18 °C
- Boiling point: (0.09 hPa) 120 °C
- Flash point: 199 °C
- Ignition temp.: 400 °C
- Vapour pressure: (20 °C) < 0.001 hPa
- Expl. limit (lower): 0.9 Vol%
- pH (100 g/l H_2O, 20 °C) ~ 5

Toxicological data:
- LD 50 (oral, rat): 12600 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 1

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G4018-1 Glycerol 99.5%, reaent grade

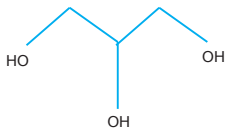
HS-No: 2905 45 00 00

Assay (acidimetric)	min. 99.5 %	Heavy metals (as Pb)	max. 0.0005 %
Insoluble in water	passes test	Iron (Fe)	max. 0.0005 %
Acidity/alkalinity	passes test	Lead (Pb)	max. 0.001 %
Halogen compounds (as Cl)	max. 0.003 %	Nickel (Ni)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Zinc (Zn)	max. 0.001 %
Sulfates (SO_4)	max. 0.001 %	Aldehydes (HCHO)	max. 0.0005 %
Ammonium (NH_4)	max. 0.0015 %	1,2,4-butantriol (G.C)	max. 0.2 %
Arsenc (As)	max. 0.0001 %	Sulfated Ash	max. 0.01 %
Copper (Cu)	max. 0.001 %	Water	max. 2 %

Code	Capacity
G4018-1-1000	1.0 L
G4018-1-2500	2.5 L

GLYCEROL ANHYDROUS

Synonyms: Glycerin, 1,2,3-Propanetriol



- $C_3H_8O_3$
- M = 92.10 g/mol
- CAS [56-81-5]
- EC number: 200-289-5

Physical data:
- Form: Liquid
- Density: 1.26 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 18 °C
- Boiling point: (0.09 hPa) 120 °C
- Flash point: 199 °C
- Ignition temp.: 400 °C
- Vapour pressure: (20 °C) < 0.001 hPa
- Expl. limit (lower): 0.9 Vol%
- pH (100 g/l H_2O, 20 °C) ~ 5

Toxicological data:
- LD 50 (oral, rat): 12600 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- disposal: 1

G4018-8 Glycerol anhydrous, molecular biology grade

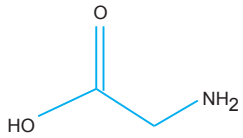
HS-No: 2905 45 00 00

Assay	min. 99 %	Arsenic (As)	max. 0.0003 %
Specific gravity	1.249	Heavy metals (as Pb)	max. 0.0005 %
Ash	max. 0.01 %	RNase, DNase, Protease activity	none detected

Code	Capacity
G4018-8-1000	1.0 L

GLYCINE

Synonyms: Aminoacetic acid, Glycocoll



- $C_2H_5NO_2$
- M = 75.07 g/mol
- CAS [56-40-6]
- EC number: 200-272-2

Physical data:
- Form: Solid
- Spec. density: 1.595 g/cm^3
- Bulk density: ~ 920 kg/m^3
- Solub. in water (20 °C): 225 g/l
- Melting point: 232 - 236 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 5.9 - 6.4

Toxicological data:
- LD 50 (oral, rat): 7930 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

G4020-3 Glycine, extra pure

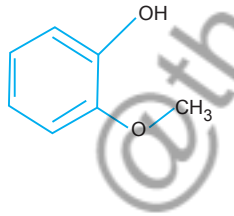
HS-No: 2922 49 10 00

Assay (titr. with $HClO_4$)	99 - 101 %	Ammonium (NH_4)	max. 0.02 %
Appearance of solution (10%, water)	passes test	Heavy metals (as Pb)	max. 0.001 %
pH (5%, H_2O)	5.9 - 6.4	Sulfated Ash	max. 0.1 %
Hydrolizable substances	passes test	Loss on drying (105 °C)	max. 0.2 %
Other aminoacids	max. 0.1 %	Organic volatile impurities (USP)	passes test
Other ninhydrin positive substance (as glycine)	max. 0.1 %	Residual solvents (Ph Eur) class2 (Methanol)	max. 0.3 %
Chlorides (Cl)	max. 0.005 %	Other residual solvents (Ph Eur/ICH)	Excluded by production process
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
G4020-3-0500	500 g

GUAIACOL

Synonyms: O-Methoxyphenol, Methylcatechol, 1-Hydroxy-2-methoxybenzene, 2-Methoxyphenol, Pyrocatechol monomethyl ether, 2-Hydroxyanisole



- $C_7H_8O_2$
- M = 124.14 g/mol
- CAS [90-05-1]
- EC number: 201-964-7

Physical data:
- Form: Solid
- Density: 1.13 g/cm^3
- Solub. in water (30 °C): 15 g/l
- Melting point: 28 - 32 °C
- Boiling point: 205 °C
- Flash point: 82 °C
- Ignition temp.: 750 °C
- Vapour pressure: (25 °C) 0.1 hPa
- pH (10 g/l H_2O, 20 °C) 5.4

Toxicological data:
- LD 50 (oral, rat): 520 mg/kg
- WGK: 1

Safety:
- EC Index no.: 604-031-00-6
- R: 22-36/38
- S: 26-46
- VbF class: AIII
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T1 III UN 2810
- IMDG: 6.1 III UN 2810
- IATA/ICAO: 6.1 III UN 2810
- PAX: 611
- CAO: 618
- LGK: 3 B

G5000-1 Guaiacol, reagent grade

HS-No: 2929 50 10 000

Assay	min. 99 %	Sulfated Ash	max. 0.05 %
Identity (IR-spectrum)	passes test	Water	max. 0.3 %

Code	Capacity
G5000-1-0101	100 ml

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Chemical list : H

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1,6-HEXANEDIAMINE

Synonyms: 1,6-Hexanediamine, Hexamethylenediamine

- $C_6H_{16}N_2$
- M = 116.2 g/mol
- CAS [124-09-4]
- EC number: 204-679-6

Physical data:
- Vapour pressure 2 hPa (50 °C)
- Spec. density: 0.83 g/cm³ (60 °C)
- Explosive limit: 0.9 - 7.6 Vol%
- Flash point: 85 °C
- Solub. in water: 490 g/l (20 °C)
- pH value 12 (100 g/l H_2O, 20 °C)
- Melting point: 39 - 42 °C
- Boiling point: 199 - 204 °C
- Ignition temp.: 305 °C

Toxicological data:
- LD 50 (oral, rat): 850 mg/kg
- WGK: 1

Safety:
- EC Index no.: 612-104-00-9
- Harmful, corrosive
- Poison class (CH) 2
- R: 21/22-34-37
- S: 22-26-36/37/39-45

Transport/storage:
- Packing-cat M
- Road/Rail: 8/52 c
- IMDG-Code: 8/III UN 2280
- IATA/DGR: 8 III UN 2280
- PAX: 822
- CAO: 823
- LGK: 8
- Disposal: 3

H1001-1 1,6-Hexanediamine, reagent grade

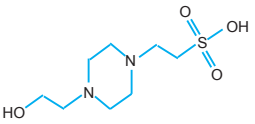
HS-No: 2921 22 00 00

Assay	min. 99 %
Melting range	39 - 42 °C
Identity (IR)	conforms

Code	Capacity
H1001-1-0500	500 g

HEPES

Synonyms: 4-(2-Hydroxyethyl)- 1piperazineethanesulfonic acid, N-(2-Hydroxyethyl)-piperazine- N'-(2-ethaneusulfonic acid)



- $C_8H_{18}N_2O_4S$
- M = 238.3 g/mol
- CAS [7365-45-9]
- EC number: 230-907-9

Physical data:
- Form: Solid
- Bulk density: ~ 560 kg/m³
- Solub. in water (20 °C): 400 g/l
- Melting point: 210 - 215 °C
- pH (100 g/l H_2O, 20 °C) 5.0 - 5.5

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 3

H2007-8 HEPES, high purity grade

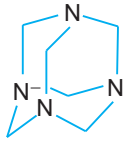
HS-No: 2933 59 95 00

Assay	min. 99 %
pKa (20 ºC)	7.55

Code	Capacity
H2007-8-0500	500 g

HEXAMETHYLENETETRAMINE

Synonyms: Hexamine, Methenamine, Formin, Urotropin



- $C_6H_{12}N_4$
- M = 140.19 g/mol
- CAS [100-97-0]
- EC number: 202-905-8

Physical data:
- Form: Solid
- Spec. density: 1.33 g/cm³
- Bulk density: ~ 600 kg/m³
- Solub. in water (20 °C): 100 g/l
- pH (100 g/l H_2O, 20 °C) 7.0 - 9.0

Toxicological data:
- LD 50 (oral, rat): 9200 mg/kg
- WGK: 1

Safety:
- EC Index no.: 612-101-00-2
- R: 11-42/43
- S: 16-22-24-37-45
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 4.1 F1 III UN 1328
- IMDG: 4.1 III UN 1328
- IATA/ICAO: 4.1 III UN 1328
- PAX: 419
- CAO: 420
- LGK: 4.1 B
- Disposal: 3

H6001-1 Hexamethylenetetramine, reagent grade

HS-No: 2933 69 20 00

Assay	min. 99 %	Chloride (Cl)	max. 0.001 %
pH value (100g/ml. 25 °C)	8.5 - 9.5	Sulfates (SO_4)	max. 0.001 %
Appearance of solution	passes test	Ammonium (NH_4)	max. 0.001 %
Insolubility matter in water	max. 0.02 %	Iron (Fe)	max. 0.001 %
Residue after ignition (as Sulfate)	max. 0.01 %	Heavy metals (as Pb)	max. 0.0005 %

Code	Capacity
H6001-1-1000	1 kg

HYDROCHLORIC ACID 20 %

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Form: Liquid
- Density: ~1.1 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: ~ -70 °C
- Boiling point: 107 °C
- Vapour pressure: (20 °C) 12 hPa
- pH (20 °C) < 1

Toxicological data:
- MAK: 2ml/m³, 3.0 mg/m³
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- R: 34-37
- S: 26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 1789
- IMDG: 8 II UN 1789
- IATA/ICAO: 8 II UN 1789
- PAX: 809
- CAO: 813
- LGK: 8 B
- Disposal: 12

Special regulations:
- Drug precursor, cat: 3

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H8000-1 Hydrochloric acid 20%, reagent grade

HS-No: 2806 10 00 00

Assay	min. 20 %
Colour	max. 10 Hazen
Bromide (Br)	max. 50 ppm
Free Chlorine (Cl)	max. 0.5 ppm
Phosphate (PO_4)	max. 0.5 ppm
Sulfate (SO_4)	max. 0.5 ppm
Sulphite (SO_3)	max. 1 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm
Silver (Ag)	max. 0.02 ppm
Aluminium (Al)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm
Boron (B)	max. 0.05 ppm
Barium (Ba)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm
bismuth (Bi)	max. 0.1 ppm
Calcium (Ca)	max. 0.5 ppm
Cadmium (Cd)	max. 0.05 ppm
Cobalt (Co)	max. 0.02 ppm
Chromium (Cr)	max. 0.02 ppm
Copper (Cu)	max. 0.02 ppm
Iron (Fe)	max. 0.2 ppm
Gallium (Ga)	max. 0.02 ppm
Indium (In)	max. 0.02 ppm
Potassium (K)	max. 0.1 ppm
Lithium (Li)	max. 0.02 ppm
Magnesium (Mg)	max. 0.1 ppm
Manganese (Mn)	max. 0.02 ppm
Molybdenum (Mo)	max. 0.05 ppm
Ammonium (NH_4)	max. 2 ppm
Sodium (Na)	max. 0.5 ppmg
Nickel (Ni)	max. 0.02 ppm
Lead (Pb)	max. 0.02 ppm
Platinum (Pt)	max. 0.2 ppm
Tin (Sn)	max. 0.1 ppm
Strontium (Sr)	max. 0.1 ppm
Titanium (Ti)	max. 0.1 ppm
Thallium (Tl)	max. 0.05 ppm
Vanadium (V)	max. 0.05 ppm
Zinc (Zn)	max. 0.1 ppm
Zirconium (Zr)	max. 0.1 ppm
Residue after ignition (as sulfate)	max. 5 ppm

Code	Capacity
H8000-1-1000	1.0 L

HYDRAZINE HYDRATE, 60%

Synonyms: Hydrazinium hydroxide

- $N_2H_4 \cdot H_2O$
- M = 50.06 g/mol
- CAS [10217-52-4]
- EC number: 206-114-9

Physical data:
- Density: 1.03 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: -60 °C
- Boiling point: 117 - 119 °C
- Flash point: 91 °C
- Ignition temp.: 310 °C
- Vapour pressure: (20 °C) 13 hPa
- Viscosity: (20 °C) 1.33 mPas
- Expl. limit (upper): 100 Vol%
- Expl. limit (lower): 4.7 Vol%
- pH (510 g/l H_2O, 20 °C) > 12

Toxicological data:
- LD 50 (oral, rat): 129 mg/kg
- WGK: 3

Safety:
- R: 45-E23/24/25-34-43-50/53
- S: 53-26-36/37/39-45-60-61
- Poison class CH (Swiss): 1*

Transport/storage:
- ADR: 8 CT1 II UN 2030
- IMDG: 8 II UN 2030
- IATA/ICAO: Forbidden UN 2030
- PAX: F
- CAO: 812
- LGK: 6.1 A
- Disposal: 9

H8010-9 Hydrazine hydrate 60%, TG

HS-No: 2825 10 00 00

Assay	min. 60.0 %
Specific Gravity (25 °C)	1.0190 g/cm³
Visodity (25 °C)	1.5 mPas
Chloride (Cl)	max. 0.1 %
Copper (Cu)	max. 5 %
Appearance	clear, colourless liquid
Solubility in water	completely soluble

Code	Capacity
H8010-9-920E	200 kg

HYDRAZINE SULFATE

Synonyms: Hydrazinium sulfate, Hydrazonium sulfate

- $N_2H_4 \cdot H_2SO_4$
- M = 130.12 g/mol
- CAS [10034-93-2]
- EC number: 233-110-4

Physical data:
- Form: Solid
- Spec. density: ~ 1.37 g/cm³
- Bulk density: ~ 450 kg/m³
- Solub. in water (20 °C): 30 g/l
- Melting point: 254 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 1.5

Toxicological data:
- LD 50 (oral, rat): 601 mg/kg
- WGK: 3

Safety:
- EC Index no.: 007-014-00-6
- R: 45-E23/24/25-43-50/53
- S: 53-36/37-45-60-61
- Poison class CH (Swiss): 1*

Transport/storage:
- ADR: 6.1 T5 III UN 3288
- IMDG: 6.1 III UN 3288
- IATA/ICAO: 6.1 III UN 3288
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 9

H8014-1 Hydrazine sulfate, reagent grade

HS-No: 2825 10 00 00

Assay	min. 99.0 %
Insoluble in water	max. 0.005 %
Chloride (Cl)	max. 0.0005 %
Ammonium (NH_4)	max. 0.04 %
Heavy metals (as Pb)	max. 0.0005 %
Iron (Fe)	max. 0.001 %
Sulfated Ash	max. 0.02 %

Code	Capacity
H8014-1-0500	500 g

HYDROCHLORIC ACID 37%

Synonyms: Hydrogen chloride solution, Hydrochloric acid fuming

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: ~ 1.19 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: -28 °C
- Boiling point: ~ 50 °C
- Vapour pressure: (20 °C) 190 hPa
- pH (20 °C) < 1

Toxicological data:
- MAK: 5 ml/m³, 7.6 mg/m³
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- R: 34-37
- S: 26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 1789
- IMDG: 8 II UN 1789
- IATA/ICAO: 8 II UN 1789
- PAX: 809
- CAO: 813
- LGK: 8 B
- Disposal: 12

Line @hanhua2569 Tel:0372 1545 6

H8040-1 Hydrochloric acid 37%, reagent grade

HS-No: 2806 10 00 00

Assay	37 ± 1.0 %	Gallium (Ga)	max. 0.02 ppm
Colour	max. 10 Hazen	Indium (In)	max. 0.02 ppm
Bromide (Br)	max. 50 ppm	Potassium (K)	max. 0.1 ppm
Free Chlorine (Cl)	max. 0.5 ppm	Lithium (Li)	max. 0.02 ppm
Phosphate (PO_4)	max. 0.5 ppm	Magnesium (Mg)	max. 0.1 ppm
Sulfate (SO_4)	max. 0.5 ppm	Manganese (Mn)	max. 0.02 ppm
Sulphite (SO_3)	max. 1 ppm	Molybdenum (Mo)	max. 0.05 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm	Ammonium (NH_4)	max. 2 ppm
Silver (Ag)	max. 0.02 ppm	Sodium (Na)	max. 0.5 ppm
Aluminium (Au)	max. 0.05 ppm	Nickel (Ni)	max. 0.02 ppm
Gold (Au)	max. 0.1 ppm	Lead (Pb)	max. 0.02 ppm
Boron (B)	max. 0.05 ppm	Platinum (Pt)	max. 0.2 ppm
Barium (Ba)	max. 0.05 ppm	Tin (Sn)	max. 0.1 ppm
Beryllium (Be)	max. 0.02 ppm	Strontium (Sr)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Titanium (Ti)	max. 0.1 ppm
Calcium (Ca)	max. 0.5 ppm	Thallium (Tl)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Vanadium (V)	max. 0.05 ppm
Cobalt (Co)	max. 0.02 ppm	Zinc (Zn)	max. 0.1 ppm
Chromium (Cr)	max. 0.02 ppm	Zirconium (Zr)	max. 0.1 ppm
Copper (Cu)	max. 0.02 ppm	Residue after ignition (as sulfate)	max. 5 ppm
Iron (Fe)	max. 0.2 ppm		

Code	Capacity
H8040-1-1000	1.0 L
H8040-1-2500	2.5 L
H8040-1-2501	2.5 L
H8040-1-4000	4.0 L

H8040-3 Hydrochloric acid 37%, extra pure

HS-No: 2806 10 00 00

Assay (acidimetric)	min. 36.5 %	Copper (Cu)	max. 0.0002 %
Free chloride (Cl)	max. 0.0001 %	Heavy metals (as Pb)	max. 0.0001 %
Bromides (Br)	max. 0.01 %	Iron (Fe)	max. 0.00005 %
Sulfates (SO_4)	max. 0.0001 %	Lead (Pb)	max. 0.0001 %
Sulfites (SO_3)	max. 0.0005 %	Nickel (Ni)	max. 0.0002 %
Ammonium (NH_4)	max. 0.0005 %	Calcination residue (as SO_4)	max. 0.003 %
Arsenic (As)	max. 0.00005 %	Non volatile matter	max. 0.005 %

Code	Capacity
H8040-3-1000	1.0 L

H8040-6 Hydrochloric acid 37%, EC-100

HS-No: 2806 10 00 00

Assay	37 ± 1.0 %	Gallium (Ga)	max. 0.02 ppm
Colour	max. 10 Hazen	Indium (In)	max. 0.02 ppm
Free Chlorine (Cl)	max. 5.0 ppm	Lithium (Li)	max. 0.02 ppm
Sulfate (SO_4)	max. 0.5 ppm	Magnesium (Mg)	max. 0.1 ppm
Arsenic and Antimony (as As)	max. 0.1 ppm	Molybdenum (Mo)	max. 0.05 ppm
Aluminium (Au)	max. 0.1 ppm	Nickel (Ni)	max. 0.1 ppm
Boron (B)	max. 0.05 ppm	Lead (Pb)	max. 0.5 ppm
Barium (Ba)	max. 0.05 ppm	Platinum (Pt)	max. 0.2 ppm
Beryllium (Be)	max. 0.02 ppm	Strontium (Sr)	max. 0.1 ppm
Bismuth (Bi)	max. 0.5 ppm	Titanium (Ti)	max. 0.1 ppm
Calcium (Ca)	max. 0.5 ppm	Thallium (Tl)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Vanadium (V)	max. 0.1 ppm
Chromium (Cr)	max. 0.1 ppm	Zinc (Zn)	max. 0.1 ppm
Copper (Cu)	max. 0.1 ppm	Zirconium (Zr)	max. 0.1 ppm
Iron (Fe)	max. 0.2 ppm	Residue after ignition (as sulfate)	max. 5 ppm

Code	Capacity
H8040-6-2500	2.5 L

H8040-6 Hydrochloric acid 37%, EC-100 (EL Grade)

HS-No: 2806 10 00 00

Assay	36 ± 0.5 %	Gallium (Ga)	max. 20 ppb
Colour	max. 10 Hazen	Indium (In)	max. 20 ppb
Free Chlorine (Cl)	max. 0.5 ppm	Lithium (Li)	max. 20 ppb
Sulfate (SO_4)	max. 0.5 ppm	Magnesium (Mg)	max. 100 ppb
Arsenic and Antimony (as As)	max. 0.1 ppm	Molybdenum (Mo)	max. 50 ppb
Aluminium (Au)	max. 50 ppb	Nickel (Ni)	max. 20 ppb
Boron (B)	max. 50 ppb	Lead (Pb)	max. 20 ppb
Barium (Ba)	max. 50 ppb	Platinum (Pt)	max. 200 ppb
Beryllium (Be)	max. 20 ppb	Strontium (Sr)	max. 100 ppb
Bismuth (Bi)	max. 100 ppb	Titanium (Ti)	max. 100 ppb
Calcium (Ca)	max. 500 ppb	Thallium (Tl)	max. 50 ppb
Cobalt (Co)	max. 20 ppb	Vanadium (V)	max. 50 ppb
Chromium (Cr)	max. 20 ppb	Zinc (Zn)	max. 100 ppb
Copper (Cu)	max. 20 ppb	Zirconium (Zr)	max. 100 ppb
Iron (Fe)	max. 200 ppb	Residue after ignition (as sulfate)	max. 5 ppm

Code	Capacity
H8040-6-924E	240 kg

Line @thanhcong2852 Tel. 0337212545

H8040-7 Hydrochloric acid 37%, EC-10

HS-No: 2806 10 00 00

Assay	36 ± 1.0 %	Cobalt (Co)	max. 0.1 ppb
Colour	max. 10 APHA	Chromium (Cr)	max. 0.1 ppb
Residue after ignition	max. 1 ppm	Copper (Cu)	max. 0.1 ppb
Ammonium Salt	max. 0.5 ppm	Iron (Fe)	max. 0.1 ppb
Bromide (Br)	max. 10 ppm	Potassium (K)	max. 0.1 ppb
Free Chlorine (Cl)	max. 0.5 ppm	Lithium (Li)	max. 0.1 ppb
Sulfate (SO_4)	max. 0.2 ppm	Magnesium (Mg)	max. 0.1 ppb
Sulphite (SO_3)	max. 0.5 ppm	Manganese (Mn)	max. 0.1 ppb
Arsenic (as As)	max. 1 ppb	Sodium (Na)	max. 0.1 ppb
Silver (Ag)	max. 0.1 ppb	Nickel (Ni)	max. 0.1 ppb
Aluminium (Al)	max. 0.1 ppb	Lead (Pb)	max. 0.1 ppb
Barium (Ba)	max. 0.1 ppb	Strontium (Sr)	max. 0.1 ppb
Calcium (Ca)	max. 0.1 ppb	Zinc (Zn)	max. 0.1 ppb
Cadmium (Cd)	max. 0.1 ppb	Particles 0.2µm upper	max. 200 /ml

Code	Capacity
H8040-7-2500	2.5 L
H8040-7-9020	20 kg

H8040-7 Hydrochloric acid 37%, EC-10

HS-No: 2806 10 00 00

Assay	min. 36 %	Magnesium (Mg)	max. 10 ppb
Colour	max. 10 APHA	Manganese (Mn)	max. 10 ppb
Free chlorine (Cl)	max. 500 ppb	Mercury (Hg)	max. 10 ppb
Residue	max. 1 ppm	Molybdenum (Mo)	max. 10 ppb
Sulfate (SO_4)	max. 500 ppb	Nickel (Ni)	max. 10 ppb
Aluminium (Al)	max. 10 ppb	Niobium (Nb)	max. 10 ppb
Antimony (Sb)	max. 10 ppb	Palladium (Pd)	max. 10 ppb
Arsenic (As)	max. 10 ppb	Platinium (Pt)	max. 10 ppb
Barium (Ba)	max. 10 ppb	Potassium (K)	max. 10 ppb
Beryllium (Be)	max. 10 ppb	Silver (Ag)	max. 10 ppb
Bismuth (Bi)	max. 10 ppb	Sodium (Na)	max. 10 ppb
Boron (B)	max. 10 ppb	Strontium (Sr)	max. 10 ppb
Cadmium (Cd)	max. 10 ppb	Tantalium (Ta)	max. 10 ppb
Calcium (Ca)	max. 10 ppb	Thallium (Tl)	max. 10 ppb
Chromium (Cr)	max. 10 ppb	Thorium (Th)	max. 10 ppb
Cobalt (Co)	max. 10 ppb	Tin (Sn)	max. 10 ppb
Copper (Cu)	max. 10 ppb	Titanium (Ti)	max. 10 ppb
Gallium (Ga)	max. 10 ppb	Tungsten (W)	max. 10 ppb
Germanium (Ge)	max. 10 ppb	Uranium (U)	max. 10 ppb
Gold (Au)	max. 10 ppb	Vanadium (V)	max. 10 ppb
Indium (In)	max. 10 ppb	Zinc (Zn)	max. 10 ppb
Iron (Fe)	max. 10 ppb	Zirconium (Zr)	max. 10 ppb
Lithium (Li)	max. 10 ppb		

Code	Capacity
H8040-7-9025	25 L

H8040-8 Hydrochloric acid 37%, EC-1

HS-No: 2806 10 00 00

Assay	min. 36 %	Magnesium (Mg)	max. 1 ppb
Colour	max. 10 APHA	Manganese (Mn)	max. 1 ppb
Free chlorine (Cl)	max. 500 ppb	Mercury (Hg)	max. 1 ppb
Residue	max. 1 ppm	Molybdenum (Mo)	max. 1 ppb
Sulfate (SO_4)	max. 500 ppb	Ammonium (NH_4)	max. 1000 ppb
Phosphates (PO_4)	max. 50 ppb	Nickel (Ni)	max. 1 ppb
Aluminium (Al)	max. 1 ppb	Niobium (Nb)	max. 1 ppb
Antimony (Sb)	max. 1 ppb	Palladium (Pd)	max. 1 ppb
Arsenic (As)	max. 1 ppb	Platinium (Pt)	max. 1 ppb
Barium (Ba)	max. 1 ppb	Potassium (K)	max. 1 ppb
Beryllium (Be)	max. 1 ppb	Silver (Ag)	max. 1 ppb
Bismuth (Bi)	max. 1 ppb	Sodium (Na)	max. 1 ppb
Boron (B)	max. 1 ppb	Strontium (Sr)	max. 1 ppb
Bromides (Br)	max. 1000 ppb	Tantalium (Ta)	max. 1 ppb
Cadmium (Cd)	max. 1 ppb	Thallium (Tl)	max. 1 ppb
Calcium (Ca)	max. 1 ppb	Thorium (Th)	max. 1 ppb
Chromium (Cr)	max. 1 ppb	Tin (Sn)	max. 1 ppb
Cobalt (Co)	max. 1 ppb	Titanium (Ti)	max. 1 ppb
Copper (Cu)	max. 1 ppb	Tungsten (W)	max. 1 ppb
Gallium (Ga)	max. 1 ppb	Uranium (U)	max. 1 ppb
Germanium (Ge)	max. 1 ppb	Vanadium (V)	max. 1 ppb
Gold (Au)	max. 1 ppb	Zinc (Zn)	max. 1 ppb
Indium (In)	max. 1 ppb	Zirconium (Zr)	max. 1 ppb
Iron (Fe)	max. 1 ppb	Substance reducing iodine (as SO_3).	max. 500 ppb
Lead (Pb)	max. 1 ppb	Particles (>0.2 µm)	max. 300 pcs/ml
Lithium (Li)	max. 1 ppb		

Code	Capacity
H8040-8-9020	20 kg
H8040-8-9025	25 L

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H8040-10 Hydrochloric acid 37%, selective grade

HS-No: 2806 10 00 00

Code	Capacity
H8040-10-924E	240 kg

Assay	min. 36.5 %	Iron (Fe)	max. 0.2 ppm
Colour	max. 10 Hazen	Gallium (Ga)	max. 0.01 ppm
Ammonium	max. 2 ppm	Indium (In)	max. 0.01 ppm
Free Chlorine (Cl)	max. 1 ppm	Lithium (Li)	max. 0.01 ppm
Phosphate (PO_4)	max. 1 ppm	Magnesium (Mg)	max. 0.1 ppm
Sulfate (SO_4)	max. 1 ppm	Molybdenum (Mo)	max. 0.02 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm	Nickel (Ni)	max. 0.02 ppm
Aluminium (Al)	max. 0.01 ppm	Lead (Pb)	max. 0.01 ppm
Boron (B)	max. 0.1 ppm	Platinum (Pt)	max. 0.2 ppm
Barium (Ba)	max. 0.01 ppm	Strontium (Sr)	max. 0.01 ppm
Beryllium (Be)	max. 0.02 ppm	Titanium (Ti)	max. 0.1 ppm
Bismuth (Bi)	max 0.1 ppm	Thallium (Tl)	max. 0.05 ppm
Calcium (Ca)	max. 0.5 ppm	Vanadium (V)	max. 0.1 ppm
Cobalt (Co)	max. 0.01 ppm	Zinc (Zn)	max. 0.1 ppm
Chromium (Cr)	max. 0.01 ppm	Zirconium (Zr)	max. 0.05 ppm
Copper (Cu)	max. 0.01 ppm	Residue after ignition (as Sulfate)	max. 5 ppm

HYDROCHLORIC ACID, VOLUMETRIC SOLUTIONS

H8050-0 Hydrochloric acid solution 0.01 mol/l (0.01 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 0.99 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1 ml = 0.0003646 g HCl

Code	Capacity
H8050-0-1000	1.0 L

H8051-0 Hydrochloric acid solution 0.05 mol/l (0.05 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 0.99 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1 ml = 0.0018235 g HCl

Code	Capacity
H8051-0-1000	1.0 L

H8052-0 Hydrochloric acid solution 0.1 mol/l (0.1 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.00 g/cm^3
- pH (20 °C) 1.2

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1 ml = 0.003646 g HCl

Code	Capacity
H8052-0-1000	1.0 L

H8055-0 Hydrochloric acid solution 0.125 mol/l (0.125 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloirde solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 0.99 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1 ml = 0.004557 g HCl

Code	Capacity
H8055-0-1000	1.0 L

H8058-0 Hydrochloric acid solution 0.2 mol/l (0.2 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: ~ 1.01 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1 ml = 0.007292 g HCl

Code	Capacity
H8058-0-1000	1.0 L

H8059-0 Hydrochloric acid solution 0.25 mol/l (0.25 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1 ml = 0.009115 g HCl

Code	Capacity
H8059-0-1000	1.0 L

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H8062-0 Hydrochloric acid solution 0.5 mol/l (0.5 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.01 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1 ml = 0.0018235 g HCl

Code	Capacity
H8062-0-1000	1.0 L

H8065-0 Hydrochloric acid solution 1 mol/l (1 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.02 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 8 B

1 ml = 0.003646 g HCl

Code	Capacity
H8065-0-1000	1.0 L

H8068-0 Hydrochloric acid solution 1.4 mol/l (1.4 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 3

Transport/storage:
- PAX: 809
- CAO: 813
- LGK: 8 B

1 ml = 0.05104 g HCl

Code	Capacity
H8068-0-1000	1.0 L

H8071-0 Hydrochloric acid solution 2 mol/l (2 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: ~1.03 g/cm^3
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- Poison class CH (Swiss): 3

Transport/storage:
- PAX: 809
- CAO: 813
- LGK: 8 B

1 ml = 0.07292 g HCl

Code	Capacity
H8071-0-1000	1.0 L

H8072-0 Hydrochloric acid solution 3 mol/l (3 N)

HS-No: 2806 10 00 00

Synonyms; Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: ~1.06 g/cm^3
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- R: 36/37/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 II UN 1789
- CAO: 8 II UN 1789
- LGK: 8 II UN 1789
- PAX: 809
- CAO: 813
- LGK: 8 B

1 ml = 0.10938 g HCl

Code	Capacity
H8072-0-1000	1.0 L

H8073-0 Hydrochloric acid solution 5 mol/l (5 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.08 g/cm^3
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- R: 36/37/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 II UN 1789
- CAO: 8 II UN 1789
- LGK: 8 II UN 1789
- PAX: 809
- CAO: 813
- LGK: 8 B

1 ml = 0.18235 g HCl

Code	Capacity
H8073-0-1000	1.0 L

H8074-0 Hydrochloric acid solution 6 mol/l (6 N)

HS-No: 2806 10 00 00

Synonyms: Hydrogen chloride solution

- HCl
- M = 36.46 g/mol
- CAS [7647-01-0]
- EC number: 231-595-7

Physical data:
- Density: 1.09 g/cm^3
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 017-002-01-X
- R: 36/37/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 II UN 1789
- CAO: 8 II UN 1789
- LGK: 8 II UN 1789
- PAX: 809
- CAO: 813
- LGK: 8 B

1 ml = 0.21876 g HCl

Code	Capacity
H8074-0-1000	1.0 L

Line@thaikyou2562 Tel. 0237215 45 - 6

HYDROFLUORIC ACID 40%

Synonyms:

- HF
- M = 20.01 g/mol
- CAS [7664-39-3]
- EC number: 231-634-8

Physical data:
- Form: Liquid
- Density: 1.13 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -44 °C
- Boiling point: ~ -112 °C
- pH (20 °C) < 1

Toxicological data:
- MAK: 2 ml/m^3, 1.7 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 009-002-00-6
- R: 26/27/28-35
- S: 7/9-26-28.1-36/37/39-45
- Poison class CH (Swiss): 1

Transport/storage:
- ADR: 8 CT1 II UN 1790
- IMDG: 8 II UN 1790
- IATA/ICAO: 8 II UN 1790
- PAX: 809
- CAO: 813
- LGK: 6.1 B
- Disposal: 23

Special regulations:
- Dual use product

H8076-1 Hydrofluoric acid 40%, reagent grade

HS-No: 2811 11 00 00

Assay (acidimetric)	min. 40 %	Heavy metals (as Pb)	max. 0.0001 %
Colour (Hazen)	max. 10 %	Iron (Fe)	max. 0.00001 %
Hexafluorosilicic acid (H_2SiF_6)	max. 0.005 %	Lead (Pb)	max. 0.000002 %
Chlorides (Cl)	max. 0.0001 %	Lithium (Li)	max. 0.000002 %
Phosphates (PO_4)	max. 0.00005 %	Magnesium (Mg)	max. 0.00001 %
Sulfates (SO_4)	max. 0.0002 %	Manganese (Mn)	max. 0.000003 %
Sulfites (SO_3)	max. 0.0002 %	Molybdenum (Mo)	max. 0.000002 %
Alumnium (Al)	max. 0.000005 %	Nickel (Ni)	max. 0.000002 %
Arsenic (As)	max. 0.000005 %	Potassium (K)	max. 0.00001 %
Barium (Ba)	max. 0.000005 %	Silver (Ag)	max. 0.000002 %
Beryllium (Be)	max. 0.000002 %	Sodium (Na)	max. 0.00002 %
Bismuth (Bi)	max. 0.000002 %	Strontium (Sr)	max. 0.000002 %
Cadmium (Cd)	max. 0.000001 %	Titanium (Ti)	max. 0.000002 %
Calcium (Ca)	max. 0.00002 %	Thallium (Tl)	max. 0.000002 %
Chromium (Cr)	max. 0.000002 %	Vanadium (V)	max. 0.000002 %
Cobalt (Co)	max. 0.000002 %	Zinc (Zn)	max. 0.000005 %
Copper (Cu)	max. 0.000002 %	Zirconium (Zr)	max. 0.000002 %
Germanium (Ge)	max. 0.000002 %	Sulfated ash	max. 0.0005 %

Code	Capacity
H8076-1-2500	2.5 L

HYDROFLUORIC ACID 49%

Synonyms:

- HF
- M = 20.00 g/mol
- CAS [7664-39-3]
- EC number: 231-634-8

Physical data:
- Form: Liquid
- Density: 1.16 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -35 °C
- Boiling point: ~ -106 °C
- pH (20 °C) < 1

Toxicological data:
- MAK: 2 ml/m^3, 1.7 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 009-002-00-6
- R: 26/27/28-35
- S: 7/9-26-28.1-36/37/39-45
- Poison class CH (Swiss): 1

Transport/storage:
- ADR: 8 CT1 II UN 1790
- IMDG: 8 II UN 1790
- IATA/ICAO: 8 II UN 1790
- PAX: 809
- CAO: 813
- LGK: 6.1 B
- Disposal: 23

Special regulations:
- Dual use product

H8081-1 Hydrofluoric acid 49%, reagent grade

HS-No: 2811 11 00 00

Assay (acidimetric)	min. 48 %	Chromium (Cr)	max. 0.000002 %
Colour (Hazen)	max. 10 %	Iron (Fe)	max. 0.00001 %
Calcination residue (as SO_4)	max. 0.0005 %	Germanium (Ge)	max. 0.000002 %
Chlorides (Cl)	max. 0.0001 %	Potassium (K)	max. 0.00001 %
Hexafluorosilicic acid (H_2HiF_6)	max. 0.005 %	Lithium (Li)	max. 0.000002 %
Phosphates (PO_4)	max. 0.00005 %	Magnesium (Mg)	max. 0.00001 %
Sulfates (SO_4)	max. 0.0002 %	Manganese (Mn)	max. 0.000003 %
Sulfites (SO_3)	max. 0.0002 %	Molybdenum (Mo)	max. 0.000002 %
Silver (Ag)	max. 0.000002 %	Sodium (Na)	max. 0.00002 %
Alumnium (Al)	max. 0.000005 %	Nickel (Ni)	max. 0.000002 %
Arsenic (As)	max. 0.000005 %	Lead (Pb)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Strontium (Sr)	max. 0.000002 %
Beryllium (Be)	max. 0.000002 %	Titanium (Ti)	max. 0.000002 %
Bismuth (Bi)	max. 0.000002 %	Thallium (Tl)	max. 0.000002 %
Calcium (Ca)	max. 0.000001 %	Vanadium (V)	max. 0.000002 %
Cadmium (Cd)	max. 0.000001 %	Zinc (Zn)	max. 0.000005 %
Cobalt (Co)	max. 0.000002 %	Zirconium (Zr)	max. 0.000002 %

Code	Capacity
H8081-1-2500	2.5 L

HYDROFLUORIC ACID 49%

Synonyms:

- HF
- M = 20.01 g/mol
- CAS [7664-39-3]
- EC number: 231-634-8

Physical data:
- Density: 1.13 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -44 °C
- Boiling point: ~ -112 °C
- pH (20 °C) < 1

Toxicological data:
- MAK: 3 ml/m^3, 2.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 009-002-00-6
- R: 26/27/28-35
- S: 7/9-26-28.1-36/37/39-45
- Poison class CH (Swiss): 1

Transport/storage:
- ADR: 8 CT1 II UN 1790
- IMDG: 8 II UN 1790
- IATA/ICAO: 8 II UN 1790
- PAX: 809
- CAO: 813
- LGK: 6.1 B
- Disposal: 23

Line @tranbou2562 Tel.0822145 -6

H8081-7 Hydrofluoric acid 49%, EC-10

HS-No: 2811 11 00 00

	Guarantee	Result
Assay (HF)	48.8 - 49.2	49.0 %
Colour	max. 6	< 6 APHA
Residue after Ignition	max. 800	50 ppb
Chlorides (Cl)	max. 1000	50 ppb
Phosphates (PO_4)	max. 400	50 ppb
Sulfate (SO_4) and Sulfite (SO_3)	max. 500	50 ppb
Nitrate (NO)	max. 1000	50 ppb
Arsenic and Antimony (as As)	max. 10	0.05 ppb
Alumnium (Al)	max. 10	0.05 ppb
Barium (Ba)	max. 5	0.1 ppb
Beryllium (Be)	max. 5	0.1 ppb
Bismuth (Bi)	max. 5	0.1 ppb
Boron (B)	max. 10	0.05 ppb
Cadmium (Cd)	max. 10	0.05 ppb
Calcium (Ca)	max. 10	0.05 ppb
Chromium (Cr)	max. 10	0.05 ppb
Cobalt (Co)	max. 10	0.05 ppb
Copper (Cu)	max. 10	0.05 ppb
Gallium (Ga)	max. 10	0.05 ppb
Germanium (Ge)	max. 10	0.05 ppb

	Guarantee	Result
Gold (Au)	max. 5	0.1 ppb
Iron (Fe)	max. 10	0.05 ppb
Lead (Pb)	max. 10	0.05 ppb
Lithium (Li)	max. 5	0.1 ppb
Magnesium (Mg)	max. 10	0.05 ppb
Manganese (Mn)	max. 10	0.05 ppb
Molybdenum (Mo)	max. 10	0.05 ppb
Nickel (Ni)	max. 10	0.05 ppb
Potassium (K)	max. 10	0.05 ppb
Niobium (Nb)	max. 10	0.05 ppb
Silver (Ag)	max. 5	0.1 ppb
Sodium (Na)	max. 10	0.05 ppb
Strontium (Sr)	max. 10	0.05 ppb
Tantalum (Ta)	max. 10	0.05 ppb
Thallium (Tl)	max. 10	0.05 ppb
Tin (Sn)	max. 10	0.1 ppb
Titanium (Ti)	max. 10	0.1 ppb
Vanadium (V)	max. 10	0.05 ppb
Zinc (Zn)	max. 10	0.05 ppb
Zirconium (Zr)	max. 10	0.05 ppb

Code	Capacity
H8081-7-2500	2.5 L
H8081-7-920E	200 L

HYDROGEN PEROXIDE 6%

Synonyms: Hydrogen dioxide, Hydroperoxide

- H_2O_2
- M = 34.01 g/mol
- CAS [7722-84-1]
- EC number: 231-765-0

Physical data
- Form: Liquid
- Density: 1.016 g/cm^3

Toxicological data:
- LD 50 (oral, rat): 2000 mg/kg (90% solution)

Safety:
- EC Index no.: 008-003-00-9
- R: 36
- S: 26-37

H8084-3 Hydrogen Peroxide 6%, extra pure

HS-No: 2847 00 00 00

Assay (permanganometric)	approx. 6 %
Acidity (as H_2SO_4)	max. 0.05 %
Chloride (Cl)	max. 0.001 %
Nitrates (NO_3)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %
Sulfates (SO_4)	max. 0.001 %
Ammonium (NH_4)	max. 0.001 %

Arsenic (As)	max. 0.00005 %
Copper (Cu)	max. 0.001 %
Iron (Fe)	max. 0.0001 %
Lead (Pb)	max. 0.001 %
Nickel (Ni)	max. 0.001 %
Non-volatile matter	max. 0.05 %

Code	Capacity
H8084-3-0500	500 ml

HYDROGEN PEROXIDE 30%

Synonyms: Perhydrol

- H_2O_2
- M = 34.01 g/mol
- CAS [7722-84-1]
- EC number: 231-765-0

Physical data:
- Density: 1.11 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -26 °C
- Boiling point: 107 °C
- Vapour pressure: (20 °C) ~ 18 hPa
- pH (20 °C): 2 - 4

Toxicological data:
- LD 50 (oral, rat): 2000 mg/kg (90% solution)
- MAK: 1 ml/m^3, 1.4 mg/m^3
- WGK: 0

Safety:
- EC Index no.: 008-003-00-9
- R: 34
- S: 3-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 OC1 II UN 2014
- IMDG: 5.1 II UN 2014
- IATA/ICAO: 5.1 II UN 2014
- PAX: 501
- CAO: 506
- LGK: 5.1 B
- Disposal: 22

H8087-1 Hydrogen peroxide 30-32%, reagent grade

HS-No: 2847 00 00 00

Assay (permanganometric)	min. 30 %
Colour	max. 10 Hazen
Free acid (as H_2SO_4)	max. 0.005 %
Chlorides (Cl)	max. 0.00005 %
Phosphates (PO_4)	max. 0.0001 %
Sulfate (SO_4)	max. 0.0001 %
Total N	max. 0.0002 %
Aluminium (Al)	max. 0.00005 %
Arsenic (As)	max. 0.000001 %
Barium (Ba)	max. 0.000005 %
Beryllium (Be)	max. 0.000001 %
Bismuth (Bi)	max. 0.00001 %
Calcium (Ca)	max. 0.00002 %
Cadmium (Cd)	max. 0.000001 %
Chromium (Cr)	max. 0.000002 %
Cobalt (Co)	max. 0.000001 %
Copper (Cu)	max. 0.000001 %
Germanium (Ge)	max. 0.000005 %

Iron (Fe)	max. 0.000005 %
Lead (Pb)	max. 0.000001 %
Lithum (Li)	max. 0.000001 %
Magnesium (Mg)	max. 0.000005 %
Manganese (Mn)	max. 0.000001 %
Molybdenum (Mo)	max. 0.000002 %
Nickel (Ni)	max. 0.000002 %
Potassium (K)	max. 0.00001 %
Sodium (Na)	max. 0.00001 %
Strontium (Sr)	max. 0.000001 %
Thallium (Tl)	max. 0.000005 %
Titanium (Ti)	max. 0.00001 %
Vanadium (V)	max. 0.000001 %
Zinc (Zn)	max. 0.000005 %
Zirconium (Zr)	max. 0.00001 %
Residue on ignition	max. 0.002 %
Non-volatile matter	max. 0.005 %

Code	Capacity
H8087-1-1000	1.0 L
H8087-1-2500	2.5 L

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H8087-3 Hydrogen peroxide 30%, extra pure

HS-No: 2847 00 00 00

Assay (permanganometric)	approx. 30 %	Arsenic (As)	max. 0.00005 %
Acidity (as H_2SO_4)	max. 0.025 %	Copper (Cu)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
Nitrates (NO_3)	max. 0.001 %	Iron (Fe)	max. 0.0001 %
Phosphates (PO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.001 %	Non-volatile matter	max. 0.02 %
Ammonium (NH_4)	max. 0.001 %		

Code	Capacity
H8087-3-2500	2.5 L

HYDROGEN PEROXIDE 35%

Synonyms: Perhydrol

- H_2O_2
- M = 34.01 g/mol
- CAS [7722-84-1]
- EC number: 231-765-0

Physical data:
- Density: 1.13 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -24 °C
- Boiling point: ~ 110 °C
- Vapour pressure: (20 °C) ~ 20 hPa
- pH (20 °C): 2 - 4

Toxicological data:
- MAK: 1 ml/m^3, 1.4 mg/m^3
- WGK: 0

Safety:
- EC Index no.: 008-003-00-9
- R: 34
- S: 3-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 OC1 II UN 2014
- IMDG: 5.1 II UN 2014
- IATA/ICAO: 5.1 II UN 2014
- PAX: 501
- CAO: 506
- LGK: 5.1 B
- Disposal: 22

H8089-3 Hydrogen peroxide 35%, extra pure

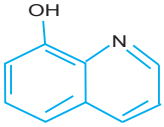
HS-No: 2847 00 00 00

Assay (permanganometric)	34.5 - 36.5 %	Arsenic (As)	max. 0.00005 %
Free acid (as H_2SO_4)	max. 0.02 %	Copper (Cu)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Heavy metals (as Pb)	max. 0.0002 %
Nitrates (NO_3)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.001 %	Non-volatile matter	max. 0.05 %
Ammonium (NH_4)	max. 0.003 %		

Code	Capacity
H8089-3-1000	1.0 L

8-HYDROXYQUINOLINE

Synonyms: Oxine, 8-Quinolinol, Hydroxybenzopyridine



- C_9H_7NO
- M = 145.16 g/mol
- CAS [148-2-3]
- EC number: 205-711-1

Physical data:
- Form: Solid
- Solub. in water (20 °C): insoluble
- Melting point: 73.8 °C
- Boiling point: 267 °C

Toxicological data:
- LD 50 (oral, rat): 1200 mg/kg
- WGK: 3

Safety:
- R: 20/22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 6.1 T2 III UN 2811
- IMDG: 6.1 III UN 2811
- IATA/ICAO: 6.1 III UN 2811
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

H8090-1 8-Hydroxyquinoline, reagent grade

HS-No: 2933 49 90 90

Assay	min. 99.5 %	Residue after ignition (as sulfate)	max. 0.02 %
Melting point	73 ~ 74.5 °C	Chloride (Cl)	max. 0.002 %
Sensitivity test to magnesium	passes test	Sulfate (SO_4)	max. 0.01 %
Solubility test in ethanol	passes test		

Code	Capacity
H8090-1-0100	100 g

HYDROGEN PEROXIDE 50%

Synonyms: Hydrogen dioxide, Hydroperoxide

- H_2O_2
- M = 34.01 g/mol
- CAS [7722-84-1]
- EC number: 231-765-0

Physical data:
- Form: Liquid
- Density: 1.20 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -52 °C
- Boiling point: 114 °C
- Vapour pressure: (30 °C) 240 hPa
- pH (20 °C): 1.0 - 4.0

Toxicological data:
- LD 50 (oral, rat): 1518 mg/kg
- WGK: 0

Safety:
- EC Index no.: 008-003-00-9
- R: 8-20/22-34
- S: 17-26-28.1-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 OC1 II UN 2014
- IMDG: 5.1 II UN 2014
- IATA/ICAO: Forbidden UN 2014
- PAX: F
- CAO: F
- LGK: 5.1 B
- Disposal: 22

H8090-3 Hydrogen peroxide 50%, extra pure

HS-No: 2847 00 00 00

Assay (permanganometric)	approx. 50 %	Arsenic (As)	max. 0.00005 %
Acidity (as H_2SO_4)	max. 0.05 %	Copper (Cu)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Nitrates (NO_3)	max. 0.001 %	Lead (Pb)	max. 0.001 %
Phosphates (PO_4)	max. 0.005 %	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.001 %	Non-volatile matter	max. 0.05 %
Ammonium (NH_4)	max. 0.003 %		

Code	Capacity
H8090-3-4000	4.0 L

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HYDROQUINONE

Synonyms: 1,4-Dihydroxybenzene, p-Dihydroxybenzene, Quinol

- $C_6H_6O_2$
- M = 110.11 g/mol
- CAS [123-31-9]
- EC number: 204-617-8

Physical data:
- Form: Solid
- Spec. density: 1.35 g/cm^3
- Bulk density: ~ 600 kg/m^3
- Solub. in water (25 °C) : 70 g/l
- Melting point: -172 °C
- Boiling point: 287 °C
- Flash point: 165 °C
- Ignition temp.: 516 °C
- Vapour presure: (132 °C) 1.3 hPa
- pH (70 g/l H_2O, 20 °C) 3.75

Toxicological data:
- LD 50 (oral, rat): 320 mg/kg
- WGK: 2

Safety:
- EC Index no.: 604-005-00-4
- R: 22-40-41-43-50-68
- S: 26-36/37/39-46-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T2 III UN 2662
- IMDG: 6.1 III UN 2662
- IATA/ICAO: 6.1 III UN 2662
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

H8097-3 Hydroquinone, extra pure

HS-No: 2907 22 00 10

Assay	min. 99 %	Sulfated ash	max. 0.05 %
Identity (IR-spectrum)	passes test	Water	max. 0.3 %

Code	Capacity
H8097-3-0500	500g

HYDROXYLAMINE HYDROCHLORIDE

Synonyms: Hydroxylammonium chloride

- $NH_2OH{\cdot}HCl$
- M = 69.49 g/mol
- CAS [5470-11-1]
- EC number: 226-798-2

Physical data:
- Spec. density: 1.67 g/cm^3
- Bulk density: ~ 900 kg/m^3
- Solub. in water (25 °C): 464 g/l
- Melting point: 159 °C
- pH (50 g/l H_2O, 20 °C) 2.5 - 3.5

Toxicological data:
- LD 50 (oral, rat): 141 mg/kg
- WGK: 3*

Safety:
- EC Index no.: 612-123-00-2 [1]
- R: 22-36/38-43-48/22-50
- S: 22-24-37-46-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 III UN 3260
- IMDG: 8 III UN 3260
- IATA/ICAO: 8 III UN 3260
- PAX: 822
- CAO: 823
- LGK: 4.1 A
- Disposal: 28

H8099-1 Hydroxylamine hydrochloride, reagent grade

HS-No: 2825 10 00 00

Assay (argentometric)	min. 99 %	Copper (Cu)	max. 0.0005 %
pH (5%, H_2O)	2.5 - 3.5	Heavy metals (as Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.002 %	Iron (Fe)	max. 0.0005 %
Ammonium (NH_4)	max. 0.05 %	Calcination residue (as SO_4)	max. 0.01 %
Arsenic (As)	max. 0.0005 %		

Code	Capacity
H8099-1-0500	500 ml

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Chemical list : I

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IRON STANDARD SOLUTION 1000MG/L FOR AA

I1001-0 Iron standard solution 1000mg/l for AA (iron (III) nitrate nonahydrate in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Synonyms:

Physical data:
- Density: ~ 1.02 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

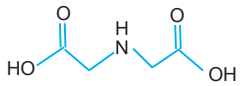
Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8 B

1 ml = 1000±5 mg/l

Code	Capacity
I1001-0-0500	500 ml

IMINODIACETIC ACID

Synonyms:



- $C_4H_7NO_4$
- M = 133.10 g/mol
- CAS [142-73-4]
- EC number: 205-555-4

Physical data:
- Solub. in water 42 g/l (20 °C)
- M = 133.10 g/mol
- pH value: 2.2 - 2.3 (20 °C) (saturated solution)
- Melting point: 247 °C (decomposes)

Toxicological data:
- WGK: 1

Safety:
- Irritant
- R: 36
- S: 22-24-26
- Poison class CH (Swiss): 3

Transport/storage:
- Packing-cat: E
- Road/Rail: 8/39 b
- IMDG-Code: 8/II UN 3261
- IATA/DGR: 8/II UN 3261
- PAX: 814
- CAO: 816
- LGK: 8
- Disposal: 4

I5001-1 Iminodiacetic acid, reagent grade

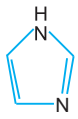
HS-No: 2922 49 70 00

Assay	min. 98.5 %	Loss on drying at 110 °C	max. 0.2 %
Melting point	~ 240 °C	Sulphated ash	max. 0.05 %

Code	Capacity
I5001-1-0100	100 g

IMIDAZOLE

Synonyms: 1,3-Diazole, Glyoxaline, Iminazole



- $C_3H_4N_2$
- M = 68.08 g/mol
- CAS [288-32-4]
- EC number: 206-019-2

Physical data:
- Form: Solid
- Spec. density: 1.030 g/cm^3
- Bulk density: ~ 500 - 600 g/m^3
- Solub. in water (20 °C): 633 g/l
- Melting point: 90 - 91 °C
- Boiling point: 256 °C
- Flash point: > 135 °C
- Ignition temp.: 480 °C
- Vapour pressure: (20 °C) 0.003 hPa
- pH (67 g/l H2O, 20 °C) 10.5

Toxicological data:
- LD 50 (oral, rat): 220 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 1

Safety:
- R: 22-34
- S: 22-26-36/37/39-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 CB III UN 3263
- IMDG: 8 III UN 3263
- IATA/ICAO: 8 III UN 3263
- PAX: 822
- CAO: 823
- LGK: 8 A
- Disposal: 3

I5005-1 Imidazole, reagent grade

HS-No: 2933 21 00 90

Assay (titr. With $HClO_4$)	min. 99.0 %	Iron (Fe)	max. 0.0005 %
Identity (IR-spectrum)	passes test	Lead (Pb)	max. 0.0005 %
pH (5%, H_2O)	9.5 - 11.0	Nickel (Ni)	max. 0.0005 %
Chlorides (Cl)	max. 0.005 %	Zinc (Zn)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %	UV-VIS spectroscopy	passes test
Cadmium (Cd)	max. 0.0005 %	Sulfated ash	max. 0.1 %
Cobalt (Co)	max. 0.0005 %	Loss on drying (20 °C, in vacum)	max. 0.5 %
Copper (Cu)	max. 0.0005%		

Code	Capacity
I5005-1-1000	1 kg

IMMERSION OIL

Synonyms:

Physical data:
- Form: Liquid
- Densiy: 0.92 g/cm^3
- Solub. in water (20 °C): almost non-miscible
- Melting point: < 0 °C
- Boiling point: 340 °C
- Flash point: 163 °C
- Vapour pressure: (23 °C) < 0.13 hPa
- Refraction index: (n 20 °C/D) 1.516

Toxicological data:
- WGK: 2

Safety:
- R: 22
- S: 25-46
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

I5010-9 Immersion oil, reagent grade

HS-No: 3822 00 00 00

Density (20°/4°)	0.92 - 0.95 °	Insoluble in ethanol	passes test
n 20°/D	1.515 - 1.522 °	Suitability for microscopy	passes test

Code	Capacity
I5010-9-0060	600 ml

IODINE

Synonyms:

- I_2
- M = 253.81 g/mol
- CAS [7553-56-2]
- EC number: 231-442-4

Physical data:
- Spec. density: 4.93 g/cm^3
- Bulk density: ~2100 g/cm^3
- Solub. in water (20 °C): 0.29 g/l
- Melting point: 114 °C
- Boiling point: 185 °C
- Vapour pressure: (25 °C) 0.41 hPa
- pH (saturated solution H_2O, 20 °C) 5.4

Toxicological data:
- LD 50 (oral, rat): 14000 mg/kg
- MAK: 0.1 ml/m^3, 1.1 mg/m^3
- WGK: 1

Safety:
- EC INdex no.: 053-001-00-3
- R: 20/21-50
- S: 23.2-51-25-36/37-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 III UN 3288
- IMDG: 6.1 III UN 3288
- IATA/ICAO: 6.1 III UN 3288
- PAX: 822
- CAO: 823
- LGK: 8 B
- Disposal: 22

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I5027-1 Iodine resublimed, reagent grade

HS-No: 2801 20 00 00

Assay (Iodometric) ..... min. 99.8 %
Chlorides, bromides (as Cl) ..... max. 0.005 %
Non-volatile matter ..... max. 0.01 %

Code	Capacity
I5027-1-0500	500 g

IODINE, VOLUMETRIC SOLUTIONS

I5034-0 Iodine solution 0.01 mol/l (0.02N)

HS-No: 2801 20 00 00

Synonyms:

- I_2
- M = 253.81 g/mol
- CAS [7553-56-2]
- EC number: 231-442-4

Physical data:
- Density: 1.005 g/cm^3

Toxicological data:
- MAK: 0.1 ml/m^3, 1 mg/m^3

Safety:
- EC Index no.: 053-001-00-3
- R: 52
- S: 61

1 ml = 0.002538 g I_2

Code	Capacity
I5034-0-1001	1.0 L

I5036-0 Iodine solution 0.05 mol/l (0.1N)

HS-No: 2801 20 00 00

Synonyms:

- I_2
- M = 253.81 g/mol
- CAS [7553-56-2]
- EC number: 231-442-4

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 3.5

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 053-001-00-3
- Poison class CH (Swiss): 3

Transport/Storage:
- LGK: 10-13

1 ml = 0.0127 g I_2

Code	Capacity
I5036-0-1001	1.0 L

I5038-0 Iodine solution 0.5 mol/l (1N)

HS-No: 2801 20 00 00

Synonyms:

- I_2
- M = 253.81 g/mol
- CAS [7553-56-2]
- EC number: 231-442-4

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 3.5

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 053-001-00-3
- Poison class CH (Swiss): 3

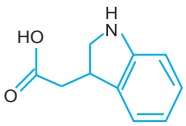
Transport/Storage:
- LGK: 10-13

1 ml = 0.127 g I_2

Code	Capacity
I5038-0-1001	1.0 L

3-INDOLE ACETIC ACID

Synonyms: JAA, Heteroauxine



- $C_{10}H_9NO_2$
- M = 175.19 g/mol
- EC number: 201-748-2

Physical data:
- Solub. in water (20 °C): slightly soluble
- Melting point: 167 - 170 °C
- Bulk density: ~ 620 g/m^3

Toxicological data:
- RTEC NL: 3150000
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 4

I6000-1 3-Indole acetic acid, reagent grade

HS-No: 2933 90 95 00

Assay ..... min. 98.0 %
Melting point ..... 166 ~ 168 °C
Solubility test in ethanol ..... passes test
Loss on drying ..... max. 0.1 %
Residue after ignition (as sulfate) .... max. 0.05 %

Code	Capacity
I6000-1-0001	1 g

IRON (II) CHLORIDE TETRAHYDRATE

Synonyms:

- $FeCl_2 \cdot 4H_2O$
- M = 198.83 g/mol
- CAS [13478-10-9]
- EC number: 231-843-4

Physical data:
- Density: 1.93 g/cm^3
- Solub. in water: ~ 1600g/l (10 °C)
- pH value: 2.5 (100 g/l H_2O, 20 °C)

- Melting point: 105 - 110 °C (release of crystalline water)
- Bulk density: 900 kg/m^3
- Water absorption hygroscopic

Toxicological data:
- LD 50 (oral, rat): 984 mg/kg
- WGK: 1

Safety:
- Harmful, irritant
- R: 22-38-41
- S: 26-39
- Poison class CH: 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

I6001-1 Iron (II) chloride tetrahydrate, reagent grade

HS-No: 2827 33 00 00

Assay (manganometric) ..... min. 99 %
Sulfates (SO_4) ..... max. 0.01 %
Total Nitrogen (N) ..... max. 0.001 %
Arsenic (As) ..... max. 0.0005 %
Copper (Cu) ..... max. 0.002 %
Iron (III) - salt (Fe III) ..... max. 0.2 %
manganese (Mn) ..... max. 0.005 %
Lead (Pb) ..... max. 0.001 %
Zinc (Zn) ..... max. 0.003 %
Substances not precipitated by ammonia (as sulfate) ..... max. 0.05 %

Code	Capacity
I6001-1-0500	500 g

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IRON (II) SULFATE HEPTAHYDRATE

Synonyms: Iron vitriol

- $FeSO_4 \cdot 7H_2O$
- M = 278.02 g/mol
- CAS [7782-63-0]
- EC number: 231-753-5

Physical data:
- Spec. density: 1.89 g/cm^3
- Bulk density: ~600 kg/m^3
- Solub. in water (20 °C): 665 g/l

- Melting point: > 60 °C (release of crystalline water)
- pH (50 g/l H_2O, 20 °C) 3 - 4

Toxicological data:
- LD 50 (oral, rat): 319 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- R: 22
- S: 24/25-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

I6007-1 Iron (II) sulfate heptahydrate, reagent grade

HS-No: 2833 29 50 00

Assay (cerimetric)	min. 99.5 %	Iron (III) (Fe (III))	max. 0.02 %
pH (5%, H_2O)	3 - 4	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.0005 %	Magnesium (Mg)	max. 0.05 %
Phosphates (PO_4)	max. 0.001 %	Zinc (Zn)	max. 0.002 %
Total Nitrogen (N)	max. 0.001 %	Non-precipitable with ammonia (as SO_4)	max. 0.05 %
Arsenic (As)	max. 0.0002 %		
Copper (Cu)	max. 0.001 %		

Code	Capacity
I6007-1-0500	500 g
I6007-1-1000	1 kg

IRON (II) SULPHIDE

Synonyms:

- FeS
- M = 87.92 g/mol
- CAS [1317-37-9]
- EC number: 215-268-6

Physical data:
- Form: Solid
- Spec. density: 4.8 g/cm^3

- Bulk density: ~ 1500 - 2000 kg/m^3
- Solub. in water (20 °C): almost insoluble
- Melting point: ~ 1195 °C

Toxicological:
- WGK:

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

I6022-3 Iron (II) Sulphide, extra pure

HS-No: 2830 90 11 00

Sulphide content	approx. 29 %

Code	Capacity
I6022-3-0500	500 g

IRON (III) CHLORIDE HEXAHYDRATE

Synonyms: Ferric chloride hexahydrate

- $FeCl_3 \cdot 6H_2O$
- M = 270.32 g/mol
- CAS [10025-77-1]
- EC number: 231-729-4

Physical data:
- Bulk density: ~ 600 - 1200 kg/m^3
- Solub. in water (20 °C): 920 g/l

- Melting point: 37 °C
- pH (10 g/l H_2O, 25 °C) ~ 1.8

Toxicological data:
- LD 50 (oral, rat): 450 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- R: 22-38-41
- S: 26-39-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

I6014-1 Iron (III) chloride hexahydrate, reagent grade

HS-No: 2827 33 00 00

Assay	min. 99 %	Ferrous Iron (Fe_2)	max. 0.002 %
Insolubility matter in water	max. 0.01 %	Copper (Cu)	max. 0.005 %
Free acid (as HCl)	max. 0.1 mol/L	Zinc (Zn)	max. 0.003 %
Sulfates (SO_4)	max. 0.01 %	Arsenic (As)	max. 0.002 %
Nitrate (NO_3)	max. 0.01 %	Substances not precipitated by ammonium hydroxide (as Sulfate)	max. 0.1 %
Phosphate (PO_4)	max. 0.01 %		
Manganese (Mn)	max. 0.02 %		

Code	Capacity
I6014-1-1000	1 kg

I6014-3 Iron (III) chloride hexahydrate, extra pure

HS-No: 2827 33 00 00

Assay	min. 99 %	Iron (II) (Fe (III))	max. 0.05 %
Free acid (as HCl)	max. 0.2 %	Lead (Pb)	max. 0.01 %
Phosphates (PO_4)	max. 0.005 %	Magnesium (Mg)	max. 0.05 %
Sulfates (SO_4)	max. 0.05 %	Manganese (Mn)	max. 0.1 %
Arsenic (As)	max. 0.005 %	Potassium (K)	max. 0.05 %
Calcium (Ca)	max. 0.05 %	Sodium (Na)	max. 0.1 %
Copper (Cu)	max. 0.005 %	Zinc (Zn)	max. 0.01 %

Code	Capacity
I6014-3-1000	1 kg

IRON (III) NITRATE NONAHYDRATE

Synonyms: Ferric nitrate monohydrate

- $Fe(NO_3)_3 \cdot 9H_2O$
- M = 404.00 g/mol
- CAS [7782-61-8]
- EC number: 233-899-5

Physical data:
- Spec. density: 1.68 g/cm^3
- Bulk density: ~ 900 g/cm^3
- Solub. in water (20 °C): soluble

- Melting point: 47 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) ~ 1.3

Toxicological data:
- LD 50 (oral, rat): 3250 mg/kg
- WGK: 1

Safety:
- R: 8-36/38
- S: 26

- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 III UN 1466
- IMDG: 5.1 III UN 1466
- IATA/ICAO: 5.1 III UN 1466
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 15

Line Chemie 02372 1545-6 Tel. 02372 1545-6

I6017-1 Iron (III) nitrate nonahydrate, reagent grade

HS-No: 2834 29 80 00

Assay (iodometric)	min. 98.5 %	Copper (Cu)	max. 0.001 %
Insolubility matter in water	max. 0.005 %	Zinc (Zn)	max. 0.001 %
Chloride (Cl)	max. 0.0005 %	Substance not precipitated by ammonium hydroxide (as sulfate)	max. 0.05 %
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
I6017-1-0500	500 g

I6017-3 Iron (III) nitrate nonahydrate, extra pure

HS-No: 2834 29 80 00

Assay (iodometric)	min. 98 %	Copper (Cu)	max. 0.005 %
Insolubility in water	max. 0.05 %	Iron (II) (Fe (II))	max. 0.01 %
Chloride (Cl)	max. 0.005 %	Lead (Pb)	max. 0.005 %
Sulfates (SO_4)	max. 0.01 %	Magnesium (Mg)	max. 0.02 %
Calcium (Ca)	max. 0.02 %	Zinc (Zn)	max. 0.01 %

Code	Capacity
I6017-3-0500	500 g

IRON (III) SULFATE HYDRATE

Synonyms:

- $Fe_2(SO_4)_3 \cdot xH_2O$
- M = 399.87 g/mol
- CAS [15244-10-7]
- EC number: 233-072-9

Physical data:
- Spec. density: (18 °C, anhydrous substance) 3.097 g/cm³
- Bulk density: ~ 200 g/cm³
- Solub. in water (20 °C): freely soluble
- pH (50 g/l H_2O, 20 °C) ~ 1.5

Toxicological data;
- WGK: 1

Safety:
- S: 24/25
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

I624-1 Iron (III) sulfate hydrate, reagent grade

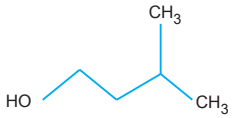
HS-No: 2833 29 50 00

Assay (iodometric (as $Fe_2(SO_4)_3$) ..	min. 75 %	Copper (Cu)	max. 0.005 %
Insoluble in water	max. 0.025 %	Iron (II) (Fe (II))	max. 0.05 %
Chloride (Cl)	max. 0.01 %	Potassium (K)	max. 0.01 %
Nitrates (NO_3)	max. 0.02 %	Sodium (Na)	max. 0.05 %

Code	Capacity
I6024-1-0500	500 g

ISOAMYL ALCOHOL

Synonyms: 3-Methyl-1-butanol, Isopentyl alcohol



- $C_5H_{12}O$
- M = 88.15 g/mol
- CAS [123-51-3]
- EC number: 204-633-5

Physical data:
- Density: 0.81 g/cm³
- Solub. in water (20 °C): 25 g/l
- Melting point: -117 °C
- Boiling point: 131 °C
- Flash point: 43 °C
- Ignition temp.: 340 °C
- Vapour pressure: (20 °C) 3.1 hPa
- Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const.: (20 °C) 14.7
- Evap. heat: (132 °C) 441 kJ/kg
- Saturation conc.: (20 °C) 11 g/m³
- Expl. limit (upper): 8 Vol%
- Expl. limit (lower): 1.2 Vol%
- pH (25 g/l H_2O, 20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): >5000 mg/kg
- MAK: 100 ml/m³, 370 mg/m³
- WGK: 1

Safety:
- EC Index no.: 603-006-00-7
- R: 10-20
- S: 24/25
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 III UN 1105
- IMDG: 3 III UN 1105
- IATA/ICAO: 3 III UN 1105
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

I7009-1 Iso-Amyl alcohol, reagent grade

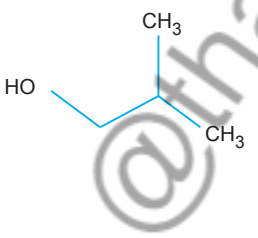
HS-No: 2905 15 00 00

Assay	min. 98.5 %	Acids and esters (as Amyl Acetate)	max. 0.2 %
Titrable acid	max. 0.002 meq/g	Carbonyl (as HCHO)	max. 0.1 %
Residue after evaporation	max. 0.003 %	Water	max. 0.5 %

Code	Capacity
I7009-1-2501	2.5 L

ISOBUTANOL

Synonyms: 2-Methyl-1-propanol, Isobutyl alcohol, Isopropylcabinol



- $C_4H_{10}O$
- M = 74.12 g/mol
- EC number: 201-148-0

Physical data:
- Density: 0.8 g/cm³
- Solub. in water (20 °C): 80 g/l
- Melting point: -108 °C
- Boiling point: 108 °C
- Flash point: 28 °C
- Ignition temp.: 430 °C
- Vapoiur pressure: (20 °C) 12 hPa
- Refraction index: (n 20 °C/D) 1.3955
- Viscosity: (20 °C) 6.68 mPas
- Dipolar moment: (20 °C) 1.79 Debye
- Dielectirc const.: (20 °C) 17.7
- Evap. heat: (108 °C) 577 kJ/kg
- Saturation conc.: (20 °C) 36 g/m³
- Expl. limit (upper): 12 Vol%
- Expl. limit (lower): 1.6 Vol%
- pH (80 g/l H_2O, 20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 2460 mg/kg
- MAK: 100 ml/m³, 310 mg/m³
- WGK: 1

Safety:
- EC Index no.: 603-108-00-1
- R: 10-37/38-41-67
- S: 7/9-13-26-37/39-46
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 III UN 1212
- IMDG: 3 III UN 1212
- IATA/ICAO: 3 III UN 1212
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

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I7019-1 Isobutanol, reagent grade

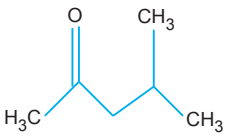
HS-No: 2905 14 90 00

Assay (GC)	min. 99.5 %	Lead (Pb)	max. 0.00002 %
Solublility in water	passes test	Magnesium(Mg)	max. 0.00001 %
Colour	max. 10 Hazen	Manganese (Mn)	max. 0.000002 %
Acidity	max. 0.0005 meq/g	Nickel (Ni)	max. 0.000005 %
Aluminium (Al)	max. 0.00005 %	Tin (Sn)	max. 0.00002 %
Arsenic (As)	max. 0.00002 %	Zinc (Zn)	max. 0.00002 %
Barium (Ba)	max. 0.000005 %	2-Butanol (GC)	max. 0.05 %
Boron (B)	max. 0.00005 %	n-butyraldehyde (GC)	max. 0.1 %
Calcium (Ca)	max. 0.00005 %	Isobutyraldehyde (GC)	max. 0.05 %
Cadmium (Cd)	max. 0.00001 %	Peroxydes (as H_2O_2)	max. 0.001 %
Cobalt (Co)	max. 0.000005 %	Substances Darkened by H_2SO_4	passes test
Chromium (Cr)	max. 0.000005 %	Non-volatile matter	max. 0.001 %
Copper (Cu)	max. 0.000005 %	Water	max. 0.1 %
Iron (Fe)	max. 0.00002 %	UV spectrphotometry	passes test

Code	Capacity
I7019-1-1000	1.0 L
I7019-1-2500	2.5 L

ISOBUTYL METHYL KETONE

Synonyms: Isobutyl methyl ketone, 4-Methyl-2-pentanone, isopropylacetone, Hexone, MIBK



- $C_6H_{12}O$
- M = 100.16 g/mol
- CAS [108-10-1]
- EC number: 203-550-1

Physical data:
- FormL Liquid
- Density: 0.80 g/cm^3
- Solub. in water (20 °C): ~ 18 - 20 g/l
- Melting point: -84 °C
- Boiling point: 116 - 118 °C
- Flash point: 14 °C
- Ignition temp.: 475 °C
- Vapour pressure: (20 °C) 20.2 hPa
- Dipolar moment: (20 °C) 13.11 Debye
- Dielectric const.: (20 °C) 13.1
- Evap. heat: (117 °C) 364 kJ/kg
- Saturation conc.: (20 °C) 82 g/m^3
- Expl. limit (upper): 8.0 Vol%
- Expl. limit (lower): 1.2 Vol%
- pH (20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): 2080 mg/kg
- MAK: 20 ml/m^3, 83 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 606-004-00-4
- R: 11-20-36/37-66
- S: 9-16-29
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1245
- IMDG: 3 II UN 1245
- IATA/ICAO: 3 II UN 1245
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

I7025-1 Isobutyl Methyl Ketone, reagent grade

Assay (GC)	min. 99.5 %	Copper (Cu)	max. 0.000002 %
Colour	max. 10 Hazen	Iron (Fe)	max. 0.00001 %
Acidity	max. 0.0002 meq/g	Lead (Pb)	max. 0.00001 %
Alkalinity	max. 0.001 meq/g	Magnesium (Mg)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.000001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Tin (Sn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Zinc (Zn)	max. 0.00001 %
Calcium (Ca)	max. 0.00005 %	$KMnO_4$ red. Matter (as O)	max. 0.0003 %
Chromium (Cr)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Cobalt (Co)	max. 0.000002 %	Water	max. 0.05 %

Code	Capacity
I7025-1-2501	2.5 L

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Chemical list : K

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KAOLIN

Synonyms: Kaolin, Aluminium silicate hydrated

- CAS [1332-58-7]
- EC number: 310-127-9

Physical data:
- Spec. density: 2.6 g/cm^3 (20 °C)
- Solub. in water (20 °C): Insoluble
- pH value 6 - 7 (slurry)
- Bulk density: ~ 350 kg/m^3

Toxicological data:
- MAK: 1.5 ml/m^3
- WGK: nwg

Safety:
- S: 22
- RTECS GF: 1670500
- Poison class CH: F

Transport/storage:
- LGK: 10-13

HS-No: 2507 00 20 00

K1000-3 Kaolin, extra pure

Chloride (Cl)	max. 0.035 %	Sand	passes test
Carbonate (CO_3)	passes test	Iron (Fe)	max. 0.06 %
Soluble matter in acids	max. 1.0 %	Heavy metals (as Pb)	max. 0.01 %
Loss on ignition	max. 15.0 %	Arsenic (As)	max. 0.0002 %

Code	Capacity
K1000-3-0500	500 g

I

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Chemical list : L

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D(+)-LACTOSE MONOHYDRATE

Synonyms: Lactobiose, Milk sugar

- $C_{12}H_{22}O_{11} \cdot H_2O$
- M = 360.32 g/mol
- CAS [10039-26-6]
- EC number: 200-559-2

Physical data:
- Form: Solid
- Bulk density: ~ 500 kg/m^3
- Solub. in water (20 °C): freely soluble
- Melting point: 223 °C
- pH (50 g/l H_2O, 20 °C) 4 - 6

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

L1000-3 d(+)-lactose monohydrate, extra pure

HS-No: 1702 11 00 00

Specific rotation ([∝] 20°/D, c=10, H_2O)	+54.4 - +55.9 °	Heavy metals (as Pb)	max. 0.0005 %
Acidity/alkalinity	passes test	Lead (Pb)	max. 0.00005 %
Appearance of solution (10%, water)	passes test	Zinc (Zn)	max. 0.0025 %
Proteins and UV-absorbing impurities	passes test	Sulfated ash	max. 0.1 %
Arsenic (As)	max. 0.00005 %	Water	4.5 - 5.5
Copper (Cu)	max. 0.0025 %	Residual solvents (Ph Eur/ICH)	Excluded by production process

Code	Capacity
L1002-3-0500	500 g

LEAD STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Form: Liquid
- Density: ~ 1.02 g/cm^3
- CAS [10039-26-6]
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 C1 III UN 3264
- IATA/ICAO: 8 C1 III UN 3264
- PAX: 818
- CAO: 520
- LGK: 8B

L1001-0 Lead standard solution 1000mg/l for AA

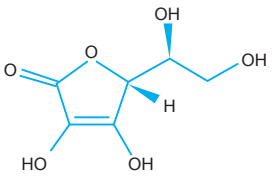
HS-No: 3822 00 00 00

(lead (II) nitrate in nitric acid 0.5 mol/l)
Composition ..... 1000±5 mg/l

Code	Capacity
L1001-0-0500	500 ml

L(+)-ASCORBIC ACID

Synonyms: Vitamin C, 3-Oxo-L-gulonic acid-g-lactone



- $C_6H_8O_6$
- M = 176.13 g/mol
- CAS [50-81-7]
- EC number: 200-066-2

Physical data:
- Spec. density: 1.65 g/cm^3
- Bulk density: ~ 500 - 900 kg/m^3
- Solub. in water (24 °C): 330 g/l
- Melting point: 190 - 192 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 2.2 - 2.5

Toxicological data:
- LD 50 (oral, rat): 11900 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

L1003-1 L(+)-ascorbic acid, reagent grade

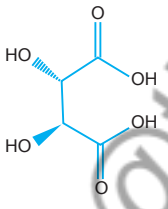
HS-No: 2936 27 00 00

Assay (acidimetric)	min. 99.7 %	Copper (Cu)	max. 0.0005 %
Specific rotation ([a]20°/D; in H_2O 10%)	+20.5 - +21.5	Heavy metals (as Pb)	max. 0.001 %
pH (5%, H_2O)	2.2 - 2.5	Iron (Fe)	max. 0.0002 %
Chloride (Cl)	max. 0.005 %	Sulfated ash	max. 0.05 %
Sulphate (SO_4)	max. 0.002 %	Loss on drying (105 °C)	max. 0.1 %

Code	Capacity
L1003-1-0100	100 g
L1003-1-0250	250 g

L(+)-TARTARIC ACID

Synonyms: 2,3-Dihydroxybutanedioic acid



- $C_4H_6O_6$
- M = 150.09 g/mol
- CAS [87-69-4]
- EC number: 201-766-0

Physical data:
- Form: Solid
- Spec. density: 1.76 g/cm^3
- Bulk density: ~ 800 - 1000 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 170 °C
- Ignition point: 425 °C
- pH (100 g/l H_2O, 25 °C) ~ 1.6

Toxicological data:
- WGK: 1

Safety:
- R: 36
- S: 24/25
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 4

L1012-1 L(+)-Tartaric acid, reagent grade

HS-No: 2918 12 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.0005 %
Identity (IR-spectrum)	passes test	Heavy metals (as Pb)	max. 0.0005 %
Appearance of solution	passes test	Iron (Fe)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Specific rotation ([∝] 20°/D; c=20, H_2O)	+12.0 - +12.8 °	Magnesium (Mg)	max. 0.002 %
Chloride (Cl)	max. 0.0005 %	Nickel (Ni)	max. 0.0001 %
Phosphates (PO_4)	max. 0.001 %	Oxalic acid	max. 0.035 %
Sulfates (SO_4)	max. 0.005 %	Sulphur compounds (as SO_4)	max. 0.002 %
Arsenic (As)	max. 0.00002 %	Sulfated ash	max. 0.01 %
Calcium(Ca)	max. 0.002 %	Loss on drying (105 °C)	max. 0.2 %

Code	Capacity
L1012-1-0500	500 g

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L1012-3 L(+)-Tartaric acid, extra pure

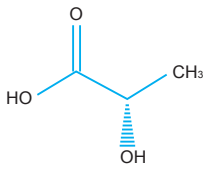
HS-No: 2918 12 00 00

Assay	99.7 - 100.5 %	Mercury (Hg)	max. 0.0001 %
Identity	passes test	Lead (Pb)	max. 0.0005 %
Organic volatile impurities (NF)	passes test	Heavy metals (as Pb)	max. 0.001 %
Chloride (Cl)	max. 0.01 %	Oxalates (as $C_2H_2O_4$)	max. 0.01 %
Calcium (Ca)	max. 0.02 %	Sulphated ash (600 °C)	max. 0.1 %
Sulphate (SO_4)	max. 0.015 %	Loss on drying (105 °C)	max. 0.2 %

Code	Capacity
L1012-3-0500	500 g

L(+)-LACTIC ACID

Synonyms:



- $C_3H_6O_3$
- M = 90.08 g/mol
- CAS [79-33-4]
- EC number: 200-018-0

Physical data:
- Form: Thick Liquid
- Density: ~ 1.18 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: 18 °C
- Boiling point: (20 hPa) 122 °C
- pH (10 g/l H_2O, 20 °C) ~ 2.8

Toxicological data:
- LD 50 (oral, rat): 3543 mg/kg (pure substance)
- WGK: 1

Safety:
- R: 38-41
- S: 26-39
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

L1020-1 L(+)-Lactic acid, reagent grade

HS-No: 2915 90 10 00

Assay	min. 88 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	passes test	Heavy metals (as Pb)	max. 0.0005 %
Insoluble in $C_2H_5OC_2H_5$	passes test	Iron (Fe)	max. 0.0002 %
Aldehydes	passes test	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Nickel (Ni)	max. 0.0005 %
Sulfate (SO_4)	max. 0.002 %	Substances darkened by H_2SO_4	passes test
Arsenic (As)	max. 0.00001 %	Sulfated ash	max. 0.01 %

Code	Capacity
L1020-1-0500	500 g

LANTHANUM (III) CHLORIDE HEPTAHYDRATE

Synonyms: $LaCl_3 \cdot 7H_2O$

- $Cl_3La \cdot 7H_2O$
- M = 371-37 g/mol
- CAS [10025-84-0]
- EC number: 233-237-5

Physical data:
- Form: Solid
- Bulk density: ~ 900 g/cm³
- Solub. in water (20 °C): soluble
- Melting point: 91 °C (release of crystalline water)
- Boiling point: (20 hPa) 122 °C
- pH (100 g/l H_2O, 25 °C) ~ 5

Toxicological data:
- LD 50 (oral, rat): 4184 mg/kg (anhydrous substnace)
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 28

L1030-1 Lanthanum (III) chloride heptahydrate, reagent grade

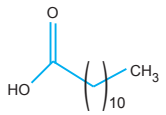
HS-No: 2846 90 00 00

Assay (Gravimetric)	min. 99 %	Iron (Fe)	max. 0.0001 %
Identity	passes test	Lead (Pb)	max. 0.0001 %
Insoluble in water	max. 0.01 %	Magnesium (Mg)	max. 0.0001 %
Sulfates (SO_4)	max. 0.005 %	Potassium (K)	max. 0.001 %
Calcium (Ca)	max. 0.001 %	Sodium (Na)	max. 0.001 %
Copper (Cu)	max. 0.0001 %	Zinc (Zn)	max. 0.0001 %
Heavy metals (as Pb)	max. 0.0005 %		

Code	Capacity
L1030-1-0100	100 g

LAURIC ACID

Synonyms: Dodecanoic acid



- $C_{12}H_{24}O_2$
- M = 200.32 g/mol
- CAS [143-07-7]
- EC number: 205-582-1

Physical data:
- Spec. density: ~ 0.87 g/cm³
- Bulk density: ~ 400 kg/m³
- Solub. in water (20 °C): insoluble
- Melting point: 42 - 45 °C
- Boiling point: (1.3 hPa) 131 °C
- Flash point: > 160 °C
- Vapour pressure: (20 °C) < 0.01 hPa

Toxicological data:
- LD 50 (oral, rat): 12000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 4

L1034-3 Lauric acid, extra pure

HS-No: 2915 90 10 00

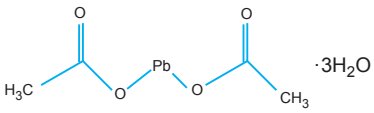
Assay	min. 99 %	Heavy metals (as Pb)	max. 0.001 %
Saponificable compounds	max. 0.5 %	Iron (Fe)	max. 0.0001 %
Iodine Index	ma. 0.5 %	Sulfated ash	max. 0.01 %

Code	Capacity
L1034-3-0500	500 g
L1034-3-1000	1 kg

Line @hanyou262 Tel: 03721545-6

LEAD (II) ACETATE TRIHYDRATE

Synonyms:



- $Pb(CH_3COO)_2 \cdot 3H_2O$
- M = 379.34 g/mol
- CAS [6080-56-4]
- EC number: 206-104-4

Physical data:
- Spec. density: 2.55 g/cm³
- Bulk density: ~ 1200 kg/m³
- Solub. in water (20 °C): 410 g/l
- Melting point: 75 °C
- pH (50 g/l H_2O, 20 °C) 5.5 - 6.5

Toxicological data:
- LD 50 (oral, rat): 4665 mg/kg
- MAK: 0.1 mg/m³
- WGK: 3*

Safety:
- EC Index no.: 082-005-00-8
- R: 61-33-E48/22-50/53-62
- S: 53-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 III UN 1616
- IMDG: 6.1 III UN 1616
- IATA/ICAO: 6.1 III UN 1616
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 15

L2003-3 Lead (II) acetate trihydrate, extra pure

HS-No: 2915 29 00 00

Assay (complexometric)	min. 99.5 %	Silver (Ag)	max. 0.001 %
Insoluble in water	passes test	Zinc (Zn)	max. 0.005 %
Chloride (Cl)	max. 0.002 %	Non precipitable with H_2S (as Sulfate)	max. 0.2 %
Copper (Cu)	max. 0.001 %		
Iron (Fe)	max. 0.001 %		

Code	Capacity
L2003-3-0500	500 g

L

LEAD (II) BROMIDE

Synonyms:

- $PbBr_2$
- M = 367.01 g/mol
- CAS [10031-22-8]
- EC number: 233-084-4

Physical data:
- Solub. in water: 5 g/l (20 °C)
- Melting point: 372 - 374 °C

Toxicological data:
- MAK: 0.1 mg/m³
- WGK: 3*

Safety:
- Toxic for reproduction, harmful, dangerous for the environment
- EC-Index no.: 082-001-00-6
- R: 61-E20/2-33-50/53-62
- S: 53-45-60-61

Transport/storage:
- Packing-cat: G
- Road/Rail 6.1/62 c
- IMDG-Code: 6.1/III UN 2291
- IATA/DGR: 6.1 III UN 2291
- CAO: 619
- PAX: 619
- SAX: 6.1692
- LGK: 6.1 B
- Disposal: 15

L2005-3 Lead (II) Bromide, extra pure

HS-No: 2827 59 00 00

Assay (ex Pb) ..... max. 99 %

Code	Capacity
L2005-3-0500	500 g

LEAD (II) NITRATE

Synonyms:

- $Pb(NO_3)_2$
- M = 331.21 g/mol
- CAS [10099-74-8]
- EC number: 233-245-9

Physical data:
- Spec. density: 4.53 g/cm³
- Bulk density: ~ 1850 kg/m³
- Solub. in water (20 °C): 525 g/l
- Melting point: ~ 470 °C
- pH (50 g/l H_2O, 20 °C) 3 - 4

Toxicological data:
- MAK: 0.1 mg/m³
- WGK: 2

Safety:
- EC Index no.: 082-001-00-6
- R: 61-E20/22-33-50/53-62
- S: 53-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 OT2 II UN 1469
- IMDG: 5.1 II UN 1-69
- IATA/ICAO: 5.1 II -*N 1469
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 15

L2019-1 Lead (II) nitrate, reagent grade

HS-No: 2834 29 20 00

Assay (complexometric)	min. 99.5 %	Magnesium (Mg)	max. 0.005 %
Insoluble substances	max. 0.005 %	Potassium (K)	max. 0.005 %
Chloride (Cl)	max. 0.0005 %	Sodium (Na)	max. 0.005 %
Calcium (Ca)	max. 0.005 %	Non precipitable with H_2S (as sulfate)	max. 0.01 %
Copper (Cu)	max. 0.0005 %		
Iron (Fe)	max. 0.0005 %		

Code	Capacity
L2019-1-0500	500 g

LEAD (II) OXIDE

Synonyms: Litharge

- PbO
- M = 223.19 g/mol
- CAS [1317-36-8]
- EC number: 215-267-0

Physical data:
- Spec. density: 9.6 g/cm³
- Bulk density: ~ 3500 - 3700 kg/m³
- Solub. in water (20 °C): 0.017 g/l
- Melting point: 890 °C
- Boiling point: 1470 °C
- pH (100 g/l H_2O, 20 °C) 8 - 9

Toxicological data:
- LD 50 (oral, rat): > 10000 mg/kg
- MAK: 0.1 mg/m³
- WGK: 1

Safety:
- EC Index no.: 082-001-00-6
- R: 61-E20/22-33-50/53-62
- S: 53-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 III UN 2291
- IMDG: 6.1 III UN 2291
- IATA/ICAO: 6.1 III UN 2291
- PAX: 619
- CAO: 619
- LGK: 6.1B
- Disposal: 15

Line @thanyarat2562 Tel 02 372 1843-6

L2022-3 Lead (II) oxide, extra pure

HS-No: 2824 10 00 00

Code	Capacity
L2022-3-0500	500 g

Assay (complexometric)	min. 99 %
Insoluble in dil. acetic acid	max. 0.05 %
Soluble in water	max. 0.02 %
Chloride (Cl)	max. 0.005 %
Nitrates (NO_3)	max. 0.01 %
Copper (Cu)	max. 0.002 %
Iron (Fe)	max. 0.002 %
Silver (Ag)	max. 0.005 %
Loss on calcinations (700 °C)	max. 0.2 %

LEAD (IV) OXIDE

Synonyms: Lead dioxide, Lead peroxide

- PbO_2
- M = 232.20 g/mol
- CAS [1309-60-8]
- EC number: 215-174-5

Physical data:
- Spec. density: 9.4 g/cm³
- Bulk density: ~ 1500 kg/m³
- Solub. in water (20 °C): almost insoluble
- Melting point: 290 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) 6 - 7

Toxicological data:
- MAK: 0.1 mg/m³
- WGK: 1

Safety:
- EC Index no.: 082-001-00-6
- R: 61-E20/22-33-50/53-62
- S: 53-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 OT2 III UN 1872
- IMDG: 5.1 III UN 1872
- IATA/ICAO: 5.1 III UN 1872
- PAX: 516
- CAO: 518
- LGK: 5.1B
- Disposal: 15

L2030-3 Lead (IV) oxide, extra pure

HS-No: 2824 90 00 00

Code	Capacity
L2030-3-0500	500 g

Assay (bromometric)	min. 97 %
Insoluble in acid	max. 0.05 %
Chloride (Cl)	max. 0.003 %
Sulfates (SO_4)	max. 0.003 %
Carbon (C)	max. 0.005 %
Total N	max. 0.005 %
Copper (Cu)	max. 0.001 %
Iron (Fe)	max. 0.02 %
Manganese (Mn)	max. 0.0002 %
Non precipitable with H_2S (as SO_4)	max. 0.5 %

LEAD (II) SULFATE

Synonyms:

- $PbSO_4$
- M = 303.25 g/mol
- CAS [7446-14-2]
- EC number: 231-198-9

Physical data:
- Spec. density: 6.2 g/cm³
- Solub. in water (20 °C): 0.045 g/l
- Melting point: 1170 °C

Safety:
- EC Index no.: 082-001-00-6
- R: 61-E20/22-33-50/53-62
- S: 53-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C2 II UN 1794
- IMDG: 8 C2 II UN 1794
- IATA/ICAO: 8 II UN 1794
- PAX: 619
- CAO: 619

L2032-3 Lead (II) sulfate, extra pure

HS-No: 2836 91 00 90

Code	Capacity
L2032-3-0500	500 g

Assay (complexometric)	min. 98 %
Insoluble in CH_3COONH_4	max. 0.1 %
Chloride (Cl)	max. 0.005 %
Iron (Fe)	max. 0.005 %

LITHIUM CARBONATE

Synonyms: Li_2CO_3

- $LiCO_3$
- M = 73.89 g/mol
- CAS [554-13-2]
- EC number: 209-062-5

Physical data:
- Form: Solid
- Spec. density: ~ 2.1 g/cm³
- Bulk. density: ~ 250 kg/m³
- Solub. in water (20 °C): 13 g/l
- Melting point: 720 °C
- pH (5 g/l H_2O, 20 °C) ~ 10 - 11

Toxicological data:
- LD 50 (oral, rat): 525 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- R: 22-36
- S: 24-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

L3000-1 Lithium carbonate, reagent grade

HS-No: 2836 91 00 90

Code	Capacity
L3000-1-0500	500 g

Assay	min. 97.0 %
Chloride (Cl)	max. 0.005 %
Sulfate (SO_4)	max. 0.1 %
Nitrate (NO_3)	max. 0.005 %
Phosphate (PO_4)	max. 0.003 %
Barium (Ba)	max. 0.01 %
Iron (Fe)	max. 0.007 %
Sodium (Na)	max. 0.3 %
Potassium (K)	max. 0.2 %
Heavy metals (as Pb)	max. 0.002 %

LITHIUM CHLORIDE MONOHYDRATE

Synonyms:

- $LiCl \cdot H_2O$
- M = 60.41 g/mol
- CAS [16712-20-2]
- EC number: 231-212-3

Physical data:
- Spec. density: 2.07 g/cm³
- Bulk. density: ~ 530 kg/m³
- Solub. in water (20 °C): 832 g/l
- Melting point: 614 °C
- Vapour pressure: (547 °C) 1.33 hPa
- pH (50 g/l H_2O, 20 °C) ~ 6

Toxicological data:
- LD 50 (oral, rat): 526 mg/kg
- WGK: 1

Safety:
- R: 22-36/38
- S: 46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

Line @thankyou2562 Tel. 02372 1845 - 6

L3018-1 Lithium chloride monohydrate, reagent grade

HS-No: 2827 39 80 90

Assay	min. 97.0 %	Sodium (Na)	max. 0.03 %
pH (50 g/l, 25 °C)	4.5 - 7.5	Magnesium (Mg)	max. 0.002 %
Appearance of solution	passes test	Potassium (K)	max. 0.03 %
Insolubility matter in water	max. 0.005 %	Calcium (Ca)	max. 0.005 %
Sulfates (SO_4)	max. 0.01 %	Iron (Fe)	max. 0.001 %
Nitrate (NO_3)	max. 0.002 %	Barium (Be)	max. 0.005 %
Ammonium (NH_4)	max. 0.002 %	Heavy metals (as Pb)	max. 0.001 %
Phosphate (PO_4)	max. 0.001 %		

Code	Capacity
L3018-1-0500	500 g

L3018-3 Lithium chloride monohydrate, extra pure

HS-No: 2827 39 80 90

Assay (argentometric)	min. 98 %	Copper (Cu)	max. 0.002 %
Insoluble in water	max. 0.05 %	Iron (Fe)	max. 0.001 %
Nitrogen compounds (as N)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Phosphates (PO_4)	max. 0.003 %	Nickel (Ni)	max. 0.002 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.01 %
Heavy metals (as Pb)	max. 0.001 %	Sodium (Na)	max. 0.02 %
Calcium (Ca)	max. 0.01 %		

Code	Capacity
L3018-3-1000	1 kg

LITHIUM HYDROXIDE MONOHYDRATE

L

Synonyms:

- $LiOH \cdot H_2O$
- M = 41.96 g/mol
- CAS [1310-66-3]
- EC number: 215-183-4

Physical data:
- Spec. density: 1.51 g/cm³
- Bulk density: ~ 650 kg/m³
- Solub. in water (20 °C): 124 g/l

- Melting point: 462 °C
- pH (50 g/l H_2O, 20 °C) ~ 12

Toxicological data:
- WGK: 1

Safety:
- R: 35
- S: 26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C6 II UN 2680
- IMDG: 8 II UN 2680
- IATA/ICAO: 8 II UN 2680
- PAX: 814
- CAO: 816
- LGK: 8 B
- Disposal: 13

L3023-1 Lithium hydroxide monohydrate, reagent grade

HS-No: 2825 20 00 00

Assay (acidimetric)	min. 98 %	Calcium (Ca)	max. 0.005 %
Assay of Li_2CO_3	max. 1 %	Heavy metals (as Pb)	max. 0.001 %
Insoluble in acid	max. 0.01 %	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.005 %	Potassium (K)	max. 0.01 %
Sulfates (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.01 %

Code	Capacity
L3023-1-0500	500 g

LITHIUM NITRATE

Synonyms:

- $LiNO_3$
- M = 68.95 g/mol
- CAS [7790-69-4]
- EC number: 232-218-9

Physical data:
- Form: Solid
- Spec. density: ~ 2.36 g/cm³
- Bulk density: ~ 910 kg/m³
- Solub. in water (20 °C): 13 g/l

- Melting point: 255 °C
- pH (50 g/l H_2O, 20 °C) ~ 7 - 9

Toxicological data:
- WGK: 1

Safety:
- R: 8
- S: 24/25
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 III UN 2722
- IMDG: 5.1 III UN 2722
- IATA/ICAO: 5.1 III UN 2722
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 14

L3050-1 Lithium nitrate, reagent grade

HS-No: 2836 29 80 00

Appearance of solution	passes test	Sodium (Na)	max. 0.1 %
Insolubility matter in water	max. 0.1 %	Magnesium (Mg)	max. 0.01 %
Loss on drying	max. 3.0 %	Potassium (K)	max. 0.1 %
Acid and alkali test	passes test	Calcium (Ca)	max. 0.03 %
Chloride (Cl)	max. 0.002 %	Iron (Fe)	max. 0.002 %
Sulfate (SO_4)	max. 0.052 %	Barium (Ba)	max. 0.01 %
Phosphate (PO_4)	max. 0.001 %	Heavy metals (as Pb)	max. 0.001 %
Ammonium (NH_4)	max. 0.003 %		

Code	Capacity
L3050-1-0500	500 g

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Chemical list : M

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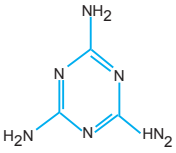
MELAMINE

Synonyms: 2,4,4-Triamino-1,3,5-triazine



- $C_3H_6N_6$
- M = 126.12 g/mol
- CAS [108-78-1]
- EC number: 203-615-4

Physical data:
- Form: Powder, finecrystaline
- Spec. density: 1.57 g/cm^3
- Bulk density: 800 kg/m^3
- Solub. in water (20 °C): 3.2 g/l
- Melting point: 354 °C (decomposes)
- Flash point: > 280 °C
- Ignition temp.: > 600 g/cm^3
- pH (32 g/l H_2O, 20 °C) 7 - 8

Toxicological data:
- LD 50 (oral, rat): > 3000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 3

M1000-2 Melamine, synthesis grade

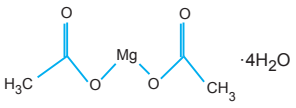
HS-No: 2933 61 00 00

Assay (ex. N)	min. 99 %
Identity (IR-spectrum)	passes test

Code	Capacity
M1000-2-0500	500 g

MAGNESIUM ACETATE TETRAHYDRATE

Synonyms:



- $Mg(CH_3COO)_2 \cdot 4H_2O$
- M = 214.46 g/mol
- CAS [16674-78-5]
- EC number: 205-554-9

Physical data:
- Spec. density: 1.45 g/cm^3
- Bulk density: ~ 510 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 80 °C
- pH (50 g/l H_2O, 50 °C) 6.1

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1001-1 Magnesium acetate tetrahydrate, reagent grade

HS-No: 2915 29 00 90

Assay (complexometric)	99.5 - 102 %	Heavy metals (as Pb)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0001 %
Chloride (Cl)	max. 0.001 %	Manganese (Mn)	max. 0.001 %
Sulfate (SO_4)	max. 0.001 %	Potassium (K)	max. 0.005 %
Total Nitrogen (N)	max. 0.001 %	Sodium (Na)	max. 0.001 %
Barium (Ba)	max. 0.001 %	Strontium (Sr)	max. 0.005 %
Calcium(Ca)	max. 0.001 %	Zinc (Zn)	max. 0.0002 %
Copper (Cu)	max. 0.0005 %		

Code	Capacity
M1001-1-0500	500 g

M1001-3 Magnesium acetate tetrahydrate, extra pure

HS-No: 2915 29 00 90

Assay (complexometric)	min. 99 %	Copper (Cu)	max. 0.001 %
Insoluble in water	max. 0.025 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.005 %	Manganese (Mn)	max. 0.001 %
Sulfate (SO_4)	max. 0.01 %	Potassium (K)	max. 0.01 %
Total Nitrogen (N)	max. 0.005 %	Sodium (Na)	max. 0.01 %
Barium (Ba)	max. 0.001 %	Strontium (Sr)	max. 0.005 %
Calcium(Ca)	max. 0.01 %	Zinc (Zn)	max. 0.001 %

Code	Capacity
M1001-3-0500	500 g

MANGANESE STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Density: ~ 1.01 g/cm$_3$
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 0

Safety:
- R: 36/38
- S: 26-37
- Poison calss CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8 B

M1003-0 Manganese standard solution 1000mg/l for AA
(manganese nitrate in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Composition	1000±5 mg/l

Code	Capacity
M1003-0-0500	500 ml

MERCURY STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- density: ~ 1.05 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 1

Safety:
- R: 20/21/22-33-34
- S: 26-36/37/39-45

Transport/storage:
- ADR: 8 CT1 III UN 2922
- IMDG: 8 III UN 2922
- IATA/ICAO: 8 III UN 2922
- PAX: 818
- CAO: 820
- LGK: 8 B
- Disposal:

Special regulations:
- Restricted chemical

M1005-0 Mercury standard solution 1000 mg/l for AA
(mercury (II) nitrate monohydrate in nitric acid 2 mol/l)

HS-No: 3822 00 00 00

Composition	1000±5 mg/l

Code	Capacity
M1005-0-0500	500 ml

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MAGNESIUM CARBONATE BASIC

Synonyms:

- ~ $4MgCO_3 \cdot Mg(OH)_2 \cdot 5H_2O$
- M = 485 g/mol
- CAS [12125-28-9]
- EC number: 235-192-7

Physical data:
- Form: Solid
- Spec. density: 2.16 g/cm³
- Bulk density: ~ 110 - 180 kg/cm³
- Solub. in water (20 °C): insoluble
- Melting point: 700 °C
- pH (50 g/l H_2O suspension, 20 °C) ~ 10.5

Toxicological:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1010-1 Magnesium carbonate basic, reagent grade

HS-No: 2836 99 11 00

Assay (complexometric, Mg)	min. 24.0 %	Barium and strontium (as Ba)	max. 0.001 %
Substances soluble in water	mx. 0.5 %	Calcium (Ca)	max. 0.001 %
Substances insoluble in hydrochloric acid	max. 0.005 %	Copper (Cu)	max. 0.0005 %
Chloride (Cl)	max. 0.005 %	Iron (Fe)	max. 0.001 %
Sulfate (SO_4)	max. 0.003 %	Potassium (K)	max. 0.001 %
Total nitrogen (N)	max. 0.001 %	Sodium (Na)	max. 0.2 %
Heavy metals (as Pb)	max. 0.001 %	Lead (Pb)	max. 0.001 %
		Zinc (Zn)	max. 0.0005 %

Code	Capacity
M1010-1-0250	250 g

MAGNESIUM CHLORIDE HEXAHYDRATE

Synonyms:

- $MgCl_2 \cdot 6H_2O$
- M = 203.31 g/mol
- CAS [7791-18-6]
- EC number: 232-094-6

Physical data:
- Spec. density: ~1.57 g/cm³
- Solub. in water (20 °C): 1670 g/l
- Melting point: ~ 117 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 5.0 - 6.5

Toxicological:
- LD 50 (oral, rat): 8100 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1014-1 Magnesium chloride hexahydrate, reagent grade

HS-No: 2827 31 00 00

Assay (complexometric)	min. 99.5 %	Calcium (Ca)	max. 0.01 %
Insoluble in water	max. 0.005 %	Potassium (K)	max. 0.005 %
Phosphates (PO_4)	max. 0.0005 %	Sodium (Na)	max. 0.005 %
Nitrate (NO_3)	max. 0.001 %	Strontium (Sr)	max. 0.005 %
Sulfate (SO_4)	max. 0.002 %	Heavy metals (as Pb)	max. 0.0005 %
Ammonium (NH_4)	max. 0.002 %	Iron (Fe)	max. 0.0005 %
Barium (Ba)	max. 0.005 %	Manganese (Mn)	max. 0.0005 %

Code	Capacity
M1014-1-0500	500 g
M1014-1-1000	1 kg

MAGNESIUM HYDROXIDE CARBONATE PENTAHYDRATE

Synonyms: Magnesium carbonate basic

- $4MgCO_3 \cdot Mg(OH)_2 \cdot 5H_2O$
- M = 485 g/mol
- CAS [12125-28-9]
- EC number: 235-192-7

Physical data:
- Spec. density: 2.16 g/cm³
- Bulk density: ~ 110 - 180 kg/cm³
- Solub. in water (20 °C): insoluble
- Melting point: 700 °C
- pH (50 g/l H_2O suspension, 20 °C) ~ 10.5

Toxicological:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1020-3 Magnesium hydroxide carbonate pentahydrate, extra pure

HS-No: 2836 99 11 00

Assay (as MgO)	40 - 45 %
Chloride (Cl)	max. 0.1 %
Insoluble in H_2SO_4	max. 0.1 %
Sulphur compounds (as SO_4)	max. 0.2 %

Code	Capacity
M1020-3-0500	500 g

MAGNESIUM NITRATE HEXAHYDRATE

Synonyns:

- $Mg(NO_3)_2 \cdot 6H_2O$
- M = 256.41 g/mol
- CAS [13446-18-9]
- EC number: 233-826-7

Physical data:
- Spec. density: 1.46 g/cm³
- Solub. in water (20 °C): 1250 g/l
- Melting point: ~ 89 - 95 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 5.0 - 7.0

Toxicological data:
- LD 50 (oral, rat): 5440 mg/kg
- WGK: 0
- R: 8
- S: 24/25

Transport/storage:
- ADR: 5.1 O2 III UN 1474
- IMDG: 5.1 III UN 1474
- IATA/ICAO: 5.1 III UN 1474
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 14

M1021-1 Magnesium nitrate hexahydrate, reagent grade

HS-No: 2834 29 80 00

Assay (complexometric)	min. 99.5 %	Barium, stronium (as Ba)	max. 0.002 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.005 %
pH (5%, H_2O)	5 - 7	Heavy metals (as Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Sulfate (SO_4)	max. 0.002 %	Manganese (Mn)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0005 %	Potassium (K)	max. 0.0005 %
Ammonium (NH_4)	max. 0.001 %	Sodium (Na)	max. 0.0005 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
M1021-1-0500	500 g
M1021-1-1000	1 kg

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MAGNESIUM OXIDE

Synonyns:

- MgO
- M = 40.30 g/mol
- CAS [13009-48-4]
- EC number: 215-171-9

Physical data:
- Spec. density: 3.58 g/cm^3
- Bulk density: ~ 200 kg/cm^3

- Solub. in water (20 °C): insoluble
- Melting point: -2800 °C
- Boiling point: 3600 °C
- pH (saturated solution H_2O, 20 °C) -10

Toxicological:
- MAK: 4mg/m^3
- WGK: 1

Safety:
- S: 22
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1029-3 Magnesium oxide, extra pure

HS-No: 2519 90 10 00

Assay (complexometric)	min. 98 %	Copper (Cu)	max. 0.0005 %
Insoluble in acetic acid	max. 0.1 %	Heavy metals (as Pb)	max. 0.002 %
Soluble in water	max. 1 %	Iron (Fe)	max. 0.05 %
Chloride (Cl)	max. 0.05 %	Lead (Pb)	max. 0.0005 %
Sulphate (SO_4)	max. 0.5 %	Zinc (Zn)	max. 0.0025 %
Arsenic (As)	max. 0.0002 %	Loss on calcinations (900 °C)	max. 5 %
Calcium (Ca)	max. 1 %		

Code	Capacity
M1029-3-0500	500 g

MAGNESIUM

Synonyms:

- Mg
- M = 24.31 g/mol
- CAS [7439-95-4]
- EC number: 231-104-6

Physical data:
- Spec. density: 1.75 g/cm^3
- Solub. in water (20 °C): insoluble
- Melting point: 651 °C
- Boiling point: 1107 °C

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 012-002-0-9
- S: 7/8-43.6
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 4.1 F3 III UN 1869
- IMDG: 4.1 III UN 1869
- PAX: 419
- CAO: 420
- LGK: 4.3
- Disposal: 26

M1032-3 Magnesium powder, extra pure

HS-No: 8104 30 00 00

Assay (complexometric)	min. 99 %
Insoluble in HCl	max. 0.05 %
Iron (Fe)	max. 0.05 %

Code	Capacity
M1032-3-0250	250 g

MAGNESIUM SULFATE ANHYDROUS

Synonyns:

- $MgSO_4$
- M = 120.37 g/mol
- CAS [7487-88-9]
- EC number: 231-298-2

Physical data:
- Spec. density: 2.66 g/cm^3

- Bulk density: ~ 600 kg/cm^3
- Solub. in water (40 °C): 450 g/l
- Melting point: 1124 °C
- pH (50 g/l H_2O, 20 °C) ~ 7.9

Toxicological:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1035-1 Magnesium sulfate anhydrous, reagent grade

HS-No: 2833 21 00 00

Assay (complexometric)	min. 98 %	Sodium chloride (NaCl)	max. 0.1 %
Calcium sulfate ($CaSO_4$)	max. 0.5 %	Iron (Fe)	max. 0.01 %
Potassium chloride (KCl)	max. 0.1 %	Manganese (Mn)	max. 0.11 %
Potassium sulfate (K_2SO_4)	max. 0.6 %	Loss on drying (600 °C)	max. 1 %

Code	Capacity
M1035-1-0500	500 g

MAGNESIUM SULFATE HEPTAHYDRATE

Synonyms: Bitter salt, Epsom salt, Sulfuric acid magnesium salt heptahydrate

- $MgSO_4 \cdot 7H_2O$
- M = 246.48 g/mol
- CAS [10034-99-8]
- EC number: 231-298-2

Physical data:
- Spec. density: 1.68 g/cm^3
- Bulk density: ~900 kg/cm^3

- Bulk density: ~900 kg/cm^3
- Solub. in water (20 °C): 710 g/l
- pH (50 g/l H_2O, 20 °C) 5.0 - 8.2

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

Transport/storage:
- LGK: 10-13
- Disposal: 14

M1045-1 Magnesium nitrate heptahydrate, reagent grade

HS-No: 2833 21 00 00

Assay (complexometric)	min. 99.5 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	5 - 8	Iron (Fe)	max. 0.0001 %
Chloride (Cl)	max. 0.0003 %	Lead (Pb)	max. 0.0001%
Total N	max. 0.002 %	Manganese (Mn)	max. 0.0005 %
Calcium (Ca)	max. 0.005 %	Potassium (K)	max. 0.001 %
Copper (Cu)	max. 0.0001 %	Sodium (Na)	max. 0.001 %

Code	Capacity
M1045-1-0500	500 g
M1045-1-1000	1 kg

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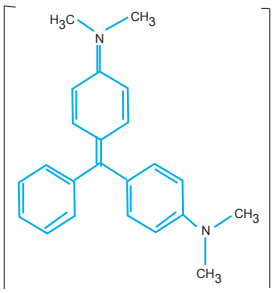
MALACHITE GREEN OXALATE, C.I. 42000

Synonyms: Diamond green B



- $C_{50}H_{52}O_8N_4 \cdot H_2C_2O_4$
- M = 927.02 g/mol
- CAS [2437-29-8]
- EC number: 219-441-7

Physical data:
- Form: Solid
- Bulk density: ~ 400 - 500 kg/m³
- Solub. in water (24 °C): insoluble
- Melting point: ~ 159 °C
- Boiling point: 3600 °C
- pH (10 g/l H_2O, 24 °C) 2.4

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 607-007-0-3
- R: 21/22
- S: 24/25-37-46
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T2 III UN 2811
- IMDG: 6.1 III UN 2811
- IATA/ICAO: 6.1 III UN 2811
- PAX:619
- CAO: 619
- LGK: 10-13

M1050-1 Malachite green oxalate, C.I. 42000, reagent and microscopy grade *HS-No: 3204 13 00 00*

Identity	passes test	TLC test	passes test
Absorption maximum λ (water)	616 - 620 nm	Loss on drying (110 °C)	max. 7 %
Absorptivity (A1%/1 cm; λ max, 0.003 g/l, water)	1730 - 1960		

Code	Capacity
M1050-1-0101	100 g

MALACHITE GREEN

Synonyms:

- $C_{23}H_{25}ClN_2$
- M = 929.02 g/mol
- CAS [2437-29-8]

M1050-3 Malachite green, extra pure

Identification test	passes test	Loss on drying	max. 3.5 %
Sensitivity test to tungsten	passes test	Residue after ignition (as sulfate)	max. 2.0 %

Code	Capacity
M1050-3-0500	500 g

MANGANESE (II) ACETATE TETRAHYDRATE

Synonyms:

- $Mn(C_2H_3O_2)_2 \cdot 4H_2O$
- M = 245.09 g/mol
- CAS [6156-78-1]
- EC number: 211-334-3

Physical data:
- Spec. density: 1.59 g/cm³

Safety:
- R: 36/37/38
- S: 26-36

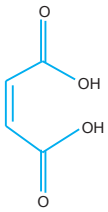
M1052-1 Manganese (II) acetate tetrahydrate, reagent grade

Assay	min. 99.0 %	Iron (Fe)	max. 0.001 %
Appearance of solution	passes test	Zinc (Zn)	max. 0.02 %
Insolubility matter in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.002 %
Chloride (Cl)	max. 0.005 %	Substance not precipitated by ammonium sulfide (as sulfate)	max. 0.2 %
Sulfate (SO_4)	max. 0.005 %		

Code	Capacity
M1052-1-0500	500 g

MALEIC ACID

Synonyms: cis-Butenedioic acid



- $C_4H_4O_4$
- M = 116.07 g/mol
- CAS [110-16-7]
- EC number: 203-742-5

Physical data:
- Spec. density: 1.59 g/cm³
- Bulk density: 750 - 800 kg/m³
- Solub. in water (25 °C): 788 g/l
- Melting point: 133 °C
- Boiling point: 135 °C (decomposes)
- Flash point: 127 °C
- Vapour pressure: (20 °C) < 0.1 hPa

Toxicological data:
- LD 50 (oral, rat): 708 mg/kg
- WGK: 1

Safety:
- EC Index no.: 607-095-00-3
- R: 22-36/37/38
- S: 26-28.1-37-46
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C4 III UN 3261
- IMDG: 8 III UN 3261
- IATA/ICAO: 8 III UN 3261
- PAX: 822
- CAO: 823
- LGK: 8
- Disposal: 4

M1061-3 Maleic acid, extra pure *HS-No: 2917 19 90 90*

Assay (acidimetric, refered to anhydrous substance)	min. 99 %	Iron (Fe)	max. 0.0005 %
Appearance of solution 10% in H_2O	clear and colourless	Sulfated ash	max. 0.1 %
Fumaric acid (TCL)	max. 1.5 %	Water	max. 2 %
Heavy metals (as Pb)	max. 0.001 %	Residual solvents (Ph/Eur/ICH)	excluded by production process

Code	Capacity
M1061-3-0500	500 g

MANGANESE (II) CHLORIDE TETRAHYDRATE

Synonyms:

- $MnCl_2 \cdot 4H_2O$
- M = 197.91 g/mol
- CAS [13446-.4-9]
- EC number: 231-869-6

Physical data:
- Spec. density: 2.01 g/cm³
- Bulk density: ~ 1150 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 58 °C
- pH (50 g/l H_2O, 20 °C) ~ 4 - 6

Toxicological data:
- LD 50 (oral, rat): 1484 mg/kg
- WGK: 1

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 15

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M1067-1 Manganese (II) chloride tetrahydrate, reagent grade

HS-No: 2827 39 80 90

Assay	min. 99 %	Barium (Ba)	max. 0.005 %
Insolubility matter in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
sulfates (SO_4)	max. 0.005 %	Alkali metals and alkali earth metals (as sulfate)	max. 0.2 %
Iron (Fe)	max. 0.0002 %	Oxidizing and reducing substances	passes test
Zinc (Zn)	max. 0.02 %		

Code	Capacity
M1067-1-0500	500 g

M1067-3 Manganese (II) chloride tetrahydrate, extra pure

HS-No: 2827 39 80 90

Assay (complexometric)	min. 99 %	Iron (Fe)	max. 0.001 %
pH (5%, H_2O)	4 - 6	Lead (Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %	Nickel (Ni)	max. 0.005 %
Calcium (Ca)	max. 0.01 %	Zicn (Zn)	max. 0.005 %
Heavy metals (as Pb)	max. 0.002 %		

Code	Capacity
M1067-3-0500	500 g

MANGANESE (II) SULFATE MONOHYDRATE

Synonyms:

- $MnSO_4 \cdot H_2O$
- M = 169.02 g/mol
- CAS [10034-96-5]
- EC number: 232-089-9

Physical data:
- Spec. density: 2.95 g/cm^3
- Bulk density: ~ 1000 - 1200 kg/m^3
- Solub. in water (20 °C): 762 g/l
- Melting point: 117 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 3.0 - 3.5

Toxicological data:
- MAK: 0.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 025-003-00-4
- R: 48/20/22-51/53
- S: 22-46-61
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 15

M1070-1 Manganese (II) sulfate monohydrate, reagent grade

HS-No: 2833 29 90 00

Assay (complexometric)	min. 99 %	Magnesium (Mg)	max. 0.005 %
Insoluble in water	max. 0.01 %	Nickel (Ni)	max. 0.0005 %
Chloride (Cl)	max. 0.001 %	Potassium (K)	max. 0.005 %
Calcium (Ca)	max. 0.005 %	Sodium (Na)	max. 0.005 %
Copper (Cu)	max. 0.0002 %	Zinc (Zn)	max. 0.001 %
Iron (Fe)	max. 0.0005 %	$KMnO_4$ red matter (as O)	max. 0.0005 %
Lead (Pb)	max. 0.0002 %	Loss on calcinations (500 °C)	10 - 12 %

Code	Capacity
M1070-1-0500	500 g

MANGANESE (IV) OXIDE

Synonyms: Manganese dioxide, Pyrolusite, Black manganese oxide, Manganese superoxide

- MnO_2
- M = 86.94 g/mol
- CAS [1313-13-9]
- EC number: 215-202-6

Physical data:
- Spec. density: 5.03 g/cm^3
- Bulk density: ~ 1000 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 535 °C (decomposes)
- pH (200 g/l H_2O, 20 °C) 4.0 - 5.5

Toxicological data:
- MAK: 0.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 025-001-00-3
- R: 20/22
- S: 25-46
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 5.1 O2 II UN 1479
- IMDG: 5.1 II UN 1479
- IATA/ICAO: 5.1 II UN 1479
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 15

M1080-3 Manganese (IV) oxide 95% precipitate, extra pure

HS-No: 2820 10 00 00

Assay (permanganometric)	approx. 95 %
Silicium dioxide (SiO_2)	max. 3 %
Iron (Fe)	max. 1 %
Loss on drying (105 °C)	max. 1 %

Code	Capacity
M1080-3-0500	500 g

MERCURY

Synonyms:

- Hg
- M = 200.59 g/mol
- CAS [7439-97-6]
- EC number: 231-106-7

Physical data:
- Density: 13.55 g/cm^3
- Solub. in water (20 °C): 0.0036 g/l
- Melting point: -39 °C
- Boiling point: 357 °C
- Vapour pressure: (20 °C) 0.0017 hPa
- pH ~7

Toxicological data:
- MAK: 0.1 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 080-001-00-0
- R: 23-33-50/53
- S: 7-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C9 III UN 2809
- IMDG: 8 III UN 2809
- IATA/ICAO: 8 III UN 2809
- PAX: 803
- CAO: 803
- LGK: 6.1 B
- Disposal: 20

M1092-3 Mercury, extra pure

HS-No: 2805 40 90 00

Assay	min. 99.6 %	Iron (Fe)	max. 0.0005 %
Insoluble in HNO_3	max. 0.002 %	Loss on drying	max. 0.003 %
Heavy metals (as Pb)	max. 0.0005 %		

Code	Capacity
M1092-3-1000	1 kg

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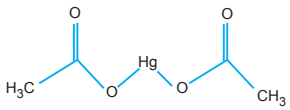
MERCURY (II) ACETATE

Synonyms: Acetic acid mercury (II) salt, Mercuric salts



- $Hg(CH_3COO)_2$
- M = 318.68 g/mol
- CAS [1600-27-7]
- EC number: 216-491-1

Physical data:
- Spec. density: 3.27 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (20 °C): 400 g/l
- Melting point: 178 - 180 °C

Toxicological data:
- LD 50 (oral, rat): 40.9 mg/kg
- WGK: 3

Safety:
- EC Index no.: 080-002-00-6
- R: 26/27/28-33-50/53
- S: 13-28.1-36/37-45-60-61

Transport/storage:
- ADR: 6.1 T5 II UN 1629
- IMDG: 6.1 II UN 1629
- IATA/ICAO: 6.1 II UN 1629
- PAX: 613
- CAO: 615
- LGK: 6.1 B
- Disposal: 20

M2010-1 Mercury (II) acetate, reagent grade

HS-No: 2915 29 00 90

Assay (complexometric)	min. 99 %
Insoluble in dil. acetic acid	max. 0.01 %
Chlorides (Cl)	max. 0.005 %
Nitrates (NO_3)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %
Heavy metals (as Pb)	max. 0.002 %
Iron (Fe)	max. 0.001 %
Mercury (I) (as Hg)	max. 0.3 %
Sulfated ash after reduction	max. 0.02 %

Code	Capacity
M2010-1-0101	100 g
M2010-1-0250	250 g

MERCURY (II) CHLORIDE

Synonyms:

- $HgCl_2$
- M = 271.50 g/mol
- CAS [7487-94-7]
- EC number: 231-299-8

Physical data:
- Spec. density: 5.44 g/cm³
- Bulk density: ~ 200 kg/m³
- Solub. in water (20 °C): 74 g/l
- Melting point: 280.7 °C
- Boiling point: 302 °C
- Vapour pressure: (20 °C) 0.0001 hPa
- pH (15 g/l H_2O, 20 °C) 3.2

Toxicological data:
- LD 50 (oral, rat): 1 mg/kg
- MAK: 0.1 mg/m³
- WGK: 3

Safety:
- EC Index no.: 080-010-00-X
- R: 28-34-48/24/25-50/53
- S: 36/37/39-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 II UN 1624
- IMDG: 6.1 II UN 1624
- IATA/ICAO: 6.1 II UN 1624
- PAX: 613
- CAO: 615
- LGK: 6.1 B
- Disposal: 20

M2016-1 Mercury (II) chloride, reagent grade

HS-No: 2827 39 80 90

Assay (complexometric)	min. 99 %
Insoluble in ether	passes test
Insoluble in water	max. 0.01 %
Nitrates (NO_3)	max. 0.001 %
Sulfates (SO_4)	max. 0.02 %
Total N	max. 0.002 %
Calcium (Ca)	max. 0.001 %
Cadmium (Cd)	max. 0.0005 %
Copper (Cu)	max. 0.0005 %
Heavy metals (as Pb)	max. 0.001 %
Iron (Fe)	max. 0.0005 %
Lead (Pb)	max. 0.0005 %
Magnesium (Mg)	max. 0.001 %
Mercury (I) chloride (Hg_2Cl_2)	max. 0.05 %
Nickel (Ni)	max. 0.0005 %
Potassium (K)	max. 0.005 %
Silver (Ag)	max. 0.0005 %
Sodium (Na)	max. 0.005 %
Zinc (Zn)	max. 0.0005 %
Not red. matter with HCOOH (calcination residue, as sulfate)	max. 0.01 %
$KMnO_4$ red. matter (as O)	max. 0.001 %
Loss on drying (on P_2O_4)	max. 1 %

Code	Capacity
M2016-1-0101	100 g
M2016-1-0250	250 g
M2016-1-1000	1 kg

MERCURY (II) IODIDE

Synonyms:

- HgI_2
- M = 454.40 g/mol
- CAS [7774-29-0]
- EC number: 231-873-8

Physical data:
- Spec. density: (25 °C) 6.36 g/cm³
- Bulk density: ~ 1350 kg/m³
- Solub. in water (25 °C): 0.06 g/l
- Melting point: 259 °C
- Boiling point: 354 °C
- Vapour pressure: (60 °C) ~ 0.001 hPa
- pH (50 g/l H_2O, 20 °C) 6 - 7

Toxicological data:
- LD 50 (oral, rat): 18 mg/kg
- MAK: 0.1 mg/m³
- WGK: 3

Safety:
- EC Index no.: 080-002-00-6
- R: 26/27/28-33-50/53
- S: 13-28.1-36/37-45-60-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 II UN 1638
- IMDG: 6.1 II UN 1638
- IATA/ICAO: 6.1 II UN 1638
- PAX: 613
- CAO: 615
- LGK: 6.1 B
- Disposal: 20

M2023-1 Mercury (II) iodide, reagent grade

HS-No: 2827 60 00 90

Assay (argentometric)	min. 99 %
Insoluble in a solution of KI	passes test
Insoluble mercury salts (as Hg)	max. 0.05 %
Iron (Fe)	max. 0.001 %
Mercury (I) (as Hg)	max. 0.1 %
Other heavy metals (as Pb)	max. 0.001 %
Not red. Matter with HCOOH (calcination residue, as sulfate)	max. 0.02 %

Code	Capacity
M2023-1-0250	250 g
M2023-1-0500	500 g

Line Othant Vous Pro Tel. : 23721545 6

MERCURY (II) NITRATE MONOHYDRATE

Synonyms: Mercury nitrate, Mercury pernitrate

- $Hg(NO_3)_2 \cdot H_2O$
- M = 342.62 g/mol
- CAS [7783-34-8]
- EC number: 233-152-3

Toxicological data:
- MAK: 0.1 mg/m^3

Safety:
- EC Index no.: 080-002-00-6
- R: 26/27/28-33-50/53
- S: 13-28.1-45-60-61

Special regulations:
- Restricted chemical

M2025-1 Mercury (II) nitrate monohydrate, reagent grade

HS-No: 2834 29 30 00

Assay (complexometric)	min. 99 %	Potassium (K)	max. 0.005 %
Chloride (Cl)	max. 0.002 %	Sodium (Na)	max. 0.005 %
Sulphate (SO_4)	max. 0.002 %	Mecury (I) (as Hg)	max. 0.2 %
Copper (Cu)	max. 0.0005 %	Residue after reduction	max. 0.01 %
Iron (Fe)	max. 0.001 %		

Code	Capacity
M2025-1-0100	100 g
M2025-1-0500	500 g

MERCURY (II) SULFATE

Synonyms: Mercury bisulfate

- $HgSO_4$
- M = 296.65 g/mol
- CAS [7783-35-9]
- EC number: 231-992-5

Physical data:
- Spec. density: ~6.47 g/cm^3
- Bulk density: ~6700 kg/m^3
- Solub. in water (20 °C): hydrolysis reaction
- Ignition temp.: > 450 °C
- pH (50 g/l H_2O, 20 °C) ~ 1

Toxicological data:
- LD 50 (oral, rat): 57 mg/kg
- MAK: 0.1 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 080-002-00-6
- R: 26/27/28-33-50/53
- S: 13-28.1-36/37-45-60-61

Transport/storage:
- ADR: 6.1 T5 II UN 1645
- IMDG: 6.1 II UN 1645
- IATA/ICAO: 6.1 II UN 1645
- PAX: 613
- CAO: 615
- LGK: 6.1 B
- Disposal: 20

M2038-1 Mercury (II) sulfate, reagent grade

HS-No: 2833 29 70 00

Assay (complexometric)	min. 99 %	Magnesium (Mg)	max. 0.003 %
Chloride (Cl)	max. 0.003 %	Nickel (Ni)	max. 0.001 %
Nitrates (NO_3)	max. 0.005 %	Potassium (K)	max. 0.002 %
Cadmium (Cd)	max. 0.0001 %	Zinc (Zn)	max. 0.001 %
Calcium (Ca)	max. 0.003 %	Sulfated ash after reduction	max. 0.02 %
Copper (Cu)	max. 0.0005 %	Mercury (I) (as Hg)	max. 0.05 %
Iron (Fe)	max. 0.001 %	Suitability for COD	passes test
Lead (Pb)	max. 0.0005 %		

Code	Capacity
M2038-1-0250	250 g

Methyl t-Butyl Ether

Synonyms: Mercury bisulfate

- Formula: $(CH_3)_3COCH_3$
- F.W.: 88.14
- CAS: 1634-04-4

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.35
- Polarity Index (P'): 2.5
- Viscosity (cP, 25 °C): 0.28
- Density (g/ml, 25 °C): 0.740
- Boilling point (°C): 55
- Solubility of water (%, 20 °C): 1.5
- Refractive index (25 °C): 1.366

M2060-4 Methyl t-Butyl Ether, Pesticide Grade

HS-No: 2905 14 10

See specification in Solvents Specification - 44

Code	Capacity
M2060-4-1001	1.0 L
M2060-4-4001	4.0 L

M2060-11 Methyl t-Butyl Ether, Pesticide Grade

HS-No: 2905 14 10

See specification in Solvents Specification - 24

Code	Capacity
M2060-11-1001	1.0 L
M2060-11-4001	4.0 L

M2060-12 Methyl t-Butyl Ether, Ultimate Grade

HS-No: 2905 14 10

See specification in Solvents Specification - 57

Code	Capacity
M2060-12-1001	1.0 L
M2060-12-4001	4.0 L

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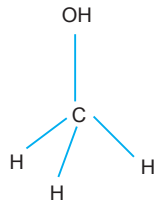
METHANOL

Synonyms: Methyl alcohol, Carbinol, Methynol, Wood alcohol



- CH_3OH
- M = 32.04 g/mol
- CAS [67-56-1]
- EC number: 200-659-6

Physical data:
- Density: 0.79 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -98 °C
- Boiling point: 64.5 °C
- Flash point: 11 °C
- Ignition temp.: 455 °C
- Vapour pressure: (20 °C) 128 hPa
- Refraction index: (n 20 °C/D) 1.3288
- Viscosity: (20 °C) 0.52 mPas
- Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const.: (25 °C) 32.6
- Evap. heat: (65 °C) 1100 kJ/kg
- Saturation conc.: (20 °C) 166 g/m^3
- Expl. limit (upper): 44 Vol%
- Expl. limit (lower): < 5.5 Vol%

Toxicological data:
- LD 50 (oral, rat): 5628 mg/kg
- MAK: 200 ml/m3, 270 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-001-00-X
- R: 11-23/24/25-39/23/24/25
- S: 7-16-36/37/45
- VbF class: B
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 3 FT1 II UN 1230
- IMDG: 3 II UN 1230
- IATA/ICAO: 3 II UN 1230
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

M2064-1 Methanol anhydrous, reagent grade

HS-No: 2905 11 00 00

Assay (G.C)	min. 99.9 %	Iron (Fe)	max. 0.0001 %
Free acid (as HCOOH)	max. 0.002 %	Acetone (G.C)	max. 0.001 %
Chloride (Cl)	max. 0.0001 %	Substances darkened by H_2SO_4	passes test
Sulfates (SO_4)	max. 0.0005 %	Non-volatile matter	max. 0.0005 %
Heavy metals (as Pb)	max. 0.0002 %	Water	max. 0.003 %

Code	Capacity
M2064-1-2501	2.5 L

M2097-1 Methanol, reagent grade

HS-No: 2905 11 00 00

Assay (GC)	min. 99.8 %	Lithium (Li)	max. 0.02 ppm
Free Acid (as Methanoic acid)	max. 20 ppm	Magnesium (Mg)	max. 0.1 ppm
Free Alkali (as Ammonia)	max. 1.0 ppm	Manganese (Mn)	max. 0.02 ppm
Spec. resistance	min. 0.5 MW cm	Molybdenum (Mo)	max. 0.05 ppm
Heavy metals (as Pb)	max. 0.2 ppm	Sodium (Na)	max. 0.5 ppm
Silver (Ag)	max. 0.02 ppm	Nickel (Ni)	max. 0.02 ppm
Aluminium (Al)	max. 0.2 ppm	Lead (Pb)	max. 0.05 ppm
Arsenic (As)	max. 0.01 ppm	Platinum (Pt)	max. 0.2 ppm
Gold (Au)	max. 0.1 ppm	Antimony (Sb)	max. 0.01 ppm
Boron (B)	max. 0.01 ppm	Tin (Sn)	max. 0.1 ppm
Barium (Ba)	max. 0.1 ppm	Strontium (Sr)	max. 0.02 ppm
Beryllium (Be)	max. 0.02 ppm	Titanium (Ti)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Thallium (Tl)	max. 0.05 ppm
Calcium (Ca)	max. 0.5 ppm	Vanadium (V)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Zinc (Zn)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Zirconium (Zr)	max. 0.2 ppm
Chromium (Cr)	max. 0.02 ppm	Aldehydes and Ketones	
Copper (Cu)	max. 0.02 ppm	(as Formaldehyde)	max. 10.0 ppm
Iron (Fe)	max. 0.1 ppm	Substances reducing $KMnO_4$ (as O)	max. 2.5 ppm
Gallium (Ga)	max. 0.02 ppm	Substances discoloured by H_2SO_4	corresponds
Indium (In)	max. 0.02 ppm	Non-volatile matter	max. 5.0 ppm
Potassium (K)	max. 0.1 ppm	Water	max. 500 ppm

Code	Capacity
M2097-1-1000	1.0 L
M2097-1-2500	2.5 L
M2097-1-2501	2.5 L
M2097-1-4000	4.0 L

M2097-4 Methanol, HPLC grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 43

Code	Capacity
M2097-4-1001	1.0 L
M2097-4-2501	2.5 L
M2097-4-4001	4.0 L

M2097-6 Methanol, EC-10

HS-No: 2905 11 00 00

Assay (GC)	min. 99.8 %	Potassium (K)	max. 0.02 ppm
Free Acid (as Methanoic acid)	max. 20 ppm	Lithium (Li)	max. 0.01 ppm
Free Alkali (as Ammonia)	max. 1.0 ppm	Magnesium (Mg)	max. 0.02 ppm
Spec. resistance	min. 0.5 MΩ·cm	Manganese (Mn)	max. 0.01 ppm
Heavy metals (as Pb)	max. 0.1 ppm	Molybdenum (Mo)	max. 0.01 ppm
Silver (Ag)	max. 0.01 ppm	Sodium (Na)	max. 0.1 ppm
Aluminium (Al)	max. 0.05 ppm	Nickel (Ni)	max. 0.01 ppm
Arsenic (As)	max. 0.01 ppm	Lead (Pb)	max. 0.01 ppm
Gold (Au)	max. 0.02 ppm	Platinum (Pt)	max. 0.05 ppm
Boron (B)	max. 0.01 ppm	Antimony (Sb)	max. 0.01 ppm
Barium (Ba)	max. 0.02 ppm	Tin (Sn)	max. 0.02 ppm
Beryllium (Be)	max. 0.01 ppm	Strontium (Sr)	max. 0.01 ppm
Bismuth (Bi)	max. 0.02 ppm	Titanium (Ti)	max. 0.02 ppm
Calcium (Ca)	max. 0.1 ppm	Thallium (Tl)	max. 0.01 ppm
Cadmium (Cd)	max. 0.01 ppm	Vanadium (V)	max. 0.01 ppm
Cobalt (Co)	max. 0.01 ppm	Zinc (Zn)	max. 0.02 ppm
Chromium (Cr)	max. 0.01 ppm	Zirconium (Zr)	max. 0.02 ppm
Copper (Cu)	max. 0.01 ppm	Aldehydes and Ketones (as	
Iron (Fe)	max. 0.05 ppm	Formaldehyde)	max. 10.0 ppm
Gallium (Ga)	max. 0.01 ppm	Substances reducing $KMnO_4$ (as O)	max. 2.5 ppm
Indium (In)	max. 0.01 ppm	Non-volatile matter	max. 5.0 ppm
		Water	max. 256 ppm

Code	Capacity
M2097-6-4000	4.0 L

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M2097-7 Methanol, EC-10

HS-No: 2905 11 00 00

Code	Capacity
M2097-7-2500	2.5 L

Assay	min. 99.9 %	Titration
Colour	max. 10 APHA	Colorimetric
Acidity	max. 0.3 meq/g	-
Alkalinity	max. 0.1 meq/g	-
Residue after Evaporation	max. 5.0 ppm	Gravimetric
Water	max. 0.05 %	kari Fischer Titrates
Chloride (Cl)	max. 0.20 ppm	Ion Chromatography
Phosphate (PO_4)	max. 0.50 ppm	Ion Chromatography
Aluminium (Al)	max. 100 ppb	ICP-MS
Arsenic (As)	max. 10 ppb	ICP-MS
Barium (Ba)	max. 20 ppb	ICP-MS
Boron (B)	max. 10 ppb	ICP-MS
Cadmium (Cd)	max. 20 ppb	ICP-MS
Calcium (Ca)	max. 100 ppb	ICP-MS
Chromium (Cr)	max. 20 ppb	ICP-MS
Cobalt (Co)	max. 20 ppb	ICP-MS
Copper (Cu)	max. 10 ppb	ICP-MS
Gallium (Ga)	max. 50 ppb	ICP-MS
Germanium (Ge)	max. 100 ppb	ICP-MS
Gold (Au)	max. 20 ppb	ICP-MS
Heavy metals (as Pb)	max. 100 ppb	ICP-MS
Iron (Fe)	max. 100 ppb	ICP-MS
Lead (Pb)	max. 100 ppb	ICP-MS
Lead (Pb)	max. 100 ppb	ICP-MS
Lithium (Li)	max. 50 ppb	ICP-MS
Magnesium (Mg)	max. 50 ppb	ICP-MS
Manganese (Mn)	max. 10 ppb	ICP-MS
Nickel (Ni)	max. 10 ppb	ICP-MS
Potassium (K)	max. 100 ppb	ICP-MS
Silicon (Si)	max. 50 ppb	ICP-MS
Silver (Ag)	max. 20 ppb	ICP-MS
Sodium (Na)	max. 100 ppb	ICP-MS
Strontium (Sr)	max. 10 ppb	ICP-MS
Tin (Sn)	max. 50 ppb	ICP-MS
Thallium (Tl)	max. 20 ppb	ICP-MS
Zinc (Zn)	max. 100 ppb	ICP-MS
Particle Count (> 1.0 µm)	max. 10 per m/l	Liquid Particle Counter

M

M2097-11 Methanol, Pesticide grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 24

Code	Capacity
M2097-11-1001	1.0 L
M2097-11-4001	4.0 L

M2097-12 Methanol, Ultimate grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 16

Code	Capacity
M2097-12-1001	1.0 L
M2097-12-4001	4.0 L

M2097-13 Methanol, LC-MS grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 6

Code	Capacity
M2097-13-1001	1.0 L
M2097-13-4001	4.0 L

M2097-14 Methanol, BIO grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 57

Code	Capacity
M2097-14-1001	1.0 L
M2097-14-4001	4.0 L

M2097-15 Methanol, Ultra Dry grade

HS-No: 2905 11 00 00

See specification in Solvents Specification - 63

Code	Capacity
M2097-15-1001	1.0 L
M2097-15-4001	4.0 L

Methyl Isobutyl Ketone

- Formula: $(CH_3)_2CHCH_2COCH_3$
- F.W.: 100.16
- CAS: 108-10-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.43
- Polarity index (P'): 4.2
- Viscosity (cP, 25 °C): 0.58
- Density (g/ml, 25 °C): 0.801
- Boilling point (°C): 117 ~ 118
- Refractive index (20 °C): 1.3957

Transport/storage:
- ADR: 3 II UN 1245
- IMDG: 3 II UN 1245
- IATA/ICAO: 3 II UN 1245

M2120-4 Methyl Isobutyl Ketone, HPLC grade

HS-No: 2914 13 00

See specification in Solvents Specification - 45

Code	Capacity
M2097-4-1001	1.0 L
M2097-4-4001	4.0 L

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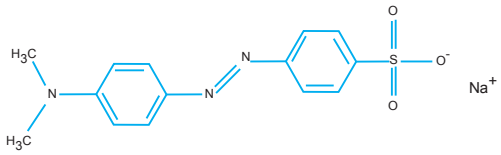
METHYL ORANGE, C.I. 13025

Synonyms: Helianthine, 4-dimethylaminoazobenzene-4'-sulfonic acid sodium salt, Gold orange, Orange III



- $C_{14}H_{14}N_3NaO_3S$
- M = 327.34 g/mol
- CAS [547-58-0]
- EC number: 208-925-3

Physical data:
- Bulk density: ~ 200 - 400 kg/m³
- Solub. in water (20 °C): ~ 5 g/l
- pH (5 g/l H_2O, 20 °C) ~ 6.5

Toxicological data:
- LD 50 (oral, rat): 60 mg/kg
- WGK: 3*

Safety:
- R: 25
- S: 37-45
- Poison class CH (Swiss):4

Transport/storage:
- ADR: 6.1 T2 III UN 2811
- IMDG: 6.1 III UN 2811
- IATA/ICAO: 6.1 III UN 2811
- PAX: 619
- CAO: 619
- LGK: 6.1 A
- Disposal: 3

M2130-0 Methyl orange, C.I. 13025 indicator

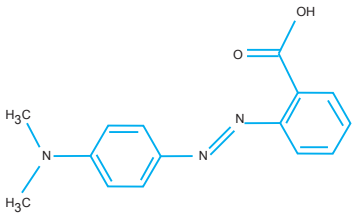
HS-No: 2927 00 00 90

pH range (pink to orange-yellow)	3.1 - 4.4	Absorptivity (A1%/1 cm; I_1 pH 4.4 on dried material)	750 - 850
Absorption maximum I_1 (pH 3.1)	501 - 504 nm	Loss on drying (110 °C)	max. 5 %
Absorption maximum I_2 (pH 4.4)	467 - 471 nm		
Absorptivity (A1%/1 cm; I_1, pH 3.1 on dried material)	1050 - 1150		

Code	Capacity
M2130-0-0025	25 g
M2130-0-0101	100 g

METHYL RED, C.I. 13020

Synonyms: 2-[(4-Dimethylamino)phenylazo]benzoic acid, 4-(Dimethylamino)-azobenzene-1,2'-carboxylic acid



- $C_{15}H_{15}N_3O_2$
- M = 269.31 g/mol
- CAS [493-52-7]
- EC number: 207-776-1

Physical data:
- Bulk density: ~ 300 - 500 kg/m³
- Solub. in water (20 °C): sligthly soluble
- Melting point: 178 - 182 °C

Toxicological data:
- WGK: 3*

Safety:
- Poison class CH (Swiss):4

Transport/storage:
- LGK: 10-13

M2135-0 Methyl red, C.I. 13020 indicator

HS-No: 2927 00 00 90

pH range (red-violet to brownish-yellow)	4.5 - 6.2	Absorptivity (A1%/1 cm; I_1 pH 6.2 on dried material)	700 - 800
Absorption maximum I_1 (pH 4.5)	523 - 526 nm	Transition range acc. ACS	passes test
Absorption maximum I_2 (pH 6.2)	427 - 437 nm	Loss on drying (110 °C)	max.0. 5 %
Absorptivity (A1%/1 cm; I_1 pH 4.5 on dried material)	1380 - 1480		

Code	Capacity
M2135-0-0025	25 g
M2135-0-0101	100 g

METHYL METHACRYLATE

Synonyms: Methyl 2-methylpropenoate, MAA

- $C_5H_8O_2$
- M = 100.12 g/mol
- CAS [80-62-6]
- EC number: 201-297-1

Physical data:
- Vapour pressure 47 hPa (20 °C)
- Spec. density 0.94 g/cm³ (20 °C)
- Explosive limits 2.1 - 12.5 Vol%
- Flash point 10 °C
- Solub. in water 16 g/l (20 °C)
- Melting point -48 °C
- Boiling point 100 °C
- Ignition temp. 430 °C

Toxicological data:
- MAK 50 mlm³ / 210 bg/m³
- VbF-CLASS. AI
- WGK: 1
- LD 50 (oral, rat) 7872 mg/kg

Safety:
- Highly flammable, irritant, sensitizing
- R: 11-36/37/38-43
- S: 9-16-29-33
- Poison class (CH): 4
- EC-Index-No. 607-035-00-6

Transport/storage:
- LGK: 3 A
- Packing-cat A
- Road/Rail: 3/3 b
- IMDG-Code 3.2/II UN 1247
- IATA/DGR 3 II UN 1247
- CAO: 307
- PAX: 305

M2140-1 Methyl methacrylate, reagent grade

HS-No: 2916 14 10 00

Assay	min. 99.0 %	Residue after ignition (as sulfate)	max. 0.03 %
Density (20 ºC)	0.939 - 0.941 g/ml	High polymer	passes test
Free acid (as $C_4H_6O_2$)	max. 0.03 %	Fire retardant (as $C_6H_6O_2$)	0.01 - 0.02 %

Code	Capacity
M2140-1-0500	500 ml

METHYLENE BLUE

Synonyms:

- $C_{16}H_{18}ClN_3S$
- M = 319.86 g/mol
- CAS [61-73-4]
- EC number: 200-515-2

Physical data:
- Form: Liquid
- Density: 0.995 kg/m³
- Flash point: 12 °C

Safety:
- R: 36/38-68
- S: 26-36/37

M2153-1 Methylene blue, for microscopy

HS-No: 2927 00 00 90

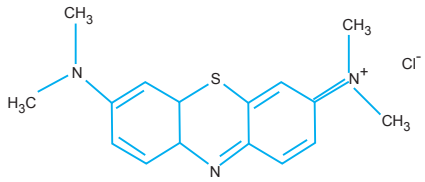
Assay of basic dye	min. 82 %	Suitability as biological stain	passes test
Loss on drying (110 º)	max. 15 %	Residue on ignition (as SO_4)	max. 0.5 %

Code	Capacity
M2135-0-0025	25 g
M2135-0-0101	1 g

Line @thanhcu2567 Tel. 0372 153 6

METHYLENE BLUE, C.I. 52015

Synonyms: 3,7-Bis(dimethylamino) pheno- thiazinium chloride, Solvent blue 8, Methylthyoninum chloride, Tetramethylthionine chloride



·xH_2O (x = 2 - 3)

- $C_{16}H_{18}ClN_3S \cdot xH_2O$ (x=2 - 3)
- M = 319.86 g/mol
- CAS [61-73-4]
- EC number: 200-515-2

Physical data:
- Bulk density: ~ 400 - 600 kg/m^3
- Solub. in water (20 °C): ~ 50 g/l
- Melting poing: ~ 180 °C (decomposes)
- pH (10 g/l H_2O, 20 °C) ~ 3

Toxicological data:
- LD 50 (oral, rat): 1180 mg/kg (anhydrous substance)
- WGK: 3*

Safety:
- R: 22
- S: 46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13

M2153-3 Methylene blue, C.I. 52015, extra pure

HS-No: 3204 13 00 00

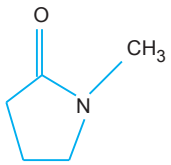
Assay (on dried sample)	min. 99 %	Zinc (Zn)	max. 0.005 %
Insoluble in ethanol 96%	max. 0.2 %	Sulfated ash	max. 0.2 %
Arsenic (As)	max. 0.0005 %	Loss on drying	18 - 22 %
Heavy metals (as Pb)	max. 0.005 %		

Code	Capacity
M2153-3-0100	100 g

M

1-METHYL-2-PYRROLIDONE (N-METHYLPYRROLIDONE)

Synonyms: N-Methypyrrolidone, N-Methyl-2pyrrolidinone, NMP



- C_5H_9NO
- M = 99.13 g/mol
- CAS [872-50-4]
- EC number: 212-828-1

Physical data:
- Form: Liquid
- Density: 1.03 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -24 °C
- Boiling point: 202 °C
- Flash point: 91 °C
- Ignition temp.: 245 °C
- Vapour pressure: (20 °C) 0.32 hPa
- Refraction index: (n 20 °C/D) 1.4684
- Viscosity: (20 °C) 1.67 mPas
- Dipolar moment: (20 °C) 4.1 Debye
- Dielectric const.: (25 °C) 33
- Expl. limit (upper): 9.5 Vol%
- Expl. limit (lower): 1.3 Vol%
- pH (100 g/l H_2O, 20 °C) 8.5 - 10.0

Toxicological data:
- LD 50 (oral, rat): 3598 mg/kg
- MAK: 19 ml/m^3, 80 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 606-021-00-7
- R: 36/38
- S: 41
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 5

M2160-1 1-Methyl-2-pyrrolidone (N-Methylpyrrolidone), reagent grade

HS-No: 2933 79 00 00

Assay (G.C)	min. 99.5 %	Iron (Fe)	max. 0.00001 %
Free Alkali (as methylamine)	max. 0.01 %	Magnesium (Mg)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Lead (Pb)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Tin (Sn)	max. 0.00001 %
Calcium (Ca)	max. 0.00005 %	Zinc (Zn)	max. 0.00001 %
Chromium (Cr)	max. 0.000002 %	Sulfated Ash	max. 0.0005 %
Cobalt (Co)	max. 0.000002 %	Water (K.F.)	max. 0.05 %
Copper (Cu)	max. 0.000002 %		

Code	Capacity
M2160-1-2501	2.5 L

M2160-4 1-Methyl-2-pyrrolidone (N-Methylpyrrolidone), HPLC grade

HS-No: 2933 79 00 00

See specification in Solvents Specification - 45

Code	Capacity
M2160-4-1001	1.0 L
M2160-4-4001	4.0 L

M2160-14 1-Methyl-2-pyrrolidone (N-Methylpyrrolidone), HPLC grade

HS-No: 2933 79 00 00

See specification in Solvents Specification - 57

Code	Capacity
M2160-14-1001	1.0 L
M2160-14-4001	4.0 L

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METHYL THYMOL BULE

Synonyms:

- $C_{37}H_{44}N_2O_{12}S$
- M = 756.83 g/mol
- CAS [1945-77-3]

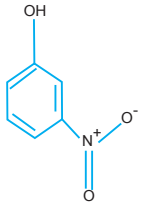
M2170-1 Methyl thymol blue, reagent grade

Free thymol blue	passes test	Loss on drying	max. 15 %
Sensitivity test	passes test	Residue after ignition (as sulfate)	35 - 42 %

Code	Capacity
M2170-1-0005	5 g

M-NITROPHENOL

Synonyms: 3-Nitrophenol



- $C_6H_5NO_3$
- M = 139.11 g/mol
- CAS [554-84-7]
- EC number: 209-073-5

Physical data:
- Form: Solid
- Spec. density: 1.49 g/cm^3
- Bulk density: ~ 640 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 94 - 95 °C
- pH (20 °C) 6.6 - 8.6

Toxicological data:
- LD 50 (oral, rat): 328 mg/kg
- WGK: 2*

Safety:
- R: 22-36/38
- S: 26-28.1-46
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 6.1 T2 III UN 1663
- IMDG: 6.1 III UN 1663
- IATA/ICAO: 6.1 III UN 1663
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

M4000-0 m-Nitrophenol, indicator

HS-No: 2908 90 00 90

Assay (DSC)	min. 99 %
Identity (IR-spectrum)	passes test
pH range (colorless to yellow)	6.6 - 8.6

Code	Capacity
M4000-0-0025	25 g

MIXED ACID ETCHANT

Synonyms:

M = Nitric acid - 39.3 ± 1.0%
Hydrofluoric acid - 11.6 ± 1.0%
Acetic acid - 20.7 ± 1.0%

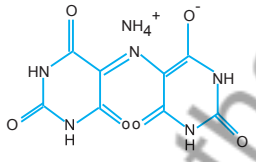
M4002-6 Mixed acid ethchant, EC-100

Residue after Ignition	max. 5 ppm	Gold (Au)	max. 0.5 ppm
Color (Hazen)	max. 10 Hazen	Iron (Fe)	max. 1.0 ppm
Density 20 °C	1.28 g/cm3	Lead (Pb)	max. 0.5 ppm
Heavy metals (as Pb)	max. 0.5 ppm	Lithium (Li)	max. 1.0 ppm
Arsenic (As)	max. 0.1 ppm	Magnesium (Mg)	max. 1.0 ppm
Antimony (Sb)	max. 0.1 ppm	Molybdenum (Mo)	max. 0.5 ppm
Aluminium (Al)	max. 0.1 ppm	Manganese (Mn)	max. 0.5 ppm
Barium (Ba)	max. 0.1 ppm	Nickel (Ni)	max. 0.5 ppm
Beryllium (Be)	max. 0.5 ppm	Potassium (K)	max. 1.0 ppm
Bismuth (Bi)	max. 0.5 ppm	Platinum (Pt)	max. 0.5 ppm
Boron (B)	max. 1.0 ppm	Silver (Ag)	max. 0.5 ppm
Cadmium (Cd)	max. 0.5 ppm	Sodium (Na)	max. 1.0 ppm
Calcium (Ca)	max. 1.0 ppm	Strontium (Sr)	max. 1.0 ppm
Cobalt (Co)	max. 0.5 ppm	Thallium (Tl)	max. 0.5 ppm
Copper (Cu)	max. 0.5 ppm	Tin (Sn)	max. 1.0 ppm
Chromium (Cr)	max. 0.5 ppm	Zinc (Zn)	max. 1.0 ppm
Gallium (Ga)	max. 0.5 ppm	Zirconium (Zr)	max. 0.5 ppm
Germanium (Ge)	max. 1.0 ppm		

Code	Capacity
M4002-6-925E	250 kg

MUREXIDE

Synonyms: Ammonium purpurate, acid



- $C_8H_8N_6O_6$
- M = 284.19 g/mol
- CAS [3051-09-0]
- EC number: 221-266-6

Physical data:
- Bulk density: ~ 330 kg/m^3
- Solub. in water (20 °C): ~ 1 g/l
- pH (1 g/l H_2O, 20 °C) ~ 5

Toxicological data:
- WGK: 2

Transport/storage:
- LGK: 10-13
- Disposal: 4

M7001-0 Murexide, indicator for metal titration

HS-No: 2933 59 95 90

Absorption maximum I (water)	517 - 523 nm	Suitability as complexometric indicator	passes test
Absorptivity (A1%/1 cm; I max)	375 - 500	Loss on drying	max. 10 %

Code	Capacity
M7001-0-0005	5 g
M7001-0-0025	25 g

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Chemical list : N

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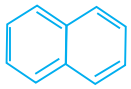
NAPHTHALENE

Synonyms:



- $C_{10}H_8$
- M = 128.16 g/mol
- CAS [91-20-3]
- EC number: 202-049-5

Physical data:
- Form: Solid
- Spec. density: 1.15 g/cm^3
- Bulk density: 600 kg/m^3
- Solub. in water (20 °C): 0.3 g/l
- Melting point: 79 - 82 °C
- Boiling point: 218 °C
- Flash point: 80 °C
- Ignition temp.: 540 °C
- Vapour pressure: (20 °C) 0.066 hPa
- Expl. limit (upper): 5.9 Vol%
- Expl. limit (lower): 0.9 Vol%

Toxicological data:
- LD 50 (oral, rat): > 2000 mg/kg
- WGK: 2

Safety:
- EC Index no.: 601-052-00-2
- R: 22-40-50/53
- S:36/37-46-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 4.1 F1 III UN 1334
- IMDG: 4.1 III UN 1334
- IATA/ICAO: 4.1 III UN 1334
- PAX: 419
- CAO: 420
- LGK: 4.1 B
- Disposal: 3

N1000-3 Naphthalene, extra pure

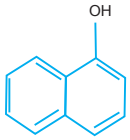
HS-No: 2902 90 10 00

Assay	min. 99.5 %
Identity (IR-spectrum)	passes test
Sulfated ash	max. 0.01 %
Water	max. 0.2 %

Code	Capacity
N1000-3-0500	500 g

1-NAPHTHOL

Synonyms: 1-Hydroxynaphthalene



- $C_{10}H_8O$
- M = 144.17 g/mol
- CAS [90-15-3]
- EC number: 201-969-4

Physical data:
- Form: Solid
- Spec. density: 1.28 g/cm^3
- Bulk density: ~ 450 kg/m^3
- Solub. in water (20 °C): ~ 0.1 g/l
- Melting point: 95 - 97 °C
- Boiling point: ~ 288 °C
- Flash point: 125 °C
- Ignition temp.: 510 °C
- Vapour pressure: (94 °C) 1.3 hPa
- pH (H_2O) ~ < 7

Toxicological data:
- LD 50 (oral, rat): 275 mg/kg
- WGK: 1

Safety:
- EC Index no.: 604-029-00-5
- R: 21/22-37/38-41
- S: 22-26-36/39-46
- Poison class CH (Swiss): 2

Transport/storage:
- LGK: 10-13
- Disposal: 3

N1002-1 1-Naphthol, reagent grade

HS-No: 2907 15 10 00

Assay	min. 99 %	Iron (Fe)	max. 0.001 %
Identity (IR-spectrum)	passes test	Naphthalene (G.C.)	max. 0.2 %
Appearance of solution	passes test	2-Naphthol (G.C.)	max. 0.2 %
Chloride (Cl)	max. 0.005 %	Sulfated Ash	max. 0.05 %
Heavy metals (As Pb)	max. 0.001 %	Water	max. 0.2 %

Code	Capacity
N1002-1-0025	25 g

NICKEL STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Density: ~ 1.01 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological:
- WGK: 1

Safety:
- R: 36/38-52/53
- S: 26-37-61
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 8 C1 III UN 3564
- IMDG: 8 III UN 3564
- IATA/ICAO: 8 III UN 3564
- PAX: 818
- CAO: 820
- LGK: 8 B

N1003-0 Nickel standard solution 1000mg/l for AA (nickel (II) nitrate in nitric acid 0.5 mol/l)

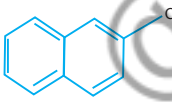
HS-No: 3822 00 00 00

Composition	1000±5 mg/l

Code	Capacity
N1003-0-0500	500 ml

2-NAPHTHOL

Synonyms:



- $C_{10}H_8O$
- M = 144.17 g/mol
- CAS [135-19-3]
- EC number: 205-182-7

Physical data:
- Form: Solid
- Spec. density: 1.22 g/cm^3
- Bulk density: ~300 kg/m^3
- Solub. in water (20 °C): 1 g/l
- Melting point: 121.6 °C
- Boiling point: 285 °C
- Flash point: 153 °C
- Vapour pressure: (30 °C) < 0.1 hPa

Toxicological data:
- LD 50 (oral, rat): 1960 mg/kg
- WGK: 2

Safety:
- EC Index no.: 604-007-00-5
- R: 20/22-50
- S: 24/25-46-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 3

N1004-1 2-Naphthol, reagent grade

HS-No: 2907 15 90 00

Assay	min. 99 %	Iron (Fe)	max. 0.001 %
Identity (IR-spectrum)	passes test	Naphthalene (G.C)	max. 0.1 %
Appearance of solution	passes test	2-Naphthol (G.C)	max. 0.1 %
Chloride (Cl)	max. 0.005 %	Sulfated Ash	max. 0.05 %
Heavy metals (As Pb)	max. 0.001 %	Water	max. 0.2 %

Code	Capacity
N1004-1-0025	25 g

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NESSLER'S REAGENT

Synonyms:

Physical data:
- Form: Liquid
- Density: 1.16 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) > 14

Toxicological data:
- MAK: 0.1 mg/m^3
- WGK: 2

Safety:
- R: 23/24/25-33-35-51/53
- S: 26/37/39-45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T4 II UN 2024
- IMDG: 6.1 II UN 2024
- IATA/ICAO: 6.1 II UN 2024
- PAX: 617
- CAO: 612
- LGK: 6.1 B
- Disposal: 20

N1005-0 Nessler's reagent

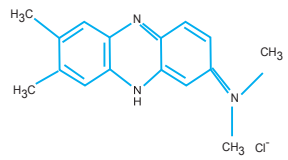
HS-No: 3822 00 00 00

Suitability for determination of ammonia and ammonic salts ..... passes test

Code	Capacity
N1005-0-0500	500 ml

NEUTRAL RED, C.I. 50040

Synonyms: Toluylene red, Basic Red 5



- $C_{15}H_{17}ClN_4$
- M = 288.78 g/mol
- CAS [553-24-2]
- EC number: 209-035-8

Physical data:
- Form: Solid
- Bulk density: ~ 350 - 500 kg/m^3
- Solub. in water (25 °C): 50 g/l
- pH (10 g/l H_2O, 20 °C) ~ 3.1

Toxicological:
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 3

N1006-0 Neutral red, C.I. 50040, for microscopy and indicator

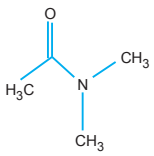
HS-No: 3204 13 00 00

Assay (espectrophotometric)	min. 90.0 %	Related substances (TLC)	passes test
Absorption maximum max (ethanol 50%)	539 - 544 nm	Suitability for microscopy	passes test
Absorptivity (E1%/1cm; max, 0.0005%, ethanol 50%)	1395 - 1550	Loss on drying (110 °C)	max. 18 %

Code	Capacity
N1006-0-0025	25 g

N,N-DIMETHYLACETAMIDE

Synonyms: Acetic acid dimethylamide



- C_4H_9NO
- M = 87.12 g/mol
- CAS [127-19-5]
- EC number: 2924-19-00-90

Physical data:
- Form: Liquid
- Density: 0.94 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -20 °C
- Boiling point: 165 - 166 °C
- Flash point: 70 °C
- Ignition temp.: 320 °C
- Vapour pressure: (20 °C) 1.76 hPa
- Refraction index: (n 20 °C/D) 1.4230
- Dipolar moment: (20 °C) 3.8 Debye
- Dielectric const.: (20 °C) 37.8
- Saturation conc.: (20 °C) 12 g/m^3
- Expl. limit (upper): 11.5 Vol%
- Expl. limit (lower): 1.7 Vol%
- pH (200 g/l H_2O, 20 °C) ~ 4

Toxicological data:
- LD 50 (oral, rat): 4300 mg/kg
- MAK: 10 ml/m^3, 30 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 616-011-00-4
- R: 61-E20/21
- S: 26-28.1-36/37-45
- Poison class CH (Swiss): 2

Transport/storage:
- LGK: 3 B
- Disposal: 1

N1040-1 N,N-Dimethylacetamide, reagent grade

HS-No: 2924 19 00 90

Assay	min. 99.5 %	Iron (Fe)	max. 0.000005 %
Free acid (as CH_3COOH)	max. 0.01 %	Non-volatile matter	max. 0.005 %
Chloride (Cl)	max. 0.01 %	Water (K.F.)	max. 0.05 %
Heavy metals (Pb)	max. 0.000005 %		

Code	Capacity
N1040-1-2501	2.5 L

N1040-4 N,N-Dimethylacetamide, HPLC grade

HS-No: 2924 19 00 90

See specification in Solvents Specification - 30

Code	Capacity
N1040-4-1001	1.0 L
N1040-4-4001	4.0 L

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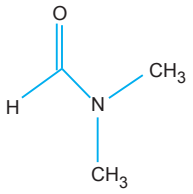
N,N-DIMETHYLFORMAMIDE

Synonyms: DMF, Formic acid dimethylamide



- C_3H_7NO
- M = 73.10 g/mol
- CAS [68-12-2]
- EC number: 200-679-5

Physical data:
- Density: 0.94 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -61 °C
- Boiling point: 153 °C
- Flash point: 58 °C
- Ignition temp.: 410 °C
- Vapour pressure: (20 °C) 3.77 hPa
- Refraction index: (n 20 °C/D) 1.4305
- Viscosity: (20 °C) 0.8 mPas
- Dipolar moment: (20 °C) 3.8 Debye
- Dielectric const.: (25 °C) 36.7
- Saturation conc.: (20 °C) 12 g/m^3
- Expl. limit (upper): 16 Vol%
- Expl. limit (lower): 2.2 Vol%
- pH (200 g/l H_2O, 20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 2800 mg/kg
- MAK: 10 ml/m^3, 30 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 616-001-00-X
- R: 61-E20/21-36
- S: 53-36/37-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 3 F1 III UN 2265
- IMDG: 3 III UN 2265
- IATA/ICAO: 3 III UN 2265
- PAX: 309
- CAO: 310
- LGK: 6.1 A
- Disposal: 1

N1042-1 N,N-Dimethylformamide, reagent grade

HS-No: 2924 19 00 90

Assay	min. 99.8 %	Titrable base	max. 0.003 meq/g
Colour	max. 15 APHA	Titrable acid	max. 0.0005 meq/g
Residue after evaporation	max. 0.005 %	Water (Coulometric KF)	max. 0.15 %

Code	Capacity
N1042-1-2501	2.5 L

N1042-4 N,N-Dimethylformamide, HPLC grade

HS-No: 2924 19 00 90

See specification in Solvents Specification - 38

Code	Capacity
N1042-4-1001	1.0 L
N1042-4-4001	4.0 L

N1042-14 N,N-Dimethylformamide, BIO grade

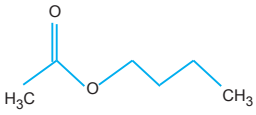
HS-No: 2924 19 00 90

See specification in Solvents Specification - 56

Code	Capacity
N1042-14-1001	1.0 L
N1042-14-4001	4.0 L

N-BUTYL ACETATE

Synonyms: Acetic acid n-butyl ester



- $C_6H_{12}O_2$
- M = 116.16 g/mol
- CAS [123-86-4]
- EC number: 204-658-1

Physical data:
- Density: 0.88 g/cm^3
- Solub. in water (20 °C): 7 g/l
- Melting point: -77 °C
- Boiling point: 127 °C
- Flash point: 22 °C
- Ignition temp.: 370 °C
- Vapour pressure: (20 °C) ~ 13 hPa
- Refraction index: (n 20 °C/D) 1.3941
- Viscosity: (25 °C) 0.69 mPas
- Dipolar moment: (22 °C) 1.84 Debye
- Dielectric const.: (20 °C) 5.0
- Evap. heat: (126 °C) 309 kJ/kg
- Saturation conc.: (20 °C) 62 g/m^3
- Expl. limit (upper): 7.5 Vol%
- Expl. limit (lower): 1.2 Vol%

Toxicological data:
- LD 50 (oral, rat): 10768 mg/kg
- MAK: 100ml/m^3, 480 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 607-025-00-1
- R: 10-66-67
- S: 25
- VbF class: AII
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1123
- IMDG: 3 II UN 1123
- IATA/ICAO: 3 II UN 1123
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

N1073-1 n-Butyl acetate, reagent grade

HS-No: 2915 33 00 00

Assay (G.C)	min. 99.5 %	Iron (Fe)	max. 0.00001 %
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Free acid (as CH_3COOH)	max. 0.01 %	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Lead (Pb)	max. 0.001 %
Boron (B)	max. 0.000002 %	n-butyl formate (G.C)	max. 0.1 %
Cadmium (Cd)	max. 0.000005 %	n-butyl propionate (G.C)	max. 0.1 %
Calcium (Ca)	max. 0.00005 %	n-butanol (G.C)	max. 0.2 %
Cobalt (Co)	max. 0.000002 %	Substances darkened by H_2SO_4	passes test
Zinc (Zn)	max. 0.00001 %	Non-volatile matter	max. 0.005 %
Copper (Cu)	max. 0.000002 %	Water	max. 0.1 %
Chromium (Cr)	max. 0.000002 %		
Tin (Sn)	max. 0.00001 %		

Code	Capacity
N1073-1-1000	1.0 L
N1073-1-2500	2.5 L

Line @thanhyo0256 Tel. 02 312 ... 6

N-HEPTANE

Synonyms: n-Dipropylmethane, n-Heptylhydride, 1-Methyl hexane

- C_7H_{16}
- M = 100.21 g/mol
- CAS [142-82-5]
- EC number: 205-563-8

Physical data:
- Density: 0.68 g/cm^3
- Solub. in water (20 °C): almost non-miscible
- Melting point: -90.6 °C
- Boiling point: 98.4 °C
- Flash point: -4 °C
- Ignition temp.: 215 °C
- Vapour pressure: (20 °C) 48 hPa
- Refraction index: (n 20 °C/D) 1.3876
- Viscosity: (25 °C) 0.4 mPas
- Dielectric const.: (20 °C) 1.9
- Saturation conc.: (20 °C) 196 g/m^3
- Expl. limit (upper): 7 Vol%
- Expl. limit (lower): 1 Vol%

Toxicological data:
- LD 50 (oral, rat): > 15000 mg/kg
- MAK: 500 ml/m^3, 2100 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 601-008-00-2
- R: 11-38-50/53-65-67
- S: 9-16-29-33-46-60-61-62
- VbF class: AI
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1206
- IMDG: 3 II UN 1206
- IATA/ICAO: 3 II UN 1206
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

N3005-4 n-Heptane 97%, HPLC grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 56

Code	Capacity
N3005-4-1001	1.0 L
N3005-4-4001	4.0 L

N3005-11 n-Heptane 97%, Pesticide grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 23

Code	Capacity
N3005-11-1001	1.0 L
N3005-11-4001	4.0 L

N3005-12 n-Heptane 97%, Ultimate grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 17

Code	Capacity
N3005-12-1001	1.0 L
N3005-12-4001	4.0 L

N3008-1 n-Heptane 99%, reagent grade

HS-No: 2901 10 90 00

Assay (G.C)	min. 99.2 %	Lead (Pb)	max. 0.00001 %
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001 %
Free acid (as CH_3COOH)	max. 0.005 %	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Tin (Sn)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Zinc (Zn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Aromatic hydrocarbons (as C_6H_6)	max. 0.1 %
Calcium (Ca)	max. 0.00005 %	Sulphur compounds (as S)	max. 0.005 %
Cobalt (Co)	max. 0.000002 %	Substances darkened by H_2SO_4	passes test
Copper (Cu)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Chromium (Cr)	max. 0.000002 %	Water	max. 0.01 %
Iron (Fe)	max. 0.00001 %		

Code	Capacity
N3008-1-2501	2.5 L

N3008-4 n-Heptane 99%, HPLC grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 56

Code	Capacity
N3005-4-1001	1.0 L
N3005-4-4001	4.0 L

N3008-11 n-Heptane 99%, Pesticide grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 23

Code	Capacity
N3005-11-1001	1.0 L
N3005-11-4001	4.0 L

N3008-12 n-Heptane 99%, Ultimate grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 17

Code	Capacity
N3005-12-1001	1.0 L
N3005-12-4001	4.0 L

Line @thankyou52 Tel. 02 372 1345 6

NICKEL (II) HYDROXIDE CARBONATE HYDRATE (ABOUT 47% NI) EXTRA PURE

Synonyms:

$NiCO_32Ni(OH)_24H_2O$
$CNiO_32N_2NiO_24H_2O$

- CAS [39430-27-8]
- EC number: 235-715-9

Physical data:
- Solub. in water (20 °C) insoluble
- pH value ~ 8.5 (50 g/l H_2O, 20 °C) (slurry)
- Bulk density: ~ 300 kg/m³
- Harmful, sensityzing

Toxicological data:
- WKG: 3*
- LD 50 (oral, rat) 840 mg/kg

Safety:
- R: 22-40-43
- S: 24-37
- Poison class (CH): 3

Transport/storage:
- LGK: 10-13
- Merkblatt BG Chemie Nr. M050

N3014-3 Nickel (II) hydroxide carbonate hydrage, extra pue

HS-No: 2836 99 18 00

Assay (complexometric, Ni)	min. 47.0 %	Lead (Pb)	max. 0.002 %
Chloride (Cl)	max. 0.02 %	Zinc (Zn)	max. 0.001 %
Sulfate (SO_4)	max. 0.01 %	Non precipitable with ammonium sulphide (as sulphate)	max. 0.3 %
Cobalt (Co)	max. 0.05 %		
Copper (Cu)	max. 0.003 %		
Iron (Fe)	max. 0.005 %		

Code	Capacity
N3014-3-0500	500 g
N3014-3-1000	1 kg

N-HEXANE

Synonyms: n-Caproylhydride, n-Hexylhydride

- C_6H_{14}
- M = 86.18 g/mol
- CAS [110-54-3]
- EC number: 203-777-6

Physical data:
- Density: 0.66 g/cm³
- Solub. in water (20 °C): 0.0095 g/l
- Melting point: -94.3 °C
- Boiling point: 69 °C
- Flash point: -22 °C
- Ignition temp.: 240 °C
- Vapour pressure: (20 °C)160 hPa
- Viscosity: (25 °C) 0.31 mPas
- Dielectric const.: (20 °C) 1.8
- Saturation conc.: (20 °C) 563 g/m³
- Expl. limit (upper): 8.1 Vol%
- Expl. limit (lower): 1.0 Vol%

Toxicological data:
- LD 50 (oral, rat): 28710 mg/kg
- MAK: 50 ml/m³, 180 mg/m³
- WGK: 1

Safety:
- EC Index no.: 601-037-00-0
- R: 11-38-48/20-51/53-62-65-67
- S: 9-16-29-33-36/37-61-62
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1208
- IMDG: 3 II UN 1208
- IATA/ICAO: 3 II UN 1208
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

N3057-1 n-Hexane, reagent grade

HS-No: 2901 10 90 00

Assay	min. 99 %	Lead (Pb)	max. 0.00001 %
Colour	max. 10 APHA	Magnesium (Mg)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Tin (Sn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Zinc (Zn)	max. 0.00001 %
Calcium (Ca)	max. 0.00005 %	Residue after evaporation	max. 0.001 %
Chromium (Cr)	max. 0.000002 %	Water-soluble Titrable Acid	max. 0.0003 meq/g
Cobalt (Co)	max. 0.000002 %	Thiophene	passes test
Copper (Cu)	max. 0.000002 %	Sulphur compounds (as S)	max. 0.005 %
Iron (Fe)	max. 0.00001 %		

Code	Capacity
N3057-1-2501	2.5 L

N3057-4 n-Hexane, HPLC grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 42

Code	Capacity
N3057-4-1001	1.0 L
N3057-4-4001	4.0 L

N3057-11 n-Hexane, Ultimate grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 15

Code	Capacity
N3057-11-1001	1.0 L
N3057-11-4001	4.0 L

N3057-12 n-Hexane, Ultimate grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 24

Code	Capacity
N3057-12-1001	1.0 L
N3057-12-4001	4.0 L

N3057-15 n-Hexane, Ultimate grade

HS-No: 2901 10 90 00

See specification in Solvents Specification - 63

Code	Capacity
N3057-15-1001	1.0 L
N3057-15-4001	4.0 L

Line@hankyoung69 Tel 02-372-1545 - 6

NICKEL (II) CHLORIDE HEXAHYDRATE

Synonyms: Nickel dichloride hexahydrate

- $NiCl_2 \cdot 6H_2O$
- M = 237.71 g/mol
- CAS [7791-20-0]
- EC number: 231-743-0

Physical data:
- Spec. density: 3.55 g/cm³ (anhydrous substance)
- Bulk density: ~ 640 kg/m³
- Solub. in water (20 °C): 553 g/l
- Melting point: 140 °C (release of crystalline water)
- Vapour pressure: (671 °C) 1.3 hPa (anhydrous substance)
- pH (100 g/l H_2O, 20 °C) ~4.9

Toxicological data:
- LD 50 (oral, rat): 105 mg/kg (anhydrous substance)
- WGK: 2

Safety:
- R: 25-43-50/53
- S: 24-37-45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T5 II UN 3288
- IMDG: 6.1 II UN 3288
- IATA/ICAO: 6.1 II UN 3288
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 15

N3062-1 Nickel (II) chloride hexahydrate, reagent grade

HS-No: 2827 35 00 00

Assay (complexometric)	min. 98.5 %	Copper (Cu)	max. 0.001 %
pH (5%, H_2O)	3.5 - 5.5	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Calcium (Ca)	max. 0.005 %	Sodium (Na)	max. 0.01 %
Cobalt (Co)	max. 0.005 %	Zinc (Zn)	max. 0.001 %

Code	Capacity
N3062-1-0500	500 g

N3062-3 Nickel (II) chloride hexahydrate, extra pure

HS-No: 2827 35 00 00

Assay (complexometric)	min. 97 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.01 %	Zinc (Zn)	max. 0.15 %
Cobalt (Co)	max. 0.05 %	Non precipitable with $(NH_4)_2S$(as SO_4)	max. 0.3 %
Iron (Fe)	max. 0.005 %		

Code	Capacity
N3062-3-0500	500 g

N

NICKEL (II) NITRATE HEXAHYDRATE

Synonyms:

- $Ni(NO_3)_2 \cdot 6H_2O$
- M = 290.81 g/mol
- CAS [13478-00-7]
- EC number: 236-068-5

Physical data:
- Form: Solid
- Bulk density: ~ 800 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 56.7 °C
- pH (50 g/l H_2O, 20 °C) ~ 5

Toxicological data:
- LD 50 (oral, rat): 1620 mg/kg
- WGK: 2

Safety:
- R: 8-22-43
- S: 24-37-46
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 2725
- IMDG: 5.1 III UN 2725
- IATA/ICAO: 5.1 III UN 2725
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 15

N3065-1 Nickel (I) nitrate hexahydrate, reagent grade

HS-No: 2834 29 20 00

Assay (complexometric, Nil)	min. 99.0 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.001 %	Sodium (Na)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %	Ammonium (NH_4)	max. 0.05 %
Calcium (Ca)	max. 0.005 %	Lead (Pb)	max. 0.001 %
Cobalt (Co)	max. 0.005 %	Zinc (Zn)	max. 0.001 %
Copper (Cu)	max. 0.001 %		

Code	Capacity
N3065-1-0500	500 g

N3065-3 Nickel (I) nitrate hexahydrate, extra pure

HS-No: 2834 29 20 00

Assay (complexometric)	min. 97.0 %	Iron (Fe)	max. 0.005 %
Chloride (Cl)	max. 0.003 %	Lead (Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %	Zinc (Zn)	max. 0.05 %
Calcium (Ca)	max. 0.2 %	Non precipitable with $(NH_4)_2S$ (as SO_4)	max. 0.3 %
Cobalt (Co)	max. 0.01 %		
Copper (Cu)	max. 0.002 %		

Code	Capacity
N3065-3-0500	500 g

NICKEL (II) SULFATE HEXAHYDRATE

Synonyms:

- $NiSO_4 \cdot 6H_2O$
- M = 262.86 g/mol
- CAS [10101-97-0]
- EC number: 232-104-9

Physical data:
- Spec. density: 2.07 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (20 °C): 625 g/l
- Melting point: 53 °C
- pH (100 g/l H_2O, 20 °C) 4.3 - 4.7

Toxicological data:
- LD 50 (oral, rat): 264 mg/kg
- WGK: 3*

Safety:
- EC Index no.: 028-009-00-5
- R: 22-40-42/43-50/53
- S: 22-36/37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 15

Line @thanhbuu262 Tel 0232134-6

N3073-1 Nickel (II) sulfate hexahydrate, reagent grade

HS-No: 2833 24 00 00

Assay (complexometric)	min. 99 %	Iron (Fe)	max. 0.001 %
pH (5%, H_2O)	4 - 6	Lead (Pb)	max. 0.001 %
Total N	max. 0.001 %	Magnesium (Mg)	max. 0.01 %
Chloride (Cl)	max. 0.001 %	Manganese (Mn)	max. 0.0005 %
Calcium (Ca)	max. 0.005 %	Potassium (K)	max. 0.005 %
Cobalt (Co)	max. 0.002 %	Sodium (Na)	max. 0.01 %
Copper (Cu)	max. 0.002 %	Zinc (Zn)	max. 0.002 %

Code	Capacity
N3073-1-0500	500 g

N3073-3 Nickel (II) sulfate hexahydrate, extra pure

HS-No: 2833 24 00 00

Assay (complexometric)	min. 99 %	Copper (Cu)	max. 0.002 %
pH (5%, H_2O)	4 - 6	Iron (Fe)	max. 0.005 %
Chloride (Cl)	max. 0.003 %	Lead (Pb)	max. 0.001 %
Arsenic (As)	max. 0.001 %	Zinc (Zn)	max. 0.005 %
Calcium (Ca)	max. 0.005 %	Non precipitable with	
Cobalt (Co)	max. 0.01 %	$(NH_4)_2S$ (as SO_4)	max. 0.5 %

Code	Capacity
N3073-3-0500	500 g

NITRIC ACID 20%

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: 1.41 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -41 °C
- Boiling point: 122 °C
- Vapour pressure: (20 °C) 9.4 hPa
- pH (20 °C) < 1

Toxicological:
- MAK: 2 ml/m^3, 5.2 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 007-004-00-1
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 CO1 II UN 2031
- IMDG: 8 II UN 2031
- IATA/ICAO: 8 II UN 2031
- PAX: Forbidden UN 2031
- CAO: 813
- LGK: 8 B
- Disposal: 12

N3102-1 Nitric acid 20%, reagent grade

HS-No: 2808 00 00 00

Assay	min. 20 %	Germanium (Ge)	max. 0.1 ppm
Chloride (Cl)	max. 0.5 ppm	Indium (In)	max. 0.02 ppm
Phosphate (PO_4)	max. 0.5 ppm	Potassium (K)	max. 0.1 ppm
Sulfate (SO_4)	max. 0.5 ppm	Lithium (Li)	max. 0.02 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm	Magnesium (Mg)	max. 0.1 ppm
Silver (Ag)	max. 0.02 ppm	Manganese (Mn)	max. 0.02 ppm
Aluminium (Al)	max. 0.5 ppm	Molybdenum (Mo)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm	Sodium (Na)	max. 0.3 ppm
Boron (B)	max. 0.05 ppm	Nickel (Ni)	max. 0.02 ppm
Barium (Ba)	max. 0.05 ppm	Lead (Pb)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm	Platinum (Pt)	max. 0.2 ppm
Bismuth (Bi)	max. 0.1 ppm	Tin (Sn)	max. 0.1 ppm
Calcium (Ca)	max. 0.1 ppm	Strontium (Sr)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Titanium (Ti)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Thallium (Tl)	max. 0.05 ppm
Chromium (Cr)	max. 0.02 ppm	Vanadium (V)	max. 0.05 ppm
Copper (Cu)	max. 0.02 ppm	Zinc (Zn)	max. 0.1 ppm
Iron (Fe)	max. 0.2 ppm	Zirconium (Zr)	max. 0.1 ppm
Gallium (Ga)	max. 0.02 ppm	Residue after ignition	max. 5 ppm

Code	Capacity
N3102-1-2501	2.5 L

NITRIC ACID 69%

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: 1.41 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -41 °C
- Boiling point: 122 °C
- Vapour pressure: (20 °C) 9.4 hPa
- pH (20 °C) < 1

Toxicological:
- MAK: 2 ml/m^3, 5.2 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 007-004-00-1
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 CO1 II UN 2031
- IMDG: 8 II UN 2031
- IATA/ICAO: Forbidden UN 2031
- PAX: F
- CAO: 813
- LGK: 8 B
- Disposal: 12

Line @thankyou2372 Tel. 02 372 1345 - 6

N3105-1 Nitric acid 69%, reagent grade

HS-No: 2808 00 00 00

Assay	68.5±0.5 %	Germanium (Ge)	max. 0.1 ppm
Chloride (Cl)	max. 0.5 ppm	Indium (In)	max. 0.02 ppm
Phosphate (PO_4)	max. 0.5 ppm	Potassium (K)	max. 0.1 ppm
Sulfate (SO_4)	max. 0.5 ppm	Lithium (Li)	max. 0.02 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm	Magnesium (Mg)	max. 0.1 ppm
Silver (Ag)	max. 0.02 ppm	Manganese (Mn)	max. 0.02 ppm
Aluminium (Al)	max. 0.5 ppm	Molybdenum (Mo)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm	Sodium (Na)	max. 0.3 ppm
Boron (B)	max. 0.05 ppm	Nickel (Ni)	max. 0.02 ppm
Barium (Ba)	max. 0.05 ppm	Lead (Pb)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm	Platinum (Pt)	max. 0.2 ppm
Bismuth (Bi)	max. 0.1 ppm	Tin (Sn)	max. 0.1 ppm
Calcium (Ca)	max. 0.1 ppm	Strontium (Sr)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Titanium (Ti)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Thallium (Tl)	max. 0.05 ppm
Chromium (Cr)	max. 0.02 ppm	Vanadium (V)	max. 0.05 ppm
Copper (Cu)	max. 0.02 ppm	Zinc (Zn)	max. 0.1 ppm
Iron (Fe)	max. 0.2 ppm	Zirconium (Zr)	max. 0.1 ppm
Gallium (Ga)	max. 0.02 ppm	Residue after ignition	max. 5 ppm

Code	Capacity
N3105-1-1000	1.0 L
N3105-1-2500	2.5 L

N3105-7 Nitric acid 69%, EC-10

Assay	69.0 - 71.0 %	Titration
Residue after ignition	max. 5 ppm	Gravimetirc
Chloride (Cl)	max. 0.5 ppm	Ion Chromatography
Sulphate (SO_4)	min. 0.5 ppm	Ion Chromatography
Phosphate (PO_4)	max. 0.5 ppm	Ion Chromatography
Arsenic and Antimony (as As)	max. 0.01 ppm	ICP-MS
Silver (Ag)	max. 0.02 ppm	ICP-MS
Aluminium (Al)	max. 0.05 ppm	ICP-MS
Gold (Au)	max. 0.1 ppm	ICP-MS
Boron (B)	max. 0.05 ppm	ICP-MS
Barium (Ba)	max. 0.05 ppm	ICP-MS
Beryllium (Be)	max. 0.02 ppm	ICP-MS
Bismuth (Bi)	max. 0.1 ppm	ICP-MS
Calcium (Ca)	max. 0.1 ppm	ICP-MS
Cadmium (Cd)	max. 0.05 ppm	ICP-MS
Cobalt (Co)	max. 0.02 ppm	ICP-MS
Chromium (Cr)	max. 0.02 ppm	ICP-MS
Copper (Cu)	max. 0.02 ppm	ICP-MS
Iron (Fe)	max. 0.2 ppm	ICP-MS
Gallium (Ga)	max. 0.02 ppm	ICP-MS
Germanium (Ge)	max. 0.1 ppm	ICP-MS
Indium (In)	max. 0.02 ppm	ICP-MS
Potassium (K)	max. 0.1 ppm	ICP-MS
Lithium (Li)	max. 0.02 ppm	ICP-MS
Magnesium (Mg)	max. 0.1 ppm	ICP-MS
Manganese (Mn)	max. 0.02 ppm	ICP-MS
Molybdenum (Mo)	max. 0.05 ppm	ICP-MS
Sodium (Na)	max. 0.3 ppm	ICP-MS
Nickel (Ni)	max. 0.02 ppm	ICP-MS
Lead (Pb)	max. 0.03	ICP-MS
Platinum (Pt)	max. 0.2 ppm	ICP-MS
Tin (Sn)	max. 0.1	ICP-MS
Strontium (Sr)	max. 0.05	ICP-MS
Titanium (Ti)	max. 0.1	ICP-MS
Thallium (Tl)	max. 0.05ppm	ICP-MS
Vanadium (V)	max. 0.05 ppm	ICP-MS
Zinc (Zn)	max. 0.1 ppm	ICP-MS
Zirconium (Zr)	max. 0.1 ppm	ICP-MS

Code	Capacity
N3105-7-2500	2.5 L

N

NITRIC ACID 65%

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: 1.41 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -32 °C
- Boiling point: 122 °C
- Vapour pressure: (20 °C) 9.4 hPa
- pH (20 °C) < 1

Toxicological:
- MAK: 2 ml/m^3, 5.2 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 007-004-00-1
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 CO1 II UN 2031
- IMDG: 8 II UN 2031
- IATA/ICAO: Forbidden UN 2031
- PAX: F
- CAO: 813
- LGK: 8 B
- Disposal: 12

Line @thanksbond2 Tel. 02 372 1545 -6

N3115-1 Nitric acid 65%, reagent grade

HS-No: 2808 00 00 00

Assay	65.5±0.5 %	Germanium (Ge)	max. 0.01 ppm
Chloride (Cl)	max. 0.2 ppm	Mercury (Hg)	max. 0.05 ppm
Fluride (F)	max. 1 ppm	Indium (In)	max. 0.02 ppm
Phosphate (PO_4)	max. 0.2 ppm	Potassium (K)	max. 0.1 ppm
Sulfate (SO_4)	max. 0.5 ppm	Lithium (Li)	max. 0.01 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm	Magnesium (Mg)	max. 0.05 ppm
Silver (Ag)	max. 0.01 ppm	Manganese (Mn)	max. 0.01 ppm
Aluminium (Al)	max. 0.05 ppm	Molybdenum (Mo)	max. 0.01 ppm
Gold (Au)	max. 0.05 ppm	Sodium (Na)	max. 0.2 ppm
Barium (Ba)	max. 0.01 ppm	Nickel (Ni)	max. 0.02 ppm
Beryllium (Be)	max. 0.01 ppm	Lead (Pb)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Platinum (Pt)	max. 0.1 ppm
Calcium (Ca)	max. 0.05 ppm	Strontium (Sr)	max. 0.01 ppm
Cadmium (Cd)	max. 0.2 ppm	Titanium (Ti)	max. 0.02 ppm
Cobalt (Co)	max. 1 ppm	Thallium (Tl)	max. 0.02 ppm
Chromium (Cr)	max. 0.2 ppm	Vanadium (V)	max. 0.01 ppm
Copper (Cu)	max. 0.5 ppm	Zinc (Zn)	max. 0.02 ppm
Iron (Fe)	max. 0.01 ppm	Zirconium (Zr)	max. 0.02 ppm
Gallium (Ga)	max. 0.05 ppm	Residue after ignition	max. 3 ppm

Code	Capacity
N3115-1-1001	1.0 L
N3115-1-2501	2.5 L

N3115-3 Nitric acid 65%, extra pure

HS-No: 2808 00 00 00

Assay	min. 65 %	Calcium (Ca)	max. 0.001 %
Chloride (Cl)	max. 0.0003 %	Iron (Fe)	max. 0.0004 %
Nitrogen Oxides (as N_2O_3)	max. 0.003 %	Ammonium (NH_4)	max. 0.001 %
Sulfate (SO_4)	max. 0.001 %	Non Volatile Matter	max. 0.01 %
Heavy Metals (as Pb)	max. 0.0005 %	Appearance of solution	passes test
Arsenic (As)	max. 0.0001 %	Iodate, Bromate	passes test

Code	Capacity
N3115-3-2501	2.5 L

N

NITRIC ACID, VOLUMETRIC SOLUTIONS

N3120-0 Nitric acid, solution 0.1 mol/l (0.1 N)

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: ~ 1.002 g/cm^3

Safety:
- EC Index no.: 007-004-00-1
- S: 24/25
- Poison class CH (Swiss): 3

1 ml = 0.006301 g HNO_3

HS-No: 2808 00 00 00

Code	Capacity
N3120-0-1000	1.0 L

N3121-0 Nitric acid, solution 1 mol/l (1 N)

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: 1.036 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 007-004-00-1
- R: 34
- S: 23.2-51-26-39/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 CO1 II UN 2031
- IMDG: 8 II UN 2031
- IATA/ICAO: 8 II UN 2031
- PAX: 807
- CAO: 813
- LGK: 8 B
- Disposal: 12

1 ml = 0.06301 g HNO_3

HS-No: 2808 00 00 00

Code	Capacity
N3121-0-1000	1.0 L

N3122-0 Nitric acid, solution 2 mol/l (2 N)

Synonyms:

- HNO_3
- M = 63.01 g/mol
- CAS [7697-37-2]
- EC number: 231-714-2

Physical data:
- Density: ~1.07 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 007-004-00-1
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 CO1 II UN 2031
- IMDG: 8 II UN 2031
- IATA/ICAO: 8 II UN 2031
- LGK: 8 B
- Disposal: 12

1 ml = 0.12602 g HNO_3

HS-No: 2808 00 00 00

Code	Capacity
N3122-0-1000	1.0 L

Line @tankyou2562 Tel. 02-72 1545-6

N-PENTANE

Synonyms: 1,3-Dimethylpropane, Diethyl methane

- C_5H_{12}
- M = 72.15 g/mol
- CAS [109-66-0]
- EC number: 203-692-4

Physical data:
- Density: 0.63 g/cm^3
- Solub. in water (25 °C): 0.04 g/l
- Melting point: -129.7 °C
- Boiling point: 36.1 °C
- Flash point: -49.4 °C
- Ignition temp.: 285 °C
- Vapour pressure: (20 °C) 573 hPa
- Dielectric const.: (20 °C) 1.8
- Evap. heat: (36 °C) 383 kJ/kg
- Saturation conc.: (20 °C) 1689 g/m^3
- Expl. limit (upper): 8 Vol%
- Expl. limit (lower): 1.4 Vol%

Toxicological data:
- MAK: 1000 ml/m^3, 3000 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 601-006-00-1 [1]
- R: 12-51/53-65-66-67
- S: 9-16-29-33-61-62
- VbF class: AI
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1265
- IMDG: 3 II UN 1265
- IATA/ICAO: 3 II UN 1265
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

N6015-1 n-Pentane 99%, reagent grade

HS-No: 2901 10 90 00

Assay (G.C)	min. 99 %	Iron (Fe)	max. 0.00001 %
Colour	max. 10 Hazen	Lead (Pb)	max. 0.00001 %
Acidity	max. 0.0002 meq/g	Magnesium (Mg)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Tin (Sn)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Zinc (Zn)	max. 0.00001 %
Calcium (Ca)	max. 0.00005 %	Sulphur compounds (as S)	max. 0.005 %
Chromium (Cr)	max. 0.000002 %	Substances darkened by H_2SO_4	passes test
Cobalt (Co)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Copper (Cu)	max. 0.000002 %	Water	max. 0.01 %

Code	Capacity
N6015-1-2501	2.5 L

N6015-4 n-Pentane 99%, reagent grade

See specification in Solvents Specification - 42

HS-No: 2901 10 90 00

Code	Capacity
N6015-4-1001	1.0 L
N6015-4-4001	4.0L

N6015-11 n-Pentane 99%, reagent grade

See specification in Solvents Specification - 25

HS-No: 2901 10 90 00

Code	Capacity
N6015-11-1001	1.0 L
N6015-11-4001	4.0L

N6015-12 n-Pentane 99%, reagent grade

See specification in Solvents Specification - 17

HS-No: 2901 10 90 00

Code	Capacity
N6015-12-1001	1.0 L
N6015-12-4001	4.0L

Line @thankyou2562 Tel. 0872645-6

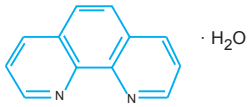
Line @thankyou2562 Tel. 02 372 1545 - 6

Chemical list : O

Line @thankyou2562 Tel. 02 372 1545 - 6

O-PHENANTHROLINE MONOHYDRATE

Synonyms: 1,10-Phenanthroline



- $C_{12}H_8N_2 \cdot H_2O$
- M = 198.24 g/mol
- CAS [5144-89-8]
- EC number: 200-629-2

Physical data:
- Bulk density: ~ 300 kg/m³
- Solub. in water (20 °C) ~ 3.3 g/l
- Melting point: 93 - 94 °C

Toxicological data:
- LD 50 (oral, rat): 132 mg/kg
- WGK: 3*

Safety:
- EC Index no.: 613-092-00-8
- R: 25-50/53
- S: 45-60-61

Transport/storage:
- ADR: 6.1 T2 III UN 2811
- IMDG: 6.1 III UN 2811
- IATA/ICAO: 6.1 III UN 2811
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 9

O6002-1 o-Phenanthroline monohydrate, reagent grade

HS-No: 2933 99 90 90

Assay (titr. with $HClO_4$)	min. 99.5 %	Sulfated ash	max. 0.05 %
Suitability for determinatin of Fe	passes test	Water	8.5 - 9.5 %
Suitability as redox indicator	passes test		

Code	Capacity
O6002-1-0005	5 g

ORTHO-PHOSPHORIC ACID, 85%

Synonyms: Orthophosphoric acid

- H_3PO_4
- M = 98.00 g/mol
- CAS [7664-38-2]
- EC number: 231-633-2

Physical data:
- Density: 1.71 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: ~ 21 °C
- Boiling poing: ~ 158 °C
- Vapour pressure: (25 °C) 2.2 hPa
- pH (10 g/l H_2O, 20 °C) < 0.5

Toxicological data:
- LD 50 (oral, rat): 1530 mg/kg (anhydrous substnace)
- WGK: 1

Safety:
- EC Index no.: 015-011-00-6
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 III UN 1805
- IMDG: 8 III UN 1805
- IATA/ICAO: 8 III UN 1805
- PAX: 819
- CAO: 821
- LGK: 8 B
- Disposal: 12

O6021-1 ortho-Phosphoric acid 85%, reagent grade

HS-No: 2809 20 00 00

Assay (acidimetric)	min. 85.0 %	Cobalt (Co)	max. 0.5 ppm
Chlorides (Cl)	max. 2 ppm	Copper (Cu)	max. 0.5 ppm
Flouride (F)	max. 1 ppm	Iron (Fe)	max. 10 ppm
Nitrate (NO_3)	max. 3 ppm	Potassium (K)	max. 5 ppm
Sulphate (SO_4)	max. 20 ppm	Magnesium (Mg)	max. 5 ppm
Phosphite and Hypophosphite (as H_3PO_3)	max. 20 ppm	Manganese (Mn)	mx. 0.5 ppm
Antimony (Sb)	max. 5 ppm	Sodium (Na)	max. 200 ppm
Arsenic (As)	max. 0.5 ppm	Nickel (Ni)	max. 1 ppm
Calcium (Ca)	max. 50 ppm	Lead (Pb)	max. 0.5 ppm
Cadmium (Cd)	max. 0.5 ppm	Zinc (Zn)	max. 2 ppm

Code	Capacity
O6021-1-2500	2.5 L

O6021-3 ortho-Phosphoric acid 85%, extra pure

HS-No: 2809 20 00 00

Assay (acidimetric)	min. 85 - 88 %	Copper (Cu)	max. 0.002 %
Volatile acids (as CH_3COOH)	max. 0.001 %	Iron (Fe)	max. 0.005 %
Chlorides (Cl)	max. 0.0005 %	Heavy metals (as Pb)	max. 0.001 %
Flouride (F)	max. 0.001 %	Lead (Pb)	max. 0.001 %
Nitrate (NO_3)	max. 0.0003 %	Potassium (K)	max. 0.005 %
Phosphite and Hypophosphite (as H_3PO_3)	max. 0.02 %	Sodium (Na)	max. 0.03 %
Sulfates (SO_4)	max. 0.005 %	Zinc (Zn)	max. 0.002 %
Arsenic (As)	max. 0.0002 %	Precipitable compounds with ammonia	passes test
Calcium (Ca)	max. 0.01 %	Residual Solvents (Ph Eur/ICH)	Excluded by production process

Code	Capacity
O6021-3-2500	2.5 L

O6021-4 ortho-Phosphoric acid 85%, HPLC grade

HS-No: 2809 20 00 00

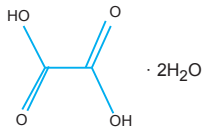
See specification in Solvents Specification - 47

Code	Capacity
O6021-4-1001	1.0 L
O6021-4-4001	4.0 L

Line @thanhnou2562 Tel. 0237 4545 6

OXALIC ACID DIHYDRATE

Synonyms: Ethanedioic acid



- $C_2H_2O_4 \cdot 2H_2O$
- M = 126.07 g/mol
- CAS [6153-56-6]
- EC number: 205-634-3

Physical data:
- Spec. density: 1.65 g/cm^3
- Bulk density: ~ 900 kg/m^3
- Solub. in water (20 °C): 102 g/l
- Melting point: 101 °C

Toxicological data:
- LD 50 (oral, rat): 7500 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- EC Index no.: 607-006-00-8
- R: 21/22
- S: 24/25-37-46
- Poison class CH (Swiss): 2

Transport/storage:
- LGK: 10-13
- Disposal: 4

O9006-1 Oxalic acid dihydrate, reagent grade

HS-No: 2917 11 00 90

Assay (permanganometric)	min. 99.5 %	Copper (Cu)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Heavy Metals (as Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.002 %	Iron (Fe)	max. 0.0002 %
Total N	max. 0.001 %	Lead (Pb)	max. 0.0005 %
Calcination Residue (as SO_4)	max. 0.01 %	Nickel (Ni)	max. 0.0005 %
Cadmium (Cd)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Calcium (Ca)	max. 0.0005 %	Foreign Organic Substances	passes test
Cobalt (Co)	max. 0.0005 %	substances Darkened by H_2SO_4	passes test

Code	Capacity
O9006-1-1000	1 kg

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Line @thankyou2562 Tel. 02 372 1545 - 6

Chemical list : P

Line @thankyou2562 Tel. 02 372 1545 - 6

PERCHLORIC ACID 70%

Synonyms: $HClO_4$

- $HClO_4$
- M = 100.46 g/mol
- CAS [7601-90-3]
- EC number: 231-512-4

Physical data:
- Form: Solid
- Density: ~ 1.36 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -18 °C
- Boiling point: ~ 198.7 kg/m^3
- pH (H_2O, 20 °C) < 1

Toxicological data:
- LD 50 (oral, rat): 1100 mg/kg (anhydrous substance)
- WGk: 1

Safety:
- EC Index no.: 017-006-00-4
- R: 5-8-35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 I UN 1873
- IMDG: 5.1 II UN 1873
- IATA/ICAO: 5.1 I UN 1873
- PAX: F
- CAO: 501
- LGK: 5.1 A
- Disposal: 12

P1005-1 Perchloric acid 70%, reagent grade

HS-No: 2811 19 80 90

Assay (acidimetric)	60 - 72 %	Germanium (Ge)	max. 0.000005 %
Identity	passes test	Heavy metals (as Pb)	max. 0.0001 %
Colour (Hazen)	max. 10 %	Iron (Fe)	max. 0.0001 %
Insoluble in Ethanol	max. 0.001 %	Lead (Pb)	max. 0.000005 %
Free Chlorine (Cl)	max. 0.00005 %	Lithium (Li)	max. 0.000002 %
Total N	max. 0.001 %	Magnesium (Mg)	max. 000005 %
Chlorates (ClO_3)	max. 0.001 %	Manganese (Mn)	max. 0.000002 %
Chlorides (Cl)	max. 0.0003 %	Molubdenum (Mo)	max. 0.000005 %
Phosphates, silicates (as SiO_2)	max. 0.0005 %	Nickel (Ni)	max. 0.00001 %
Sulfates (SO_4)	max. 0.001 %	Potassium (K)	max. 0.00001 %
Aluminium (Al)	max. 0.000005 %	Silver (Ag)	max. 0.00001 %
Arsenic (As)	max. 0.000005 %	Sodium (Na)	max. 0.00005 %
Barium (Ba)	max. 0.000002 %	Strontium (Sr)	max. 0.000002 %
Beryllium (Be)	max. 0.000002 %	Thallium (Tl)	max. 0.000005 %
Bismuth (Bi)	max. 0.00001 %	Titanium (Ti)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Vanadium (V)	max. 0.000005 %
Caldium (Ca)	max. 0.00005 %	Zinc (Zn)	max. 0.00001 %
Cobalt (Co)	max. 0.000005 %	Zirconium (Zr)	max. 0.00001 %
Copper (Cu)	max. 0.00001 %	Calcination residue (as SO_4)	max. 0.003 %

Code	Capacity
P1005-1-0500	500 ml
P1005-1-1001	1.0 L

PETROLEUM ETHER, BOILING RANGE 40 - 60 EC

Synonyms: Petroleum benzine, Petroleum spirit

- CAS [8032-32-4]
- EC number: 265-151-9

Physical data:
- Density: (15 °C) 0.65 g/cm^3
- Solub. in water (20 °C): almost non-miscible
- Melting point: < -100 °C
- Boiling point: 40 - 60 °C
- Flash point: < -21 °C
- Ignition temp.: 250 °C
- Vapour pressure: (20 °C) 350 hPa
- Viscosity: (20 °C) 0.45 mPas

- Expl. limit (upper): 8 Vol%
- Expl. limit (lower): 0.8 Vol%

Toxicological data:
- LD 50 (oral, rat): > 5000 mg/kg
- MAK: 50 ml/m^3 , 180 mg/m^3
- WGk: 1

Safety:
- EC Index no.: 649-328-00-1
- R: 11-52/53-65
- S: 9-16-23.2-51-24-33-46-62

- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1268
- IMDG: 3 II UN 1268
- IATA/ICAO: 3 II UN 1268
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

P2049-1 Petroleum ether 40 - 60 EC, reagent grade

HS-No: 2710 11 25 00

Boiling range	40 - 60 °C	Acidity	max. 0.0005 meq/g
Water (by coulometry)	max. 0.006 %	Residue on Evaporation	max. 0.001 %
Color	max. 10 APHA	Sulphur compounds (S)	max. 0.002 %

Code	Capacity
P2049-1-2501	2.5 L
P2049-1-4001	4.0 L

P2049-4 Petroleum ether 40 - 60 EC, HPLC grade

HS-No: 2710 11 25 00

See specification in Solvents Specification - 46

Code	Capacity
P2049-4-1001	1.0 L
P2049-4-4001	4.0 L

P2049-11 Petroleum ether 40 - 60 EC, Pesticide grade

HS-No: 2710 11 25 00

See specification in Solvents Specification - 25

Code	Capacity
P2049-11-1001	1.0 L
P2049-11-4001	4.0 L

P2049-12 Petroleum ether 40 - 60 EC, Ultimate grade

HS-No: 2710 11 25 00

See specification in Solvents Specification - 25

Code	Capacity
P2049-12-1001	1.0 L
P2049-12-4001	4.0 L

Line @thailyab2562 Tel.:0928121545-6

PETROLEUM ETHER 60 - 80 °C

Synonyms: Petroleum benzine, petroleum spirit

- CAS [8032-32-4]
- EC number: 265-151-9

Physical data:
- Form: Liquid
- Density: 0.68 g/cm^3
- Solub. in water (20 °C): non-miscible
- Boiling point: ~ 60 - 80 °C
- Flash point: < -20 °C
- Ignition temp.: 260 °C
- Vapour pressure: (20 °C) ~ 200 hPa
- Expl. limit (upper): 7.5 Vol%
- Expl. limit (lower): 1.0 Vol

Toxicological data:
- MAK: 50 ml/m^3, 180 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 649-328-00-1
- R: 11-38-48/20-51/53-62-65-67
- S: 16-23.2-51-33-36/37-61-62
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1268
- IMDG: 3 II UN 1268
- IATA/ICAO: 3 II UN 1268
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

Special regulations:
- Product submitted to speial taxes law

P2053-1 Petroleum ether 60 - 80 °C, reagent grade

HS-No: 2710 11 25 00

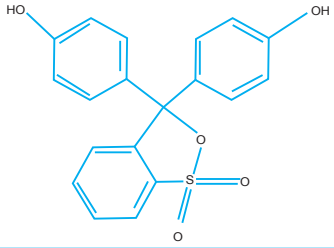
Boiling range	60 - 80 °C	Iron (Fe)	max. 0.00001 %
Acidity	max. 0.0003 meq/g	Magnesium (Mg)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	Manganese (Mn)	max. 0.000002 %
Barium (Ba)	max. 0.000001 %	Nickel (Ni)	max. 0.000002 %
Boron (B)	max. 0.000002 %	Lead (Pb)	max. 0.00001 %
Cadmium (Cd)	max. 0.000005 %	Iodine Number	max. 0.3 %
Calcium (Ca)	max. 0.00005 %	S compounds (as S)	max. 0.005 %
Zinc (Zn)	max. 0.00001 %	Aromatic s (as benzene)	max. 0.005 %
Cobalt (Co)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Copper (Cu)	max. 0.000002 %	Substnaces darkened by H_2SO_4	passes test
chromium (Cr)	max. 0.000002 %	Water (K.F.)	max. 0.01 %
Tin (Sn)	max. 0.00001 %		

Code	Capacity
P2053-1-2501	2.5 L
P2053-1-4001	4.0 L

P

PHENOL RED

Synonyms: Phenolsulfonphthalein, PR



- $C_{19}N_{14}O_5S$
- M = 354.38 g/mol
- CAS [143-74-8]
- EC number: 205-609-7

Physical data:
- Form: Solid
- Bulk dinsity: 200 - 300 kg/m^3
- Solub. in water (20 °C): miscible

Toxicological data:
- WGK: 1

Transport/storage:
- LGK: 10-13
- Disposal: 3

P3001-0 Phenol red, indicator

HS-No: 2934 99 90

pH range (yellow-red)	6.5 - 8.0	Absorptivity (A1%/1cm;λ4, on dried material)	1000 - 1200
Absorption maximum λ1 (pH 1.2)	503 - 506 nm	Insoluble in ethanol	passes test
Absorption maximum λ2 (pH 3.0)	430 - 435 nm	Copper (Cu)	max. 0.005 %
Absorption maximum λ3 (pH 6.5)	430 - 435 nm	Iron (Fe)	max. 0.005 %
Absorption maximum λ4 (pH 8.8)	557 - 560 nm	Lead (Pb)	max. 0.005 %
Absorptivity (A1%/1cm; λ1, on dried material)	900 - 1100	Nickel (Ni)	max. 0.005 %
Absorptivity (A1%/1cm;λ2, on dried material)	500 - 700	Transition range acc. ACS	passes test
Absorptivity (A1%/1cm; 3, on dried material)	500 - 700	Loss on drying (110 °C)	max. 5 %

Code	Capacity
P3001-0-0025	25 g

PHENOL

Synonyms: Phenic acid, Hydroxybenzene, Carbolic acid

- C_6H_5OH
- M = 94.11 g/mol
- CAS [108-95-2]
- EC number: 2907-11-00-00

Physical data:
- Form: Solid
- Spec. density: ~ 1.06 g/cm^3
- Bulk. density: ~ 620 kg/m^3
- Solub. in water (20 °C): 84 g/l
- Melting point: 40.8 °C
- Boiling point: 181.8 °C
- Flash point: 81 °C
- Ignition temp.: 595 °C
- Vapour pressure: (20 °C) 0.2 hPa
- Expl. limit (upper): 9.5 Vol%
- Expl. limit (lower): 1.3 Vol%
- pH (50 g/l H_2O, 20 °C) ~5

Toxicological data:
- LD 50 (oral, rat): 317 mg/kg
- MAK: 5 ml/m^3
- WGK: 2

Safety:
- EC Index no.: 604-001-00-2
- R: 23/24/25-34-48/20/21/22-68

Transport/storage:
- ADR: 6.1 T2 II UN 1671
- IMDG: 6.1 II UN 1671
- IATA/ICAO: 6.1 II UN 1671
- PAX: 613
- CAO: 615
- LGK: 6.1 A
- Disposal: 9

P3009-8 Phenol, molecular biology grade

HS-No: 2836 29 80 00

Assay (by GC)	min. 99.5 %	DNase and RNase	none detected
Melting point	40.5 °C	Iron (Fe)	1 ppm
Preservative	none	Magnesium (Mg)	1 ppm
Water (H_2O)	0.5 %	Heavy metals (Pb)	5 ppm

Code	Capacity
P3009-8-0500	500 g

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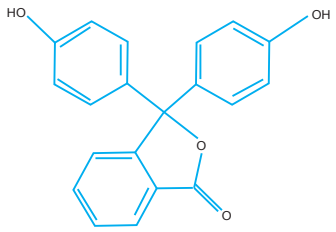
PHENOLPHTHALEIN

Synonyms: 3,3-Bis(p-hydroxyphenyl) phthalide



- $C_{20}H_{14}O_4$
- M = 318.33 g/mol
- CAS [77-09-8]
- EC number: 201-004-7

Physical data:
- Spec. density: 1.3 g/cm^3
- Bulk dinsity: 350 - 450 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 261 - 263 °C

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 3

P3017-1 Phenolphthalein indicator, reagent grade

HS-No: 2932 29 10 00

pH range (colourless to violet-red) .	8.2 - 9.8
Absorption maximum I (pH 9.8)	551 - 554 nm
Absorptivity (A1%/1 cm; I max, pH 9.8 on dried material)	700 - 750
Loss on drying (110 ºC)	max. 1 %

Code	Capacity
P3017-1-0100	100 g

PHENOLPHTHALEIN, ETHANOLIC SOLUTIONS

Synonyms:

- $C_{20}H_{14}O_4$
- M = 318.33 g/mol
- CAS [77-09-8]

Phsyical data:
- Density: 0.89 g/cm^3
- Solub. in water (20 °C): miscible
- Flash point: 23 °C
- Ignition temp.: ~ 425 °C

Toxicological data:
- LD 50 (oral, rat): 6200 mg/kg (ethanol)
- MAK: 500 ml/m^3, 960 mg/m^3
- WGk: 1

Safety:
- R: 11
- S: 7-16
- VbF class: B
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 3 F1 III UN 1993
- IMDG: 3 III UN 1993
- IATA/ICAO: 3 III UN 1993
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

P3021-0 Phenolphthalein indicator, solution in 1% ethanol

HS-No: 3822 00 00 00

Specification : pH range (colourless to violet-red) .. pH 8.2 - 9.8

Code	Capacity
P3021-0-1000	1.0 L

PHOSPHOTUNGSTIC ACID HYDRATE

Synonyms: Tungstophosphoric acid hydrate

$H_3[P(W_3O_{10})_4]\cdot XH_2O$

- $H_3O_{40}PW_{12}XH_2O$
- M = 2880.17 g/mol
- CAS [12501-23-4]
- EC number: 215-682-7

Physical data:
- Form: Solid
- Bulk. density: ~ 960 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 107 °C
- pH (20 g/l H_2O, 20 °C) ~ 5

Toxicological data:
- WGK: 1

Safety:
- R: 34
- S: 26-36/37/39-45

Transport/storage:
- ADR: 8 C2 III UN 3260
- IMDG: 8 III UN 3260
- IATA/ICAO: 8 III UN 3260
- PAX: 822
- CAO: 823
- LGK: 10-13
- Disposal: 15

P3050-1 Phosphotungstic acid hydrate, reagent grade

HS-No: 2811 19 80 90

Chlorides (Cl)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.02 %
Total N	max. 0.002 %	Sodium (Na)	max. 0.02 %
Copper (Cu)	max. 0.001 %	Water (K.F.)	max. 17 %
Iron (Fe)	max. 0.002 %		

Code	Capacity
P3050-1-0101	100 g

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PHOSPHORUS RED

Synonyms: P

- P
- M = 30.97 g/mol
- CAS [7723-14-0]
- EC number: 231-768-7

Physical data:
- Form: Powder
- Spec. density: 2.34 g/cm^3
- Bulk. density: 1100 kg/m^3
- Solub. in water (20 °C): 84 g/l
- Ignition temp.: 300 °C

Toxicological:
- WGK: 3*

Safety:
- EC Index no.: 015-002-00-7
- R: 11-16-52/53
- S: 7-43.1-61
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 4.1 F3 III UN 1338
- IMDG: 4.1 III UN 1338
- IATA/ICAO: 4.1 III UN 1338
- PAX: 422
- CAO: 421
- LGK: 4.1 B
- Disposal: 25

P3051-1 Phosphorus red, reagent grade

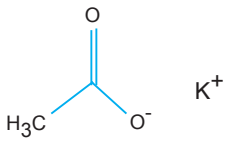
HS-No: 2804 70 00 00

Assay	min. 97 %	Yellow phosphorus	passes test
Iron (Fe)	max. 0.2 %		

Code	Capacity
P3051-1-0500	500 g

POTASSIUM ACETATE

Synonyms:



- CH_3COOK
- M = 98.15 g/mol
- CAS [127-08-2]
- EC number: 204-822-2

Physical data:
- Spec. density: (25 °C) 1.57 g/cm^3
- Bulk density: ~ 500 kg/m^3

- Solub. in water (20 °C): soluble
- Melting point: 292 °C
- Flash point: > 250 °C
- pH (50 g/l H_2O, 20 °C) 7.5 - 8.5

Toxicological data:
- LD 50 (oral, rat): 3250 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13

P5021-1 Potassium acetate, reagent grade

HS-No: 2915 29 00 90

Assat (titr. with $HClO_4$)	min. 99 %	Copper (Cu)	max. 0.0005 %
pH (5%, H_2O)	7 - 9	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0005 %	Magnesium (Mg)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.1 %
Calcium (Ca)	max. 0.005 %	Zinc (Zn)	max. 0.0005 %

Code	Capacity
P5021-1-0500	500 g

P5021-3 Potassium acetate, extra pure

HS-No: 2915 29 00 90

Assay (perchloric acid)	min. 99 %	Arsenic (As)	max. 0.0001 %
Insoluble matter in water	max. 0.005 %	Calcium (Ca)	max. 0.01 %
pH (5%, H_2O)	6.5 - 9.0	Copper (Cu)	max. 0.0005 %
Acidity (as CH_3COO)	max. 0.25 %	Iron (Fe)	max. 0.0005 %
Alkalinity (as KOH)	max. 0.015 %	Lead (Pb)	max. 0.0005 %
Chloride (Cl)	max. 0.002 %	Magnesium (Mg)	max. 0.01 %
Phosphate (PO_4)	max. 0.001 %	Nickel (Ni)	max. 0.0005 %
Sulphates (SO_4)	max. 0.002 %	Sodium (Na)	max. 0.25 %

Code	Capacity
P5021-3-0500	500 g

POTASSIUM BROMATE

Synonyms: Bromic acid potassium salt

$KBrO_3$

- M = 167.01 g/mol
- CAS [7758-01-2]
- EC number: 231-829-8

Physical data:
- Form: Solid
- Spec. density: ~ 3.42 g/cm^3
- Bulk. density: ~ 1400 kg/m^3

- Solub. in water (20 °C): 70 g/l
- Melting point: 434 °C
- pH (50 g/l H_2O, 20 °C)5 - 9

Toxicological data:
- LD 50 (oral, rat): 157 mg/kg
- WGK: 3

Safety:
- EC Index no.: 035-003-00-6
- R: 45-9-E25
- S: 53-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1484
- IMDG: 5.1 II UN 1484
- IATA/ICAO: 5.1 II UN 1484
- PAX: 508
- CAO: 511
- LGK: 5.1 A
- Disposal: 22

Applications: Analytical chemistry, laboratory reagent, in food industy

P5035-1 Potassium bromate, reagent grade

HS-No: 2829 90 40 00

Assay (iodometric, on dried sample)	min. 99.8 %	Sulfates (SO_4)	max. 0.005 %
Insoluble in water	max. 0.005 %	Total N	max. 0.001 %
pH (5%, H_2O)	5 - 9	Heavy metals (as Pb)	max. 0.0005 %
Free acid (as $HBrO_3$)	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Free alkali (as KOH)	max. 0.003 %	Sodium (Na)	max. 0.01 %
Bromides (Br)	max. 0.02 %		

Code	Capacity
P5035-1-0500	500 g

P

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POTASSIUM BROMIDE

Synonyms:

- KBr
- M = 119.01 g/mol
- CAS [7758-02-3]
- EC number: 231-830-3

Physical data:
- Spec. density: 2.75 g/cm^3
- Bulk density: ~ 900 - 1000 kg/m^3
- Solub. in water (20 °C): 540 g/l

- Melting point: 730 °C
- Boiling point: 1380 °C
- Vapour pressure: (795 °C) 1.3 hPa
- pH (50 g/l H_2O, 20 °C) 5.5 - 8.5

Toxicological data:
- LD 50 (oral, rat): 3070 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5038-1 Potassium bromide, reagent grade

HS-No: 2827 51 00 00

Assay (argentometric)	min. 99.5 %	Calcium (Ca)	max. 0.001 %
pH (5%, H_2O)	5 - 8	Copper (Cu)	max. 0.0005 %
Bromates (BrO_3)	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.1 %	Iron (Fe)	max. 0.0005 %
Iodides (I)	max. 0.001 %	Lead (Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %	Manesium (Mg)	max. 0.001 %
Total N	max. 0.001 %	Sodium (Na)	max. 0.02 %
Arsenic (As)	max. 0.0001 %	Zinc (Zn)	max. 0.0005 %
Barium (Ba)	max. 0.001 %	Loss on drying (105 °C)	max. 0.3 %
Cadmium (Cd)	max. 0.0005 %		

Code	Capacity
P5038-1-1000	1 kg

POTASSIUM CARBONATE

Synonyms: Potash

- K_2CO_3
- M = 138.21 g/mol
- CAS [584-08-7]
- EC number: 209-529-3

Physical data:
- Spec. density: 2.43 g/cm^3
- Bulk density: ~ 750 kg/m^3
- Solub. in water (20 °C): soluble

- Melting point: 891 °C
- pH (50 g/l H_2O, 20 °C) ~ 11.5 - 12.5

Toxicological data:
- LD 50 (oral, rat): 1870 mg/kg
- WGK: 1

Safety:
- R: 22-36/37/38
- S: 22-26-46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5048-1 Potassium carbonate, reagent grade

HS-No: 2836 40 00 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.002 %
Insoluble matter	max. 0.005 %	Copper (Cu)	max. 0.005 %
Total N	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Phosphates (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.001 %
Silicates (SiO_2)	max. 0.003 %	Sodium (Na)	max. 0.02 %
Heavy Metals (as Pb)	max. 0.0005 %	Substances precipitable by ammonia	max. 0.01 %
Aluminium (Al)	max. 0.001 %	Total S (as SO_4)	max. 0.003 %
Arsenic (As)	max. 0.0001 %	Loss on calcinations (600 °C)	max. 1 %

Code	Capacity
P5048-1-1000	1 kg

POTASSIUM CHLORIDE

Synonyms: Chloro potassium

- KCl
- M = 74.56 g/mol
- CAS [7447-40-7]
- EC number: 231-211-8

Physical data:
- Spec. density: 1.98 g/cm^3
- Bulk density: ~ 1000 kg/m^3

- Solub. in water (20 °C): 330 g/l
- Melting point: 773 °C
- Boiling point: 1413 °C
- pH (50 g/l H_2O, 20 °C) ~ 5.5 - 8.5

Toxicological data:
- LD 50 (oral, rat): 2600 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5067-1 Potassium chloride, reagent grade

HS-No: 3104 20 90 00

Assay (acidimetric)	min. 99.5 %	Barium (Ba)	max. 0.001 %
pH (5%, H_2O)	5.5 - 8.0	Calcium (Ca)	max. 0.001 %
Total N	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
Bromides (Br)	max. 0.05 %	Iron (Fe)	max. 0.0003 %
Iodides (I)	max. 0.002 %	Magnesium (Mg)	max. 0.001 %
Phosphates (PO_4)	max. 0.0005 %	Sodium (Na)	max. 0.02 %
Sulfates (SO_4)	max. 0.003 %		

Code	Capacity
P5067-1-1000	1 kg

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POTASSIUM CHROMATE

Synonyms: Chromic acid potassium salt

- K_2CrO_4
- M = 194.21 g/mol
- CAS [7789-00-6]
- EC number: 232-140-5

Physical data:
- Spec. density: (18 °C) 2.6 g/cm³
- Bulk density: ~ 1400 kg/m³
- Solub. in water (20 °C): 637 g/l
- Melting point: 985 °C
- Boiling point: 1000 °C
- pH (50 g/l H_2O, 20 °C) 8.6 - 9.8

Toxicological data:
- LD 50 (oral, rat): 180 mg/kg
- WGK: 3

Safety:
- EC Index no.: 024-006-00-8
- R: 49-46-36/37/38-43-50/53
- S: 53-24/37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 II UN 3288
- IMDG: 6.1 II UN 3288
- IATA/ICAO: 6.1 II UN 3288
- PAX: 613
- CAO: 615
- LGK: 6.1 B
- Disposal: 22

P5072-1 Potassium chromate, reagent grade

HS-No: 2841 50 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.001 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.002 %
pH (5%, H_2O)	8.6 - 9.8	Lead (Pb)	max 0.005 %
Chlorides (Cl)	max. 0.001 %	Sodium (Na)	max. 0.02 %
Sulfates (SO_4)	max. 0.005 %	Calcium (Ca)	max. 0.005 %
Aluminium (Al)	max. 0.003 %		

Code	Capacity
P5072-1-0500	500 g
P5072-1-1000	1 kg

POTASSIUM CYANIDE

Synonyms: Cyanogen potassium

- KCN
- M = 65.12 g/mol
- CAS [151-50-8]
- EC number: 205-792-3

Physical data:
- Spec. density: 1.55 g/cm³
- Bulk density: ~ 750 kg/m³
- Solub. in water (25 °C): 716 g/l
- Melting point: 634 °C
- Boiling point: 1625 °C
- Vapour pressure: (634.5 °C) 1.8 hPa
- pH (20 g/l H_2O, 20 °C) ~ 11 - 12

Toxicological data:
- LD 50 (oral, rat): 5 mg/kg
- MAK: 5 mg/m³
- WGK: 3

Safety:
- EC Index no.: 006-007-00-5
- R: 26/27/28-32-50/53
- S: 7-28.1-29-36/37-45-60-61
- Poison class CH (Swiss): 1

Transport/stoage:
- ADR: 6.1 T5 I UN 1680
- IMDG: 6.1 I UN 1680
- IATA/ICAO: 6.1 I UN 1680
- PAX: 606
- CAO: 607
- LGK: 6.1 B
- Disposal: 21

P5078-1 Potassium cyanide, reagent grade

HS-No: 2837 19 00 90

Appearance	Solid	Sulphide (S)	max. 0.001 % wt
Assay (argentometric)	min. 97.0 % wt	Iron (Fe)	max. 0.01 % wt
Phosphate (PO_4)	max. 0.01 % wt	Sodium (Na)	max. 1.0 % wt
Sulphate (SO_4)	max. 0.01 % wt	Lead (Pb)	max. 0.0005 % wt

Code	Capacity
P5078-1-1000	1 kg

P5078-3 Potassium cyanide, extra pure

HS-No: 2837 19 00 90

Assay (argentometric)	min. 97 %	Thiocyanates (SCN)	max. 0.05 %
Insoluble in water	max. 0.02 %	Iron (Fe)	max. 0.01 %
Chloride (Cl)	max. 0.05 %	Lead (Pb)	max. 0.001 %
Phosphate (PO_4)	max. 0.02 %	Sodium (Na)	max. 0.5 %
Sulphate (SO_4)	max. 0.02 %	Zinc (Zn)	max. 0.05 %
Sulphide (S)	max. 0.001 %		

Code	Capacity
P5078-3-0500	500 g

POTASSIUM DICHROMATE

Synonyms: Potassium bichromate, Potassium pyrochromate

- $K_2Cr_2O_7$
- M = 294.19 g/mol
- CAS [7778-50-9]
- EC number: 231-906-6

Physical data:
- Spec. density: 2.69 g/cm³
- Bulk density: 1250 kg/m³
- Solub. in water (20 °C): 130 g/l
- Melting point: 398 °C
- Boiling point: > 500 °C
- pH (100 g/l H_2O, 20 °C) 3.57

Toxicological data:
- LD 50 (oral, rat): 25 mg/kg
- WGK: 3

Safety:
- EC Index no.: 024-002-00-6
- R: 49-46-E21-E25-E26-37/38-41-43-50/53
- S: 53-36/37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 III UN 3288
- IMDG: 6.1 III UN 3288
- IATA/ICAO: 6.1 III UN 3288
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 22

P5082-1 Potassium dichromate, reagent grade

HS-No: 2841 50 00 00

Assay (iodometric)	min. 99.9 %	Copper (Cu)	max. 0.001 %
Insoluble matter	max. 0.005 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.001 %	Lead (Pb)	max. 0.005 %
Sulfates (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.01 %
Calcium (Ca)	max. 0.002 %	Loss on drying (105 °C)	max. 0.05 %

Code	Capacity
P5082-1-0500	500 g
P5082-1-1000	1 kg

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POTASSIUM DICHROMATE, VOLUMETRIC SOLUTIONS

P5091-0 Potassium dichromate, solution 1/120 mol/l (0.05 N)

Synonyms: Potassium bichromate, Potassium pyrochromate

HS-No: 2841 50 00 00

- $K_2Cr_2O_7$
- M = 294.19 g/mol
- CAS [7778-50-9]
- EC number: 231-906-6

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 024-002-00-6
- R: 49-46-52/53
- S: 53-45-61
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 6.1 T4 III UN 3287
- IMDG: 6.1 III UN 3287
- IATA/ICAO: 6.1 III UN 3287
- LGK: 6.1B
- Disposat: 22

1ml = 0.002452 g $K_2Cr_2O_7$

Code	Capacity
P5091-0-1000	1.0 L

P5092-0 Potassium dichromate, solution 1/24 mol/l (0.25 N)

Synonyms: Potassium bichromate, Potassium pyrochromate

HS-No: 2841 50 00 00

- $K_2Cr_2O_7$
- M = 294.19 g/mol
- CAS [7778-50-9]
- EC number: 231-906-6

Toxicological data:
- LD 50 (oral, rat): 95 mg/kg (toxic component)
- WGK: 3

Transport/storage:
- ADR: 6.1 T4 III UN 3287
- IMDG: 6.1 III UN 3287
- IATA/ICAO: 6.1 III UN 3287
- LGK: 6.1B
- Disposat: 22

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 3.8

Safety:
- EC Index no.: 024-002-00-6
- R: 49-46-43-52/53
- S: 53-24-37-45-61
- Poison class CH (Swiss): F

1ml = 0.012258 g $K_2Cr_2O_7$

Code	Capacity
P5092-0-1000	1.0 L

P5093-0 Potassium dichromate, solution 1/6 mol/l (1 N)

Synonyms: Potassium bichromate, Potassium pyrochromate

HS-No: 2841 50 00 00

- $K_2Cr_2O_7$
- M = 294.19 g/mol
- CAS [7778-50-9]
- EC number: 231-906-6

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 024-002-00-6
- R: 49-46-43-51/53
- S: 53-24-37-45-61
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 6.1 T4 III UN 3287
- IMDG: 6.1 III UN 3287
- IATA/ICAO: 6.1 III UN 3287
- LGK: 6.1B
- Disposat: 22

1ml = 0.04903 g $K_2Cr_2O_7$

Code	Capacity
P5093-0-1000	1.0 L

P5094-0 Potassium dichromate, solution 1/60 mol/l (0.1 N)

Synonyms: Potassium bichromate, Potassium pyrochromate

HS-No: 2841 50 00 00

- $K_2Cr_2O_7$
- M = 294.19 g/mol
- CAS [7778-50-9]
- EC number: 231-906-6

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 024-002-00-6
- R: 49-46-52/53
- S: 53-45-61
- Poison class CH (Swiss): F

Physical data:
- Density: 1.06 g/cm^3
- pH (20 °C) ~ 4.1

Transport/storage:
- ADR: 6.1 T4 III UN 3287
- IMDG: 6.1 III UN 3287
- IATA/ICAO: 6.1 III UN 3287
- PAX: 619
- CAO: 619
- LGK: 6.1B
- Disposat: 22

1ml = 0.004903 g $K_2Cr_2O_7$

Code	Capacity
P5094-0-1000	1.0 L

POTASSIUM DIHYDROGEN PHOSPHATE

Synonyms: Potassium biphosphate, Potassium phosphate monobasic, Primary potassium phosphate, Mono-potassium phosphate

- KH_2PO_4
- M = 136.09 g/mol
- CAS [7778-77-0]
- EC number: 231-931-4

Physical data:
- Spec. density: 2.34 g/cm^3
- Bulk density: ~ 1200 kg/m^3
- Solub. in water (20 °C): 222 g/l
- Melting point: ~ 253 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 4.4

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5104-1 Potasium dihydrogen phosphate, reagent grade

HS-No: 2835 24 00 00

Assay (acidimetric)	min. 99.5 %	Arsenic (As)	max. 0.00005 %
pH (5%, H_2O)	4.2 - 4.5	Heavy metals (as Pb)	max. 0.0005 %
Appearance of solution 10% in water	clear and colourless	Iron (Fe)	max. 0.0005 %
Total N	max. 0.001 %	Sodium (Na)	max. 0.02 %
Chlorides (Cl)	max. 0.0005 %	$KMnO_4$ red matter (as O)	passes test
Sulfates (SO_4)	max. 0.003 %	Loss on drying (105 °C)	max. 0.1 %

Code	Capacity
P5104-1-0500	500 g
P5104-1-1000	1 kg

P5104-4 Potasium dihydrogen phosphate, HPLC grade

HS-No: 2835 24 00 00

See specification in Solvents Specification - 47

Code	Capacity
P5104-4-0500	500 g
P5104-4-1000	1 kg

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POTASSIUM DISULFITE

Synonyms: Potassium metabisulfite, Potassium pyrosulfite

- $K_2S_2O_5$
- M = 222.33 g/mol
- CAS [16731-55-8]
- EC number: 240-795-3

Physical data:
- Bulk density: ~ 1000 - 1200 kg/m^3
- Solub. in water (20 °C): 450 g/l
- Melting point: 190 °C
- pH (400 g/l H_2O, 20 °C) 3.5 - 5.0

Toxicological:
- LD 50 (oral, rat): 2300 mg/kg
- WGK: 1

Safety:
- R: 31-37-41
- S: 26-39
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5110-3 Potasium disulfite, extra pure

HS-No: 2832 20 00 00

Assay (iodometric)	min. 95 %	Heavy metals (as Pb)	max. 0.001 %
Assay (iodometric, SO_2)	54.8 - 57.6 %	Lead (Pb)	max. 0.0005 %
Appearance of solution	passes test	Mercury (Hg)	max. 0.0001 %
Chlorides (Cl)	max. 0.01 %	Selenium (Se)	max. 0.0005 %
Thiosulfates (S_2O_3)	passes test	Zinc (Zn)	max. 0.0025 %
Arsenic (As)	max. 0.0002 %	Organic volatile matter	passes test
Copper (Cu)	max. 0.0025 %	Residual solvent (according to ICH)	excluded by production process
Iron (Fe)	max. 0.001 %		

Code	Capacity
P5110-3-0500	500 g

POTASSIUM FLUORIDE

Synonyms: Fluorine potassium

- KF
- M = 58.10 g/mol
- CAS [7789-23-3]
- EC number: 232-151-5

Physical data:
- Spec. density: 2.49 g/cm^3
- Bulk density: ~ 400 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: ~ 855 °C
- Boiling point: 1500 °C
- Vapour pressure: (885 °C) 1.3 hPa
- pH (20 °C) > 7

Toxicological data:
- LD 50 (oral, rat): 245 mg/kg
- MAK: 2.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 009-005-00-2
- R: 23/24/25
- S: 26-36/37-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 III UN 1812
- IMDG: 6.1 III UN 1812
- IATA/ICAO: 6.1 III UN 1812
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 23

P5114-1 Potasium Fluoride, reagent grade

HS-No: 2826 19 00 00

Assay	min. 99 %	Arsenic (As)	max. 0.001 %
Potassium hexafluorosilicate (K_2SiF_6)	max. 0.1 %	Lead (Pb)	max. 0.001 %
Chloride (Cl)	max. 0.005 %	Iron (Fe)	max. 0.002 %
Sulfates (SO_4)	max. 0.05 %	Loss on ignition (500 °C. 15 min)	max. 0.3 %

Code	Capacity
P5114-1-0500	500 g
P5114-1-1000	1 kg

P5114-3 Potasium Fluoride, extra pure

HS-No: 2826 19 00 00

Assay	min. 99 %	Sulfates (SO_4)	max. 0.05 %
Free Acid (as HF)	max. 0.1 %	Arsenic (As)	max. 0.001 %
Free Alkali (as KOH)	max. 0.1 %	Heavy metals (as Pb)	max. 0.003 %
Insoluble in water	max. 0.1 %	Iron (Fe)	max. 0.002 %
Chlorides (Cl)	max. 0.005 %	Lead (Pb)	max. 0.001 %
Hexafluorosilicate (SiF_6)	max. 0.1 %	Calcination Residue (500 °C.15 min)	max. 0.3 %

Code	Capacity
P5114-3-0500	500 g

POTASSIUM HEXACYANOFERRATE (II) TRIHYDRATE

Potassium ferrocyanide, Yellow prussiate of potash, Ferrocyanpotassium, Potassium cyanoferrate (II), Potassium ferric cyanide

$K_4[Fe(CN)_6]\cdot 3H_2O$

- $C_6FeK_4N_6\cdot 3H_2O$
- M = 422.34 g/mol
- CAS [14459-95-1]
- EC number: 237-722-2

Physical data:
- Form: Solid
- Spec. density: 1.85 g/cm^3 (anhydrous substance)
- Bulk. density: ~ 950-1050 kg/m^3
- Solub. in water (20 °C): 289 g/l
- Melting point: ~ 70 °C (relese of crystalline water)
- pH (100 g/l H_2O, 20 °C) ~ 9.5 (anhydrous substance)

Toxicological data:
- LD 50 (oral, rat): 3613 mg/kg (anhydrous substance)
- WGK: 2

Safety:
- R: 52/53
- S: 50.1-61
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

P5117-1 Potasium hexacyanoferrate (II) trihydrate, reagent grade

HS-No: 2837 20 00 00

Assay (permanganometric)	99 - 102 %	Cadmium (Cd)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.002 %
Carbonates (CO_3)	max. 0.0015 %	Lead (Pb)	max. 0.002 %
Chlorides (Cl)	max. 0.01 %	Sodium (Na)	max. 0.01 %
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
P5117-1-0500	500 g
P5117-1-1000	1 kg

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POTASSIUM HEXACYANOFERRATE (III)

Synonyms: Potassium ferricyanotassium, Potassium cyanoferrate (III) Potassium ferric (III) cyanide

$K_3[Fe(CN)_6]$

- $C_6FeK_3N_6$
- CAS [13746-66-2]
- EC number: 237-323-3

Physical data:
- Form: Solid
- Spec. density: 1.85 g/cm³
- Bulk density: ~ 900 - 1000 kg/m³
- Solub. in water (20 °C): 464 g/l
- pH (50 g/l H_2O, 20 °C) ~ 6

Toxicological data:
- WGK: 2

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

P5125-1 Potasium hexacyanoferrate (III), reagent grade

HS-No: 2837 20 00 00

Assay (Iodometric)	min. 99.0 %	Cobalt (Co)	max. 0.005 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.005 %
Chloride (Cl)	max. 0.01 %	Lead (Pb)	max. 0.002 %
Hexacyanoferrate (II) [$Fe(CN_6)$]	max. 0.02 %	Nickel (Ni)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.02 %
Cadmium (Cd)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Calcium (Ca)	max. 0.0005 %		

Code	Capacity
P5125-1-0500	500 g
P5125-1-1000	1 kg

POTASSIUM HYDROGEN CARBONATE

Synonyms: Potassium bicarbonate

- $KHCO_3$
- M = 100.12 g/mol
- CAS [298-14-6]
- EC number: 206-059-0

Physical data:
- Spec. density: 2.17 g/cm³
- Bulk density: ~ 900 - 1100 kg/m³
- Solub. in water (20 °C): 224 g/l
- Melting point: 292 °C
- pH (50 g/l H_2O, 20 °C) ~ 8.0 - 8.6

Toxicological data:
- LD 50 (oral, rat) > 2000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5135-1 Potasium hydrogen carbonate, reagent grade

HS-No: 2836 40 00 00

Assay ($KHCO_3$)	min. 99.5%	Silicate (SiO_3)	max. 0.005%
pH value (50 g/l ,25 °C)	max. 8.6	Sodium (Na)	max. 0.02%
Appearance of solution	passes test	Magnesium (Mg)	max. 0.003%
Insoluble matter in water	max. 0.002%	Aluminium (Al)	max. 0.002%
Chloride and chlorate (as Cl)	max. 0.005%	Calcium (Ca)	max. 0.003%
Sulfur compounds (as SO_4)	max. 0.005%	Iron (Fe)	max. 0.0005%
Total nitrogen (N)	max. 0.001%	Heavy metals (as Pb)	max. 0.0005%
Phosphate (PO_4)	max. 0.002%		

Code	Capacity
P5135-1-0500	500 g
P5135-1-1000	1 kg

P5135-3 Potasium hydrogen carbonate, extra pure

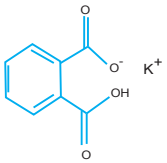
HS-No: 2836 40 00 00

Assay (acidimetric)	min 99.0%	Lead (Pb)	min. 0.002%
pH (1% solution)	8.0 - 8.6	Sodium (Na)	min. 0.1%
Chloride (Cl)	min. 0.005%	Sulphate (SO_4)	min. 0.02%
Iron (Fe)	min. 0.002%		

Code	Capacity
P5135-3-0500	500 g

POTASSIUM HYDROGEN PHTHALATE

Synonyms: Potassium biphthalate, Phthalic acid monopotassium salt



- $C_8H_5KO_4$
- M = 204.22 g/mol
- CAS [877-24-7]
- EC number: 212-889-4

Physical data:
- Spec. density: 1.636 g/cm³
- Bulk density: ~ 900 kg/m³
- Solub. in water (20 °C): 80 g/l
- Melting point: 295 - 300 °C
- pH (50 g/l H_2O, 20 °C) ~ 4.0

Toxicological data:
- LD 50 (oral, rat): > 3200 mg/kg
- WGk: 1

Transport/storage:
- LGK: 10-13
- Disposal: 3

P5141-1 Potasium hydrogen phthalate, reagent grade

HS-No: 2917 39 80 80

Assay (acidimetric)	min. 99.9 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
Phtahalic acid	max. 0.005 %	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.001 %	Nickel (Ni)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %	Sodium (Na)	max. 0.005 %
Cadmium (Cd)	max. 0.0005 %	Zinc (Zn)	max. 0.0005 %
Cobalt (Co)	max. 0.0005 %	Loss on drying (105 °C)	max. 0.2 %

Code	Capacity
P5141-1-0500	500 g
P5141-1-1000	1 kg

POTASSIUM HYDROGEN SULFATE

Synonyms: Potassium bisulfate

- $KHSO_4$
- M = 136.17 g/mol
- CAS [7646-93-7]
- EC number: 231-594-1

Physical data:
- Spec. density: 2.32 g/cm³
- Bulk density: ~ 1140 kg/m³
- Solub. in water (20 °C): 490 g/l (exothermic process)
- Melting point: 210 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 1

Toxicological:
- LD 50 (oral, rat): 2340 mg/kg
- WGK: 1

Safety:
- EC Index no.: 016-056-00-4
- R: 34-37
- S: 26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 II UN 2509
- IMDG: 8 II UN 2509
- IATA/ICAO: 8 II UN 2509
- PAX: 815
- CAO: 817
- LGK: 8
- Disposal: 14

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P5144-1 Potasium hydrogen sulfate, reagent grade

HS-No: 2833 29 90 00

Assay ($KHSO_4$)	99.0 - 101%	Sodium (Na)	max. 0.02%
Appearance of solution	passes test	Magnesium (Mg)	max. 0.0005%
Insoluble matter in water	max. 0.002%	Aluminium (Al)	max. 0.001%
Chloride (Cl)	max. 0.0005%	Calcium (Ca)	max. 0.002%
Total nitrogen (as N)	max. 0.002%	Iron (Fe)	max. 0.0005%
Phosphate (PO_4)	max. 0.001%	Arsenic (As)	max. 0.0003%
Silicate (SiO_3)	max. 0.001%	Heavy metals (as Pb)	max. 0.0005%

Code	Capacity
P5144-1-0500	500 g

P5144-3 Potasium hydrogen sulfate, extra pure

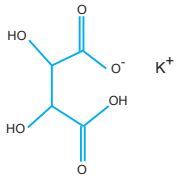
HS-No: 2833 29 90 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.01 %
Chlorides (Cl)	max. 0.003 %	Copper (Cu)	max. 0.005 %
Nitrates (NO_3)	max. 0.005 %	Heavy metals (as Pb)	max. 0.004 %
Phosphates (PO_4)	max. 0.005 %	Iron (Fe)	max. 0.005 %
Aluminium (Al)	max. 0.002 %	Magnesium (Mg)	max. 0.01 %
Arsenic (As)	max. 0.0005 %	Nickel (Ni)	max. 0.01 %

Code	Capacity
P5144-3-0500	500 g

POTASSIUM HYDROGEN TARTRATE

Synonyms: Potassium bitartrate, Tartaric acid monopotassium salt



- $C_4H_5KO_6$
- M = 188.14 g/mol
- CAS [868-14-4]
- EC number: 212-769-1

Physical data:
- Bulk density: ~ 720 kg/m³
- Solub. in water (20 °C): 5.7 g/l
- Melting point: ~ 250 °C (decomposes)
- pH (saturated solution H_2O, 20 °C) 3.4 - 3.7

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal:

P5146-3 Potasium hydrogen tartrate, extra pure

HS-No: 2918 13 00 00

Assay (acidimetric)	min. 99.5 %	Barium (Ba)	max. 0.15 %
pH (0.5%, H_2O)	3.0 - 3.8	Calcium (Ca)	max. 0.01 %
Free acid (as Tartaric acid)	max. 0.2 %	Copper (Cu)	max. 0.0025 %
Specific rotation ([a]20°/d)	8.0 - 9.2 °	Heavy Metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.02 %	Iron (Fe)	max. 0.002 %
Oxalates (C_2O_4)	max. 0.05 %	Lead (Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.008 %	Nickel (Ni)	max. 0.002 %
Ammonium (NH_4)	max. 0.005 %	Zinc (Zn)	max. 0.0025 %
Arsenic (As)	max. 0.0001 %	Loss on drying (105 °C)	max. 0.5 %

Code	Capacity
P5146-3-1000	1 kg

POTASSIUM HYDROXIDE

Synonyms: Caustic potash, Potassium hydrate, Potassium oxide hydrate

- KOH
- M = 56.11 g/mol
- CAS [1310-58-3]
- EC number: 215-181-3

Physical data:
- Spec. density: 2.04 g/cm³
- Solub. in water (20 °C): soluble
- Melting point: 360 °C
- Boiling point: 1320 °C
- pH (56 g/l H_2O, 20 °C) ~ 14

Toxicological:
- LD 50 (oral, rat): 273 mg/kg
- WGK: 1

Safety:
- EC Index no.: 019-002-00-8
- R: 22-35
- S: 26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C6 II UN 1813
- IMDG: 8 II UN 1813
- IATA/ICAO: 8 II UN 1813
- PAX: 814
- CAO: 816
- LGK: 8 B
- Disposal: 13

P5158-1 Potasium hydrogen tartrate, reagent grade

HS-No: 2815 20 10 00

Assay (acicimetric)	min. 85.0 %	Calcium (Ca)	max. 5.0 ppm
Carbonate (as potassium carbonate)	max. 1.0 %	Cobalt (Co)	max. 1.0 ppm
Chloride (Cl)	max. 10 ppm	Chromium (Cr)	max. 1.0 ppm
Phosphate (PO_4)	max. 5.0 ppm	Copper (Cu)	max. 1.0 ppm
Sulphate (SO_4)	max. 5.0 ppm	Iron (Fe)	max. 5.0 ppm
Total nitrogen (N)	max. 5.0 ppm	Manganese (Mn)	max. 0.5 ppm
Heavy metasl (as Pb)	max. 5.0 ppm	Nickel (Ni)	max. 1.0 ppm
Aluminium (Al)	max. 10 ppm	Zinc (Zn)	max. 1.0 ppm

Code	Capacity
P5158-1-0500	500 g
P5158-1-1000	1 kg

P5159-1 Potassium hydroxide solution 10%, reagent grade

HS-No: 2815 20 10 00

Assay (acidimetric)	min. 10.0 %	Sulphate (SO_4)	max. 0.003 %
Carbonate (as Na_2CO_3)	max. 1 %	Total (N)	max. 0.005 %
Chloride (Cl)	max. 0.002 %	Aluminium (Al)	max. 0.001 %
Phosphate (PO_4)	max. 0.002 %	Heavy metals (as Pb)	max. 0.001 %
Silicates (SiO_2)	max. 0.005 %	Iron (Fe)	max. 0.001 %

Code	Capacity
P5159-1-1000	1 kg

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POTASSIUM HYDROXIDE, VOLUMETRIC SOLUTIONS

P5161-0 Potassium hydroxide, solution 0.1 mol/l (0.1N)

Synonyms: Caustic potash, Potassium hydrate, Potassium oxide hydrate

- KOH
- M = 56.11 g/mol
- CAS [1310-58-3]
- EC number: 215-181-3

Physical data:
- Density: 1.01 g/cm^3
- Boiling point: ~ 100 °C
- pH (20 °C) ~ 13

Toxicological data:
- LD 50 (oral, rat): 273 mg/kg (pure substance)
- WGK: 0

Safety:
- EC Index no.: 019-002-00-8
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C5 II UN 1814
- IMDG: 8 II UN 1814
- IATA/ICAO: 8 II UN 1814
- PAX: 809
- CAO: 813
- LGK: 8 B

1ml = 0.005611 g KOH

HS-No: 2815 20 90 00

Code	Capacity
P5161-0-1000	1.0 L

P5168-0 Potassium hydroxide, solution 0.5 mol/l (0.5N)

Synonyms: Caustic potash, Potassium hydrate, Potassium oxide hydrate

- KOH
- M = 56.11 g/mol
- CAS [1310-58-3]
- EC number: 215-181-3

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 13

Toxicological data:
- LD 50 (oral, rat): 273 mg/kg (pure substance)
- WGK: 0

Safety:
- EC Index no.: 019-002-00-8
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C5 II UN 1814
- IMDG: 8 II UN 1814
- IATA/ICAO: 8 II UN 1814
- PAX: 809
- CAO: 813
- LGK: 8 B

1ml = 0.02806 g KOH

HS-No: 2815 20 90 00

Code	Capacity
P5168-0-1000	1.0 L

P

P5172-0 Potassium hydroxide, solution 1 mol/l (1N)

Synonyms: Caustic potash, Potassium hydrate, Potassium oxide hydrate

- KOH
- M = 56.11 g/mol
- CAS [1310-58-3]
- EC number: 215-181-3

Physical data:
- Density: 1.05 g/cm^3
- pH (20 °C) ~ 14

Toxicological data:
- LD 50 (oral, rat): 273 mg/kg (pure substance)
- WGK: 0

Safety:
- EC Index no.: 019-002-00-8
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 II UN 1814
- IMDG: 8 II UN 1814
- IATA/ICAO: 8 II UN 1814
- PAX: 809
- CAO: 813
- LGK: 8 B
- Disposal: 13

1ml = 0.05611 g KOH

HS-No: 2815 20 90 00

Code	Capacity
P5172-0-1000	1.0 L

P5175-0 Potassium hydroxide, solution 2 mol/l (2N)

Synonyms: Caustic potash, Potassium hydrate, Potassium oxide hydrate

- KOH
- M = 56.11 g/mol
- CAS [1310-58-3]
- EC number: 215-181-3

Physical data:
- Density: ~1.09 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 019-002-00-8
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 II UN 1814
- IMDG: 8 II UN 1814
- IATA/ICAO: 8 II UN 1814
- PAX: 809
- CAO: 813
- LGK: 8 B
- Disposal: 13

1ml = 0.11222 g KOH

HS-No: 2815 20 90 00

Code	Capacity
P5175-0-1000	1.0 L

POTASSIUM IODATE

Synonyms:

- KIO^3
- M = 214.00 g/mol
- CAS [7758-05-6]
- EC number: 231-831-9

Physical data:
- Spec.density: 3.98 g/cm^3
- Bulk density: ~ 2000 kg/m^3
- Solub. in water (20 °C): soluble
- elting point: 560 °C
- pH (50 g/l H_2O, 20 °C) ~ 6

Toxicological data:
- WGK: 1

Safety:
- R: 8
- S: 17
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1479
- IMDG: 5.1 II UN 1479
- IATA/ICAO: 5.1 II UN 1479
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 22

P5180-3 Potassium iodate, extra pure

Assay (iodometric)	min. 99 %	Arsenic (As)	max. 0.0003 %
pH (5%, H_2O)	5 - 8	Copper (Cu)	max. 0.001 %
Acidity/alkalinity	passes test	Iron (Fe)	max. 0.005 %
Chlorides, chlorates, bromides (as Cl)	max. 0.02 %	Lead (Pb)	max. 0.001 %
Iodides (I)	max. 0.002 %	Zinc (Zn)	max. 0.001 %
Sulfates (SO_4)	max. 0.05 %	Loss on drying (105 °C, 3 h)	max. 0.5 %

HS-No: 2829 90 80 00

Code	Capacity
P5180-3-0500	500 g

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POTASSIUM IODIDE

Synonyms: Knollide

- KI
- M = 166.01 g/mol
- CAS [7681-11-0]
- EC number: 231-659-4]

Physical data:
- Spec. density: 3.13 g/cm^3
- Bulk density: ~ 1500 kg/m^3
- Solub. in water (20 °C): soluble

- Melting point: 686 °C
- Boiling point: 1330 °C
- Vapour pressure: (745 °C) 1.3 hPa
- pH (50 g/l H_2O, 20 °C) ~ 6.9

Toxicological data:
- LD 50 (oral, rat): 2779 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- disposal: 14

P5182-1 Potassium iodide, reagent grade

HS-No: 2827 60 00 90

Assay (argentometric)	min. 99.5 %	Barium (Ba)	max. 0.002 %
pH (5% solution)	7 - 9	Calcium (Ca)	max. 0.0010 %
Alkalinity (as KOH)	max. 220 ppm	Copper (Cu)	max. 0.0002 %
Chloride and Bromide (as Cl)	max. 0.01 %	Iron (Fe)	max. 5 ppm
Iodates (IO_3)	max. 2 ppm	Magnesium (Mg)	max. 0.001 %
Sulphates (SO_4)	max. 50 ppm	Sodium (Na)	max. 0.030 %
Nitrogen compoinds (as N)	max. 10 ppm	Lead (Pb)	max. 0.0002 %
Heavy metals (as Pb)	max. 10 ppm	Insoluble matter	max. 50 ppm
Arsenic (As)	max. 1 ppm	Loss on drying	max. 0.2 %

Code	Capacity
P5182-1-0500	500 g
P5182-1-1000	1 kg

POTASSIUM NITRATE

Synonyms: Nitric acid potassium salt, Saltpeter

- KNO_3
- M = 101.11 g/mol
- CAS [7757-79-1]
- EC number: 231-818-8

Physical data:
- Spec. density: 2.11 g/cm^3
- Bulk density: ~ 800 kg/m^3
- Solub. in water (20 °C): 320 g/l

- Melting point: 334 °C
- pH (50 g/l H_2O, 20 °C) ~ 5.5 - 8.0

Toxicological data:
- LD 50 (oral, rat): 3750 mg/kg
- WGK: 1

Safety:
- R: 8
- S: 16-41

- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1486
- IMDG: 5.1 III UN 1486
- IATA/ICAO: 5.1 III UN 1486
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 14

P5196-1 Potassium nitrate, reagent grade

HS-No: 2834 21 00 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.001 %
pH (5%, H_2O)	6 - 8	Copper (Cu)	max. 0.0001 %
Chloride (Cl)	max. 0.001 %	Heavy Metals (as Pb)	max. 0.0005 %
Iodates (IO_3)	max. 0.0005 %	Iron (Fe)	max. 0.0003 %
Nitrites (NO_2)	max. 0.001 %	Lead (Pb)	max. 0.0001 %
Phosphates (PO_4)	max. 0.0005 %	Sodium (Na)	max. 0.02 %
Sulfates (SO_4)	max. 0.002 %	Zinc (Zn)	max. 0.0005 %
Ammonium (NH_4)	max. 0.001 %		

Code	Capacity
P5196-1-1000	1 kg

P5196-3 Potassium nitrate, extra pure

HS-No: 2834 21 00 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.005 %
Insoluble in water	max. 0.025 %	Copper (Cu)	max. 0.001 %
Acidity/Alkalinity	passes test	Heavy metals (as Pb)	max. 0.001 %
pH (5%, H_2O)	4.5 - 8.5	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Lead (Pb)	max. 0.001 %
Nitrites (NO_2)	max. 0.001 %	Magnesium (Mg)	max. 0.001 %
Phosphates (PO_4)	max. 0.003 %	Sodium (Na)	max. 0.1 %
Sulfates (SO_4)	max. 0.01 %	Zinc (Zn)	max. 0.001 %
Ammonium (NH_4)	max. 0.004 %	Loss on drying (105 °C, 4h)	max. 0.5 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
P5196-3-1000	1 kg

POTASSIUM NITRITE

Synonyms: Nitrous acid potasium salt

KNO_2

- KNO_2
- M = 85.11 g/mol
- CAS [7758-09-0]
- EC number: 231-832-4

Physical data:
- Form: Solid
- Spec. density: 1.92 g/cm^3
- Bulk density: ~ 700 kg/m^3

- Solub. in water (20 °C): soluble
- Melting point: 440 °C
- pH (50 g/l H_2O, 20 °C) ~7 - 10

Toxicological data:
- WGK:2

Safety:
- EC Index no.: 007-011-00-X
- R: 8-25-50
- S: 45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 O2 III UN 1488
- IMDG: 5.1 III UN 1488
- IATA/ICAO: 5.1 III UN 14868
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 14

P5204-1 Potassium nitrite, reagent grade

HS-No: 2834 10 00 00

Assay (permanganometric)	min. 98 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	max. 0.01 %	Heavy metals (as Pb)	max. 0.0005 %
pH (5%, H_2O)	7.0 - 10.0	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.005 %	Lead (Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %	Magnesium (Mg)	max. 0.002 %
Cadmium (Cd)	max. 0.0005 %	Sodium (Na)	max. 0.25 %
Calcium (Ca)	max. 0.003 %	Zinc (Zn)	max. 0.0005 %

Code	Capacity
P5204-1-0500	500 g

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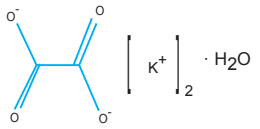
POTASSIUM OXALATE MONOHYDRATE

Synonyms: Oxalic acid dipotassium salt monohydrate



- $C_2K_2O_4 \cdot H_2O$)
- M = 184.24 g/mol
- CAS [6487-48-5]
- EC number: 209-506-8

Physical data:
- Spec. density: 2.13 g/cm^3
- Bulk density: ~ 700 - 1100 kg/m^3
- Solub. in water (20 °C): 360 g/l
- pH (50 g/l H_2O, 20 °C) ~ 7.0 - 8.5

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 607-007-00-3
- R: 21/22
- S: 24/25-37-46
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 6.1 T3 III UN 3282
- IMDG: 6.1 III UN 3282
- IATA/ICAO: 6.1 III UN 3282
- PAX: 619
- CAO: 619
- LGK: 10-13
- Disposal: 3

P5212-3 Potassium oxalate monohydrate, extra pure

HS-No: 2917 11 00 90

Assay (permanganometric)	min. 99 %	Copper (Cu)	max. 0.003 %
Insoluble in water	max. 0.025 %	Heavy metals (as Pb)	max. 0.002 %
pH (5%, H_2O)	7 - 8.5	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.002 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.02 %	Nickel (Ni)	max. 0.003 %
Ammonium (NH_4)	max. 0.005 %		

Code	Capacity
P5212-3-0500	500 g

POTASSIUM PERMANGANATE

Synonyms: Permanganic acid potassium salt

- $KMnO_4$
- M = 158.04 g/mol
- CAS [7722-64-7]
- EC number: 231-760-3

Physical data:
- Spec. density: 2.70 g/cm^3
- Bulk density: ~ 1300 - 1600 kg/m^3
- Solub. in water (20 °C): 64 g/l
- Melting point: > 240 °C (decomposes)
- Vapour pressure: (20 °C) < 0.01 hPa
- pH (20 g/l H_2O, 20 °C) ~ 7.9

Toxicological data:
- LD 50 (oral, rat): 1090 mg/kg
- WGK: 2

Safety:
- EC Index no.: 025-002-00-9
- R: 8-22-50/53
- S: 46-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1490
- IMDG: 5.1 II UN 1490
- IATA/ICAO: 5.1 II UN 1490
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 22

P5219-1 Potassium permanganate, reagent grade

HS-No: 2841 61 00 00

Assay (permanganometric)	min. 99 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	max. 0.1 %	Heavy metals (as Pb)	max. 0.003 %
Chlorides (Cl)	max. 0.005 %	Iron (Fe)	max. 0.002 %
Chlorides, Chlorates (as Cl)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.005 %	Loss on drying	max. 0.2 %
Total N	max. 0.005 %		

Code	Capacity
P5219-1-1000	1 kg

P5219-3 Potassium permanganate, extra pure

HS-No: 2841 61 00 00

Assay (iodometric)	min. 99 %	Sulfates (SO_4)	max. 0.03 %
Appearance of solution	passes test	Loss on drying	max. 0.02 %
Insoluble in water	max. 0.2 %	Residual solvents (Ph Eur/ICH)	Excluded by production process
Chlorides (Cl)	max. 0.01 %		

Code	Capacity
P5219-3-0500	500 g

POTASSIUM PERMANGANATE, VOLUMETRIC SOLUTIONS

P5226-0 Potassium permanganate, solution 0.002 mol/l (0.01 N)

Synonyms: Permanganate acid potassium salt

HS-No: 2841 61 00 00

- $KMnO_4$
- M = 158.04 g/mol
- CAS [7722-64-7]
- EC number: 231-760-3

Physical data:
- Density: 1.00 g/cm^3

Safety:
- EC Index no.: 025-002-00-9
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 22

1ml = 0.000316 g $KMnO_4$

Code	Capacity
P5226-0-1000	1.0 L

P5227-0 Potassium permanganate, solution 0.02 mol/l (0.1 N)

Synonyms: Permanganate acid potassium salt

HS-No: 2841 61 00 00

- $KMnO_4$
- M = 158.04 g/mol
- CAS [7722-64-7]
- EC number: 231-760-3

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 8

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 025-002-00-9
- R: 52/53
- S: 61
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 22

1ml = 0.00316 g $KMnO_4$

Code	Capacity
P5227-0-1000	1.0 L

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P5228-0 Potassium permanganate, solution 0.2 mol/l (1 N)

Synonyms: Permanganate acid potassium salt

HS-No: 2841 61 00 00

- $KMnO_4$
- M = 158.04 g/mol
- CAS [7722-64-7]
- EC number: 231-760-3

Physical data:
- Density: 1.01 g/cm^3

Safety:
- EC Index no.: 025-002-00-9
- R: 51/53
- S: 61
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 22

1ml = 0.0316 g $KMnO_4$

Code	Capacity
P5228-0-1000	1.0 L

POTASSIUM PEROXODISULFATE

Synonyms: Potassium persulfate, Peroxydisulfuric acid dipotassium salt

- $K_2S_2O_8$
- M = 270.33 g/mol
- CAS [7727-21-1]
- EC number: 231-781-8

Physical data:
> Spec. density: 2.48 g/cm^3
> Bulk density: ~ 780 kg/m^3
> Solub. in water (20 °C): 47 g/l
> Melting point: 100 °C (decomposes)

- pH (50 g/l H_2O, 20 °C) ~ 4 - 5

Toxicological data:
- LD 50 (oral, rat): 802 mg/kg
- WGK: 1

Safety:
- R: 8-22-36/37/38-42/43
- S: 22-24-26-37-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1492
- IMDG: 5.1 III UN 1492
- IATA/ICAO: 5.1 III UN 1492
- PAX: 561
- CAO: 518
- LGK: 5.1 B
- Disposal: 22

P5230-3 Potassium peroxodisulfate, extra pure

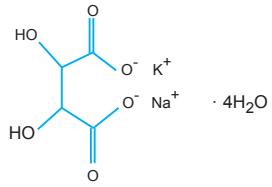
HS-No: 2833 40 00 10

Assay (iodometric)	min. 98 %	Iron (Fe)	max. 0.002 %
Insoluble in water	max. 0.02 %	Lead (Pb)	max. 0.005 %
Chlorides (Cl)	max. 0.005 %	Nickel (Ni)	max. 0.005 %
Copper (Cu)	max. 0.005 %	Manganese (Mn)	max. 0.0005 %
Heavy metals (as Pb)	max. 0.005 %		

Code	Capacity
P5230-3-0500	500 g

POTASSIUM SODIUM TARTRATE TETRAHYDRATE

Synonyms: Sodium potassium tartrate, Tartaric acid potassium sodium salt



- $C_4H_4KNaO_6 \cdot 4H_2O$
- M = 282.23 g/mol
- CAS [6381-59-5]
- EC number: 205-698-2

Physical data:
- Bulk density: ~ 1000 kg/m^3

- Solub. in water (20 °C): 630 g/l
- Melting point: 70 - 80 °C
- pH (50 g/l H_2O, 20 °C) ~ 6.5 - 8.5

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 3

P5234-1 Potassium sodium tartrate tetrahydrate, reagent grade

HS-No: 2918 13 00 90

Assay	min. 99 %	Ammonium (NH_4)	max. 0.002 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.004 %
pH (0.5%, H_2O)	7 - 8.5	Copper (Cu)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.001 %	Lead (Pb)	max. 0.0002 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.0005 %
Total N	max. 0.001 %	Zinc (Zn)	max. 0.0005 %

Code	Capacity
P5234-1-0500	500 g
P5234-1-1000	1 kg

POTASSIUM SULFATE

Synonyms: Sulfuric acid potassium salt

- K_2SO_4
- CAS [7778-80-5]
- EC number: 231-915-5

Physical data:
- Spec. density: 2.66 g/cm^3
- Bulk density: ~ 1050 kg/m^3

- Solub. in water (20 °C): 110 g/l
- Melting point: 1069 °C
- Boiling point: 1689 °C
- pH (50 g/l H_2O, 20 °C) 5.5 - 7.5

Toxicological data:
- LD 50 (oral, rat): 6600 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5249-1 Potassium sulfate, reagent grade

HS-No: 3104 30 00 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.005 %
Insoluble in water	max. 0.01 %	Copper (Cu)	max. 0.0005 %
pH (5%, H_2O)	5.5 - 7.5	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Lead (Pb)	max. 0.0005 %
Phosphate (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.002 %
Total N	max. 0.0005 %	Sodium (Na)	max. 0.005 %
Arsenic (As)	max. 0.0001 %	Zinc (Zn)	max. 0.0005 %
Cadmium (Cd)	max. 0.0005 %		

Code	Capacity
P5249-1-0500	500 g
P5249-1-1000	1 kg

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POTASSIUM THIOCYANATE

Synonyms: Potassium sulfocyanate, Potasssium rhodanide, Potassium sulfocyanide

- KSCN
- M = 97.18 g/mol
- CAS [333-20-0]
- EC number: 206-370-1

Physical data:
- Spec. density: 1.89 g/cm^3
- Bulk density: ~ 750 - 1000 kg/m^3

- Solub. in water (20 °C): soluble
- Melting point: 175 °C
- Boiling point: 500 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 5 - 7

Toxicological data:
- LD 50 (oral, rat): 854 mg/kg
- WGk: 1

Safety:
- EC Index no.: 615-004-00-3
- R: 20/21/22-32
- S: 13-36/37-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

P5258-1 Potassium thiocyanate, reagent grade

HS-No: 2838 00 00 00

Assay (argentometric)	min. 99 %	Sulfides (S)	max. 0.001 %
Insoluble in ethanol	max. 0.01 %	Ammonium (NH_4)	max. 0.001 %
Insoluble in water	max. 0.003 %	Copper (Cu)	max. 0.0002 %
Matter consuming l (as l)	max. 0.013 %	Iron (Fe)	max. 0.0001 %
pH (5%, H_2O)	5.3 - 8.5	Lead (Pb)	max. 0.0002 %
Chlorides (Cl)	max. 0.005 %	Sodium (Na)	max. 0.005 %
Sulfates (SO_4)	max. 0.001 %		

Code	Capacity
P5258-1-0500	500 g

P5258-3 Potassium thiocyanate, extra prue

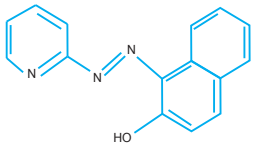
HS-No: 2838 00 00 00

Assay (argentometric)	min. 98 %	Ammonium (NH_4)	max. 0.001 %
Insoluble in water	max. 0.002 %	Copper (Cu)	max. 0.002 %
pH (5%, H_2O)	5.0 - 8.7	Iron (Fe)	max. 0.002 %
Chlorides (Cl)	max. 0.001 %	Lead (Pb)	max. 0.002 %
Sulfates (SO_4)	max. 0.005 %	Nickel (Ni)	max. 0.002 %

Code	Capacity
P5258-3-0500	500 g
P5258-3-1000	1 kg

1-(2-PYRIDYLAZO)-2-NAPHTHOL PAN, INDICATOR

Synonyms:



- $C_{15}H_{11}N_3O$
- M = 249.27 g/mol
- CAS [85-85-8]
- EC number: 201-637-9

Physical data:
- Solub. in water (20 °C): insoluble
- Melting point 137 - 140 °C
- Bulk density: ~ 190 kg/m^3

Toxicological data:
- WGk: 3

Transport/storage:
- LGK: 10-13
- Disposal: 3
- Use metal indicator: 0.01% - 0.1% in ethanol (96%)

P9000-1 1-(2-Pyridylazo)-2-naphthol PAN, indicator, reagent grade

HS-No: 2933 39 95 00

Spectral effective content	min. 90 %	Solubility test in ethanol	passes test
Sensitivity test to copper	passes test	Residue after ignition (as sulfate)	max. 0.1 %
Melting point	138 - 142 °C		

Code	Capacity
P9000-1-0005	5 g

PYRIDINE

Synonyms:

- C_5H_5N
- M = 79.10 g/mol
- CAS [110-86-1]
- EC number: 237-323-3

Physical data:
- Form: Liquid
- Density: 0.98 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -42 °C
- Boiling point: 115 °C
- Flash point: 17 °C
- Ignition temp.: 550 °C
- Vapoiur pressure: (20 °C) 0.20 hPa
- Refraction index: (20 °C/D) 1.5092
- Viscosity: (20 °C) 0.95 mPas
- Dipolar moment: (20 °C) 2.2 Debye
- Dielectric const: (25 °C) 12.3
- Evap. heat: (115 °C) 511 kJ/kg
- Saturation conc: (20 °C) 65 g/m^3
- Expl. limit (upper): 12.4 Vol%
- Expl. limit (lower): 1.7 Vol%
- pH (16 g/l H_2O, 20 °C) 8.5

Toxicological data:
- LD 50 (oral, rat): 891 mg/kg
- MAK: 5 ml/m^3, 16 ml/m^3
- WGK: 2

Safety:
- EC Index no.: 613-002-00-7
- R: 11-20/21/22
- S: 26-28.1-36/37-46
- VbF class: B
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1282
- IMDG: 3 II UN 1282
- IATA/ICAO: 3 II UN 1282
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 5

P9005-1 Pyridine, reagent grade

HS-No: 2837 20 00 00

Assay (G.C)	min. 99.5 %	Copper (Cu)	max. 0.000002 %
Identity (IR-spectrum)	passes test	Iron (Fe)	max. 0.00001 %
Density (20°/4°)	0.982 - 0.984	Lead (Pb)	max. 0.00001 %
Appearance	clear	Magnesium (Mg)	max. 0.00001 %
Colour	max. 10 Hazen	Manganese (Mn)	max. 0.000002 %
Solubility in water	passes test	Nickel (Ni)	max. 0.000002 %
Chlorides (Cl)	max. 0.0005 %	Tin (Sn)	max. 0.00001 %
Sulfates (SO_4)	max. 0.0005 %	Zinc (Zn)	max. 0.00001 %
Aluminium (Al)	max. 0.00005 %	2-picoline (G.C)	max. 0.2 %
Barium (Ba)	max. 0.00001 %	Piperidine (G.C)	max. 0.01 %
Boron (B)	max. 0.000002 %	Ammonium (NH_3)	max. 0.002 %
Cadmium (Cd)	max. 0.000005 %	Reducing Substances	passes test
Calcium (Ca)	max. 0.00005 %	Non-volatile matter	max. 0.001 %
Chromium (Cr)	max. 0.000002 %	Water	max. 0.1 %
Cobalt (Co)	max. 0.000002 %		

Code	Capacity
P9005-1-2501	2.5 L

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P9005-4 Pyridine, HPLC grade

HS-No: 2837 20 00 00

See specification in Solvents Specification - 49

Code	Capacity
P9005-4-1001	1.0 L
P9005-4-4001	4.0 L

P9005-14 Pyridine, BIO grade

HS-No: 2837 20 00 00

See specification in Solvents Specification - 58

Code	Capacity
P9005-14-1001	1.0 L
P9005-14-4001	4.0 L

P9005-15 Pyridine, Ultra Dry grade

HS-No: 2837 20 00 00

See specification in Solvents Specification - 64

Code	Capacity
P9005-15-1001	1.0 L
P9005-15-4001	4.0 L

1-PROPANOL

Synonyms: n-propyl alcohol, Ethylcarbinol, 1-Hydroxypropane, n-propanal

- C_3H_8O
- M = 60.10 g/mol
- CAS [71-23-8]
- EC number: 237-323-

Physical data:
- Form: Liquid
- Density: 0.80 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -127 °C
- Boiling point: 96.5 - 98 °C
- Flash point: 15 °C
- Ignition temp.: 405 °C
- Vapour pressure: (20 °C) 19 hPa
- Viscosity: (20 °C) 0.95 mPas
- Dipolar moment: (20 °C) 1.7 Debye
- Dielectric const: (25 °C) 20.1
- Saturation conc.: (20 °C) 46 g/m^3
- Expl. limit (upper): 13.5 Vol%
- Expl. limit (lower): 2.1 Vol%
- pH (200 g/l H_2O, 20 °C) 7

Toxicological data:
- LD 50 (oral, rat): 1870 mg/kg
- WGk: 1

Safety:
- EC Index no.: 6.3-003-00-0
- R: 11-41-67
- S: 7-16-24-39
- VbF class: B
- Poison calss CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1274
- IMDG: 3 II UN 1274
- IATA/ICAO: 3 II UN 1274
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 5

PR101-1 1-Propanol, reagent grade

HS-No: 2837 20 00 00

Assay (GC)	min. 99.5 %	Iron (Fe)	max. 0.00001 %
Identity (IR-spectrum)	passes test	Lead (Pb)	max. 0.00001 %
Density (20°/4°)	0.803 - 0.804	Magnesium (Mg)	max. 0.00001 %
Appearance	clear	Manganese (Mn)	max. 0.000002 %
Colour	max. 10 Hazen	Nickel (Ni)	max. 0.000002 %
Solubility in Water	Passes test	Tin (Sn)	max. 0.00001 %
Acidity	max. 0.0004 meq/g	Zinc (Zn)	max. 0.00001 %
Alkalinity	max. 0.002 meq/g	Acetone (G.C)	max. 0.01 %
Aluminium (Al)	max. 0.00005 %	Ethanol (G.C)	max. 0.01 %
Barium (Ba)	max. 0.00001 %	Methanol (G.C)	max. 0.01 %
Boron (B)	max. 0.000002 %	2-Propanol (G.C)	max. 0.05 %
Cadmium (Cd)	max. 0.000005 %	Aldehydes and Ketone (as C_3H_6O)	max. 0.03 %
Calcium (Ca)	max. 0.00005 %	Substance darkened by H_2SO_4	passes test
Chromium (Cr)	max. 0.000002 %	Non-volatile matter	max. 0.0005 %
Cobalt (Co)	max. 0.000002 %	Water (K.F)	max 0.05 %
Copper (Cu)	max. 0.000002 %		

Code	Capacity
PR101-1-2500	2.5 L
PR101-1-4000	4.0 L

PR101-3 1-Propanol, extra pure

HS-No: 2837 20 00 00

Assay	min. 99 %	Iron (Fe)	max. 0.0005 %
Acidity	max. 0.001 meq/g	Lead (Pb)	max. 0.0002 %
Alkalinity	max. 0.001 meq/g	Nickel (Ni)	max. 0.0002 %
Ethanol (G.C)	max. 0.1 %	Substances Darkened by H_2SO_4	passes test
Methanol (G.C)	max. 0.1 %	Non-volatile matter	max. 0.001 %
2-Propanol (G.C)	max. 0.1 %	Water	max. 0.2 %
Copper (Cu)	max. 0.0002 %		

Code	Capacity
PR101-3-2500	2.5 L

PR101-4 1-Propanol, HPLC grade

HS-No: 2837 20 00 00

See specification in Solvents Specification - 48

Code	Capacity
PR101-4-1001	1.0 L
PR101-4-4001	4.0 L

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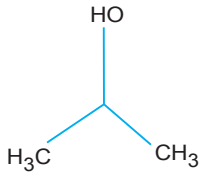
2-PROPANOL

Synonyms; Isopropyl alcohol, Isopropanol, Dimethylcarbinol, 2-Hydroxypropane



- C_3H_8O
- M = 60.10 g/ml
- CAS [67-63-0]
- EC number: 200-661-7

Physical data:
- Density: 0.78 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~89.5 °C
- Boiling point: 82.4 °C
- Flash point: 12 °C
- Igintion temp.: 425 °C
- Vapoiur pressure: (20 °C) 43 hPa
- Viscosity: (20 °C) 2.27 mPas
- Dipolar moment: (20 °C) 1.66 Debye
- Dielectric const.: (25 °C) 18.3
- Saturation conc.: (20 °C) 105 g/m^3
- Expl. limit (upper): 12.7 Vol%
- Expl. limit (lower): 2 Vol%
- pH (20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): 5045 mg/kg
- MAK: 200 ml/m^3, 500 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-117-00-0
- R: 11-36-67
- S: 7-16-24/25-26
- VbF class: B
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 3 F1 II UN 1219
- IMDG: 3 II UN 1219
- IATA/ICAO: 3 II UN 1219
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

PR141-1 2-Propanol, reagent grade

HS-No: 2905 12 00 00

Assay	min. 99.7 %	Calcium (Ca)	max. 0.5 ppm
Colour	max. 10 Hazen	Cadmium (Cd)	max. 0.05 ppm
Acidity	max. 0.0001 meq/g	Cobalt (Co)	max. 0.02 ppm
Carbonyl compounds (as CO)	max. 0.002 ppm	Chromium (Cr)	max. 0.02 ppm
Matter discoloured (H_2SO_4)	max. 10 ppm	Copper (Cu)	max. 0.02 ppm
Acetone (GC)	max. 0.01 ppm	Iron (Fe)	max. 0.1 ppm
Ethanol (GC)	max. 0.01 ppm	Magnesium (Mg)	max. 0.1 ppm
Methanol (GC)	max. 0.1 ppm	Manganese (Mn)	max. 0.02 ppm
Evaporation residue	max. 0.001 ppm	Nickel (Ni)	max. 0.02 ppm
Water	max. 0.1 %	Lead (Pb)	max. 0.1 ppm
Aluminium (Al)	max. 0.5 ppm	Tin (Sn)	max. 0.1 ppm
Boron (B)	max. 0.02 ppm	Zinc (Zn)	max. 0.1 ppm
Barium (Ba)	max. 0.1 ppm		

Code	Capacity
PR141-1-1000	1.0 L
PR141-1-2500	2.5 L
PR141-1-4000	4.0 L
PR141-1-920E	200 L

PR141-4 2-Propanol, HPLC grade

HS-No: 2905 12 00 00

See specification in Solvents Specification - 48

Code	Capacity
PR141-4-1001	1.0 L
PR141-4-2501	2.5 L
PR141-4-4001	4.0 L

PR141-6 2-Propanol, EC-100

HS-No: 2905 12 00 00

Purity (GC)	min. 99.8 %	Indium (In)	max. 10 ppb
Color	max. 10 Hazen	Potassium (K)	max. 10 ppb
Free Acid (as C_2H_5COOH)	max. 10 ppm	Lithium (Li)	max. 5 ppb
Spec. resistance	max. 10 MΩ cm	Magnesium (Mg)	max. 5 ppb
Chloride (Cl)	max. 0.02 ppm	Manganese (Mn)	max. 5 ppb
Phosphate (PO_4)	max. 0.005 ppm	Molybdenum (Mo)	max. 10 ppb
Sulphate (SO_4)	max. 0.1 ppm	Sodium (Na)	max. 100 ppb
Heavy metals (as Pb)	max. 20 ppm	Nickel (Ni)	max. 5 ppb
Alkalinity (as NH_3)	max. 10 ppm	Lead (Pb)	max. 10 ppb
Silver (Ag)	max. 5 ppb	Platinum (Pt)	max. 20 ppb
Aluminium (Al)	max. 50 ppb	Antimony (Sb)	max. 10 ppb
Arsenic (As)	max. 10 ppb	Tin (Sn)	max. 20 ppb
Gold (Au)	max. 20 ppb	Strontium (Sr)	max. 5 ppb
Boron (B)	max. 10 ppb	Titanium (Ti)	max. 20 ppb
Barium (Ba)	max. 20 ppb	Thallium (Tl)	max. 10 ppb
Beryllium (Be)	max. 10 ppb	Vanadium (V)	max. 10 ppb
Bismuth (Bi)	max. 20 ppb	Zinc (Zn)	max. 5 ppb
Calcium (Ca)	max. 10 ppb	Zirconium (Zr)	max. 10 ppb
Cadmium (Cd)	max. 5 ppb	Aldehydes and ketones (as C_3H_6O)	max. 50 ppm
Cobalt (Co)	max. 5 ppb	Evaporation Residue	max. 3 ppm
Chromium (Cr)	max. 5 ppb	Substances Reducing Potsssium Permanganate (as O)	max. 2.5 ppm
Copper (Cu)	max. 5 ppb	Water	max. 0.05 %
Iron (Fe)	max. 5 ppb		
Gallium (Ga)	max. 10 ppb		

Code	Capacity
PR141-6-2500	2.5 L
PR141-6-4000	4.0 L

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PR142-6 I.P.A., EC-100

HS-No: 2905 12 00 00

Purity (GC)	min. 99.9 %	Indium (In)	max. 10 ppb
Color	max. 10 Hazen	Potassium (K)	max. 10 ppb
Free Acid (as C_2H_5COOH)	max. 10 ppm	Lithium (Li)	max. 5 ppb
Spec. resistance	max. 10 MΩ cm	Magnesium (Mg)	max. 5 ppb
Chloride (Cl)	max. 0.02 ppm	Manganese (Mn)	max. 5 ppb
Phosphate (PO_4)	max. 0.005 ppm	Molybdenum (Mo)	max. 10 ppb
Sulphate (SO_4)	max. 0.1 ppm	Sodium (Na)	max. 100 ppb
Heavy metals (as Pb)	max. 20 ppm	Nickel (Ni)	max. 5 ppb
Alkalinity (as NH_3)	max. 10 ppm	Lead (Pb)	max. 10 ppb
Silver (Ag)	max. 5 ppb	Platinum (Pt)	max. 20 ppb
Aluminium (Al)	max. 50 ppb	Antimony (Sb)	max. 10 ppb
Arsenic (As)	max. 10 ppb	Tin (Sn)	max. 20 ppb
Gold (Au)	max. 20 ppb	Strontium (Sr)	max. 5 ppb
Boron (B)	max. 10 ppb	Titanium (Ti)	max. 20 ppb
Barium (Ba)	max. 20 ppb	Thallium (Tl)	max. 10 ppb
Beryllium (Be)	max. 10 ppb	Vanadium (V)	max. 10 ppb
Bismuth (Bi)	max. 20 ppb	Zinc (Zn)	max. 5 ppb
Calcium (Ca)	max. 10 ppb	Zirconium (Zr)	max. 10 ppb
Cadmium (Cd)	max. 5 ppb	Aldehydes and ketones (as C_3H_6O)	max. 50 ppm
Cobalt (Co)	max. 5 ppb	Evaporation Residue	max. 3 ppm
Chromium (Cr)	max. 5 ppb	Substances Reducing Potsssium Permanganate (as O)	max. 2.5 ppm
Copper (Cu)	max. 5 ppb	Water	max. 0.05 %
Iron (Fe)	max. 5 ppb		
Gallium (Ga)	max. 10 ppb		

Code	Capacity
PR142-6-9025	25 L

PR141-11 2-Propanol, HPLC grade

HS-No: 2905 12 00 00

See specification in Solvents Specification - 25

Code	Capacity
PR141-11-2501	2.5 L
PR141-11-4001	4.0 L

PR141-12 2-Propanol, HPLC grade

HS-No: 2905 12 00 00

See specification in Solvents Specification - 18

Code	Capacity
PR141-12-2501	2.5 L
PR141-12-4001	4.0 L

P

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Chemical list : R

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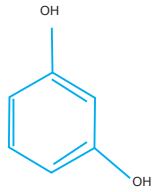
RESORCINOL

Synonyms: 1,3-Dihydroxybenzene



- $C_6H_6O_2$
- M = 110.11 g/mol
- CAS [108-46-3]
- EC number: 203-585-2

Physical data:
- Spec. density: ~ 1.28 g/cm^3
- Bulk density: ~ 600 - 700 km/m^3
- Solub. in water (20 °C): soluble
- Melting point: 109 - 111 °C
- Boiling point: (20 hPa) 177 °C
- Flash point: 127 °C
- Ignition temp.: 605 °C
- Vapour pressure: (20 °C) 0.1 hPa
- pH (100 g/l H_2O, 20 °C) ~ 4.6

Toxicological data:
- LD 50 (oral, rat): 301 mg/kg
- WGK: 1

Safety:
- EC Index no.: 604-010-00-1
- R: 22-36/38-50
- S: 26-46-61
- Poison class CH (Swiss): 3

R2003-3 Resorcinol, extra pure

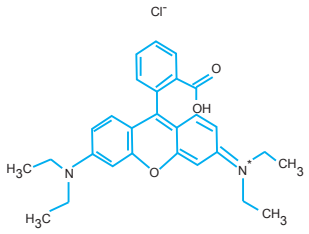
HS-No: 2907 21 00 00

Assay (G.C)	min. 98.5 %
Appearance of solution	passes test
Free acid (as H_2SO_4)	max. 0.01 %
Free alkali (as NH_3)	max. 0.01 %
Chlorides (Cl)	max. 0.01 %
Sulfates (SO_4)	max. 0.05 %
Heavy metals (as Pb)	max. 0.001 %
Pyrocatechol	max. 0.01 %
Organic volatile impurities	passes test
Sulfated ash	max. 0.05 %
Loss on drying (on silica gel)	max. 1 %
Dichloromethane (HS-GC)	max. 0.06 %
Phenol	passes test
Other residual solvents (Ph Eur/ICH)	excluded by production process

Code	Capacity
S2003-3-0250	250 g

RHODAMINE B

Synonyms: Tetraethylrhodamine, Brilliant ping B



- $C_{28}H_{31}ClN_2O_3$
- M = 479.02 g/mol
- CAS [81-88-9]
- EC number: 201-383-9

Physical data:
- Spec. density: 1.31 g/cm3 (20 °C)
- Solub. in water 34 g/l (20 °C)
- pH Value 2.0 (50 g/l, H_2O, 20 °C)
- Melting point: 199 - 201 °C
- Bulk density: ~ 240 kg/m^3

Toxicological data:
- LD 50 (oral, rat): > 2000 mg/kg

safety:
- Irritant dangerous for the environment
- R: 41-52/53
- S: 22-26-39-61
- Poison class CH (CH) 3
- WGK: 3*

Transport/storage:
- LGK: 10-13

R2050-1 Rhodamine B, extra pure

HS-No: 3204 13 00 00

Dye content (spectrophotometrically)	min. 90 %
Identity (UV/VIS-Spectrum)	passes test
Absorption maximum λ max (ethanol 50%)	550 - 552 nm
Spec. Absorptivity A1%/1cm (λ max; 0.0003%, ethanol 50%)	2115 - 2350
TLC-Test	passes test
Loss on drying (110 °C)	max. 5.0 %
Suitability for microscopy	passes test

Code	Capacity
R2050-1-0100	100 g

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Chemical list : S

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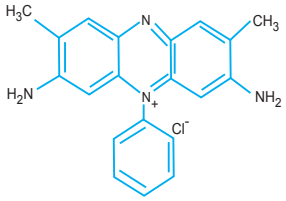
SAFRANINE 0, C.I. 50240

Synonyms:



- $C_{20}H_{19}ClN_4$
- M = 350.88 g/mol
- CAS [477-73-6]
- EC number: 207-518-8

Physical data:
- Form: Solid
- Bulk density: ~ 400 kg/m^3
- Solub. in water (20 °C): 50 g/l
- pH (10 g/l, 20 °C) ~ 10

Toxicological data:
- WGK: 2

Transport/storage:
- LGK: 10-13

S1001-1 Safranine O, C.I. 50240, for microscopy

HS-No: 3204 13 00 00

Absorption maximum λ in ethanol 50%	530 - 534 nm
Absorptivity (A1%/1 cm; λ max)	875 - 1450
Loss on drying (110 °C)	max. 15 %

Code	Capacity
S1001-1-0010	10 g
S1001-1-0025	25 g

SELENIUM STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Density: 1.01 g/cm^3
- Solub. in water (20 °): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 3

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IDMG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8

S1003-0 Selenium standard solution 1000ng/l for AA (selenium dioxide in nitric acid 0.5 mol/l)

HS-No: 3822 00 00 00

Composition ..... 1000±5 mg/l

Code	Capacity
S1003-0-0500	500 ml

SILVER STANDARD SOLUTION 1000MG/L FOR AA

Synonyms:

Physical data:
- Density: 1.02 g/mol
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Toxicological data:
- WGK: 3

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IDMG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8

S1005-0 Silver standard solution 1000 mg/l for AA (silver nitrate in nitric acid 0.5 mol/l)

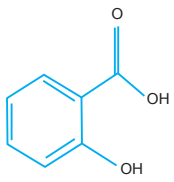
HS-No: 3822 00 00 00

Composition ..... 1000 ± 5 mg/l

Code	Capacity
S1005-0-0500	500 ml

SALICYLIC ACID

Synonyms: 2-Hydroxybenzoic acid



- $C_7H_6O_3$
- M = 138.12 g/mol
- CAS [69-72-7]
- EC number: 200-712-3

Physical data:
- Spec. density: 1.443 g/cm^3
- Bulk density: ~ 400 - 500 kg/m^3
- Solub. in water (20 °C): 2 g/l
- Melting point: 158 - 161 °C
- Boiling point: 211 °C
- Flash point: 157 °C
- Ignition temp.: 500 °C
- Vapour pressure: (100 °C) < 1 hPa
- pH (saturated solution H_2O, 20 °C) ~3

Toxicological data:
- LD 50 (oral, rat): 891 mg/kg
- WGK: 1

Safety:
- R: 22-37/38-41
- S: 26-39-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 4

S1009-3 Salicylic acid, extra pure

HS-No: 2918 21 00 00

Assay (acidimetric)	min. 99.5 %	Iron (Fe)	max. 0.0001 %
Appearance of solution 10% ethanol 96%	passes test	Reaction to H_2SO_4	passes test
Chlorides (Cl)	max. 0.001 %	Sulfated ash	max. 0.05 %
Sulfates (SO_4)	max. 0.005 %	Loss on drying	max. 0.3 %
Heavy metals (as Pb)	max. 0.0001 %	Residual solvents (Ph Eur/ICH)	excluded by production process

Code	Capacity
S1009-3-0250	250 g
S1009-3-0500	500 g

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SILICON DIOXIDE

Synonyms:

SiO_2

- O_2Si
- M = 60.08 g/mol
- CAS [763-86-9]
- EC number: 231-545-4

Physical data:
- Form: Solid
- Spec. density: ~ 2.2 g/m^3
- Solub. in water (20 °C): Insoluble
- Melting point: 1726 °C
- pH (40 g/l H_2O suspension, 20 °C) ~ 3.7 - 4.7

Toxicological data:
- LD 50 (oral, rat): > 10000 mg/kg
- MAK: 4 mg/m^3
- WGK: 0

Safety:
- S: 22
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

Applications: Painting, in the coating industry, in the rubber in dustry, manufacture of adhesiver, manufacturing of inks, cosmetics, in food industry.

S2040-1 Silicon dioxide

HS-No: 2834 29 80 00

Assay (on dried sample)	min. 99.8 %	Aluminium (as Al_2O_3)	max. 0.05 %
Specific surface area (BET)	200 ± 25 m^2/g	Iron (as Fe_2O_3)	max. 0.003 %
HCl content	max. 0.025 %	Titanium (as TiO_2)	max. 0.03 %
pH (4%, H_2O)	3.7 - 4.7	Loss on drying (195 °C)	max. 1.5 %

Code	Capacity
S2040-1-0500	500 g

SILVER NITRATE

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Spec. density: 4.35 g/cm^3
- Bulk density: ~ 2350 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 212 °C
- Boiling point: 444 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) 5.4 - 6.4

Toxicological data:
- LD 50 (oral, rat): 1173 mg/kg
- MAK: 0.01 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 047-001-00-2
- R: 34-50/53
- S: 26-36/37/39-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1493
- IMDG: 5.1 II UN 1493
- IATA/ICAO: 5.1 II UN 1493
- PAX: 508
- CAO: 511
- LGK: 5.1 B
- Disposal: 27

S

S3052-1 Silver nitrate, reagent grade

HS-No: 2843 21 00 00

Assay (argentometric)	min. 99.98%	Chloride (Cl)	max. 0.0002%
Clarity of solution	passes test	Copper (Cu)	max. 0.0002%
Free acid	passes test	Iron (Fe)	max. 0.0002%
Substances not precipitated by HCl	max. 0.009%	Nickel (Ni)	max. 0.0005%
Cadmium (Cd)	max. 0.0001%	Zinc (Zn)	max. 0.0002%
Sulfate (SO_4)	max. 0.002%	Substances insoluble in water	max. 0.01%
Lead (Pb)	max. 0.001%		

Code	Capacity
S3052-1-0100	100 g
S3052-1-0250	250 g

S3052-3 Silver nitrate, extra pure

HS-No: 2843 21 00 00

Assay	min. 99.0%	Copper (Cu)	max. 0.002%
Solubility in water	passes test	Iron (Fe)	max. 0.001%
Acidity	passes test	Appearance	glossy crystal or white crystalline powder
Chloride (Cl)	max. 0.001%		
Sulfate (SO_4)	max. 0.005%	Identification A	passes test
Substances not precipitatec by HCl	max. 0.02%	Identification B	passes test

Code	Capacity
S3052-3-0100	100 g
S3052-3-0250	250 g

SILVER NITRATE, VOLUMETRIC SOLUTIONS

S3055-0 Silver nitrate, solution 0.01 mol/l (0.01 N)

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 2

Safety:
- EC Index no.: 047-001-00-2
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

1ml = 0.001699 g $AgNO_3$

HS-No: 2843 21 00 00

Code	Capacity
S3055-0-1001	1.0 L

S3056-0 Silver nitrate, solution 0.02 mol/l (0.02 N)

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- LD 50 (oral, rat): 1173 mg/kg (pure substance)
- WGK: 2

Safety:
- EC Index no.: 047-001-00-2
- R: 52/53
- S: 61
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

1ml = 0.003398 g $AgNO_3$

HS-No: 2843 21 00 00

Code	Capacity
S3056-0-1001	1.0 L

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S3057-0 Silver nitrate, solution 0.05 mol/l (0.05 N)

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Density: 1.00 g/cm^3
- pH (20 °C) ~ 6

Toxicological data:
- LD 50 (oral, rat): 1173 mg/kg (pure substance)
- WGK: 2

Safety:
- EC Index no.: 047-001-00-2
- R: 52/53
- S: 61
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

1ml = 0.008495 g $AgNO_3$

HS-No: 2843 21 00 00

Code	Capacity
S3057-0-1001	1.0 L

S3059-0 Silver nitrate, solution 0.1 mol/l (0.1N)

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 4 - 5

Toxicological data:
- LD 50 (oral, rat): 1173 mg/kg (pure substance)
- MAK: 0.01 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 047-001-00-2
- R: 52/53
- S: 61
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

1ml = 0.01699 g $AgNO_3$

HS-No: 2843 21 00 00

Code	Capacity
S3059-0-1001	1.0 L
S3059-0-2501	2.5 L

S3062-0 Silver nitrate, solution 1 mol/l (1N)

Synonyms:

- $AgNO_3$
- M = 169.87 g/mol
- CAS [7761-88-8]
- EC number: 231-853-9

Physical data:
- Density: 1.14 g/cm^3
- pH (20 °C) ~ 7 - 9

Toxicological data:
- LD 50 (oral, rat): 1173 mg/kg (pure substance)
- MAK: 0.01 mg/m^3
- WGK: 3

Safety:
- EC Index no.: 047-001-00-2
- R: 34-51/53
- S: 26-36/37/39-45-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C9 II UN 1760
- IMDG: 8 II UN 1760
- IATA/ICAO: 8 II UN 1760
- PAX: 808
- CAO: 812
- LGK: 8 B

1ml = 0.1699 g $AgNO_3$

HS-No: 2843 21 00 00

Code	Capacity
S3062-0-1001	1.0 L

SILVER SULFATE

Synonyms: Sulfuric acid silver salt

- Ag_2SO_4
- M = 311.79 g/mol
- CAS [10294-26-5]
- EC number: 233-653-7

Physical data:
- Spec. density: 5.45 g/mol
- Bulk density: ~ 1200 kg/m^3

- Solub. in water (25 °C): 8 g/l
- Melting point: 655 °C
- pH (5 g/l H_2O, 25 °C) ~ 5 - 6

Toxicological data:
- LD 50 (oral, rat): ~ 5000 mg/kg
- MAK: 0.01 mg/m^3
- WGK: 3

Safety:
- R: 41
- S: 22-26-39
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 27

S3068-1 Silver fulfate, reagent grade

HS-No: 2843 29 00 00

Assay (argentometric)	min. 99.5%	Lead (Pb)	max. 0.001%
Nitrates (NO_3)	max. 0.001%	Nickel (Ni)	max. 0.001%
Chloride (Cl)	max. 0.001%	Zinc (Zn)	max. 0.0001%
Copper (Cu)	max. 0.0001%	Insoluble in water and silver chloride	max. 0.02%
Iron (Fe)	max. 0.0001%	Non precipitable in HCL	max. 0.01%

Code	Capacity
S3068-1-0100	100 g
S3068-1-0250	250 g

S3068-3 Silver fulfate, extra pure

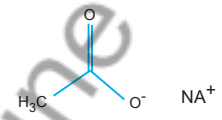
HS-No: 2843 29 00 00

Assay	min 99.0%	Identification B	passes test
Solubility in water	passes test	Nitrate (NO_3)	max. 0.01 %
Substances not precipitated by HCL	max. 0.1%	Chloride (Cl)	max. 0.01 %
Total Nitrogen (as N)	max. 0.01%	Copper (Cu)	max. 0.001 %
Appearance	white crystal or	Iron (Fe)	max. 0.003 %
ntification A	crystalline powder	Lead (Pb)	max. 0.005 %
	passes test	Nickel (Ni)	max. 0.002 %

Code	Capacity
S3068-3-0100	100 g
S3068-3-0250	250 g

SODIUM ACETATE ANHYDROUS

Synonyms: Acetic acid sodium salt



- CH_3COONa
- M = 82.03 g/mol
- CAS [127-09-3]
- EC number: 204-823-8

Physical data:
- Spec. density: 1.52 g/cm^3
- Bulk density: ~ 320 - 470 kg/m^3

- Solub. in water (20 °C): 365 g/l
- Melting point: 324 °C (decomposes)
- Boiling point: > 400 °C (decomposes)
- Flash point: > 250 °C
- Ignition temp.: 607 °C
- pH (50 g/l H_2O, 20 °C) 7.5 - 9.0

Toxicological data:
- LD 50 (oral, rat): 3530 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

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S5013-1 Sodium acetate anhydrous, reagent grade

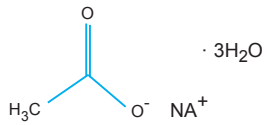
HS-No: 2915 22 00 00

Assay (titr. With $HClO_4$)	min. 99%	Aluminium (Al)	max. 0.001%
Appearance of solution (10% in water)	passes test	Calcium (Ca)	max. 0.001%
Insoluble in water	max. 0.01%	Copper (Cu)	max. 0.0003%
pH (5%, H_2O)	7.5 - 9.2	Heavy metals (as Pb)	max. 0.001%
Chloride (Cl)	max. 0.001%	Iron (Fe)	max. 0.0005%
Phosphates (PO_4)	max. 0.0005%	Magnesium (Mg)	max. 0.0005%
Sulfates (SO_4)	max. 0.003%	Potassium (K)	max. 0.02%

Code	Capacity
S5013-1-0500	500 g
S5013-1-1000	1 kg

SODIUM ACETATE TRIHYDRATE

Synonyms:



- $CH_3COONa \cdot 3H_2O$
- M = 136.08 g/mol
- CAS [6131-90-4]
- EC number: 204-823-8

Physical data:
- Spec. density: 1.42 g/cm³
- Bulk density: ~ 900 kg/m³
- Solub. in water (20 °C): 613 g/l
- Melting point: 58 °C
- Boiling point: > 400 °C (anhydrous substance) (decomposes)
- Flash point: > 250 °C (anhydrous substance)
- Ignition temp.: 607 °C
- pH (50 g/l H_2O, 20 °C) 7.5 - 9.2

Toxicological data:
- LD 50 (oral, rat): 3530 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5022-1 Sodium acetate trihydrate, reagent grade

HS-No: 2915 22 00 00

Assay (titr. With $HClO_4$)	min. 99.5%	Cadmium (Cd)	max. 0.0005%
Appearance of solution (10% in water)	passes test	Calcium (Ca)	max. 0.001%
Insoluble in water	max. 0.005%	Copper (Cu)	max. 0.0003%
pH (5%, H_2O)	7.5 - 9.0	Iron (Fe)	max. 0.0005%
Chloride (Cl)	max. 0.0005%	Heavy metals (as Pb)	max. 0.0005%
Phosphates (PO_4)	max. 0.0002%	Lead (Pb)	max. 0.0005%
Sulfates (SO_4)	max. 0.002%	Magnesium (Mg)	max. 0.0005%
Total N	max. 0.001%	Potassium (K)	max. 0.005%
Aluminium (Al)	max. 0.00002%	Zinc (Zn)	max. 0.0005%
Arsenic (As)	max. 0.0001%	$KMnO_4$ red. matter (as HCOOH)	max.0.005%

Code	Capacity
S5022-1-0500	500 g
S5022-1-1000	1 kg

S5022-4 Sodium acetate trihydrate, HPLC grade

HS-No: 2915 22 00 00

See specification in Solvents Specification - 50

Code	Capacity
S5022-4-0500	500 g
S5022-4-1000	1 kg

SODIUM BROMIDE

Synonyms: Bromo sodium

- NaBr
- M = 102.90 g/mol
- CAS [7647-15-6]
- EC number: 231-599-9

Physical data:
- Spec. density: 3.20 g/cm³
- Bulk density: ~ 1400 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 755 °C
- Boiling point: 1393 °C
- Vapour presure: (806 °C) 1.3 hPa
- pH (50 g/l H_2O, 20 °C) ~ 5.4

Toxicological data:
- LD 50 (oral, rat): 3500 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5029-1 Sodium bromide, reagent grade

HS-No: 2827 51 00 00

Assay (argentometric)	min. 99.5 %	Lithium (Li)	max. 0.00001 %
Aluminium (Al)	max. 0.000005 %	Magnesium (Mg)	max. 0.000005 %
Barium (Ba)	max. 0.0005 %	Manganese (Mn)	max. 0.000005 %
Calcium (Ca)	max. 0.000005 %	Nickel (Ni)	max. 0.000001 %
Copper (Cu)	max. 0.000005 %	Potassium (K)	max. 0.0005 %
Iron (Fe)	max. 0.000005 %	Thallium (Ti)	max. 0.000005 %
Lead (Pb)	max. 0.000005 %	Zinc (Zn)	max. 0.000005 %

Code	Capacity
S5029-1-0500	500 g

S5029-3 Sodium bromide, extra pure

HS-No: 2827 51 00 00

Assay (argentometric)	min. 99.5 %	Barium (Ba)	max. 0.001 %
Appearance of solution	passes test	Calcium (Ca)	max. 0.005 %
Acidly or alkalinely reating or alkalinely reacting impurities	passes test	Heavy metals (as Pb)	max. 0.001 %
Bromates (BrO_3)	max. 0.001 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 0.2 %	Magnesium (Mg)	max. 0.001 %
Iodides (I)	max. 0.02 %	Magnesium and earth alkali metals (as Ca)	max. 0.02 %
Sulfates (SO_4)	max. 0.005 %	Loss on drying (105 °C)	max. 3 %
Arsenic (As)	max. 0.0002 %	Residual solvents (Ph Eur/ICH)	excluded by production precess

Code	Capacity
S5029-3-0500	500 g

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SODIUM BORATE DECAHYDRATE

Synonyms:

$Na_2B_4O_7 \cdot 10H_2O$

- $B_4Na_2O_7 \cdot 10H_2O$
- M = 381.37 g/mol
- CAS [1303-96-4]
- EC number: 215-540-4

Physical data:
- Form: Crystals
- Spec.density: 1.72 g/cm^3
- Bulk density: ~ 750 kg/m^3
- Solub. in water (20 °C): 51.4 g/l
- Melting point: 75 °C
- Boiling point: 1575 °C (anhydrous)
- Vapour pressure: (20 °C) 0.213 hPa
- pH (47 g/l H_2O, 20 °C) 9.2

Toxicological data:
- LD 50 (oral, rat): 2660 mg/kg
- WGK: 1

Safety:
- S: 24/25
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 28

S5030-1 Sodium borate decahydrate, reagent grade

HS-No: 2840 19 90 00

Assay (acidimetric)	99.5 - 103.0 %	Ammonium (NH_4)	max. 0.001 %
Identity	passes test	Manganese (Mn)	max. 0.0005 %
Appearance of solution	clear	Calcium (Ca)	max. 0.005 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.0005 %
pH (0.01 M, H_2O)	9.15 - 9.20	Heavy metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Phosphate (PO_4)	max. 0.001 %	Lead (Pb)	max. 0.0005 %
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
S5030-1-1000	1 kg

SODIUM BOROHYDRIDE

Synonyms: Sodium tertrahydroborate

- $NaBH_4$
- M = 37.83 g/mol
- CAS [16940-66-2]
- EC number: 241-004-4

Physical data:
- Form: Solid
- Spec. density: 1.07 g/cm^3
- Bulk dinsity: 350 - 500 kg/m^3
- Solub. in water (25 °C): 550 g/l (decomposes slowly)
- Melting point: 400 °C (decomposes slowly)
- Flash point: 69 °C
- Ignition temp. ~ 220 °C
- Expl. limit (upper): 3.02 Vol%
- pH (10 g/l H_2O, 20 °C) ~ 11

Toxicological data:
- LD 50 (oral, rat): 891 mg/kg
- WGK: 2

Safety:
- R: 15-25-34
- S: 14.2-26-36/37/39-43.6-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 4.3 W2 I UN 1426
- IMDG: 4.3 I UN 1426
- IATA/ICAO: 4.3 I UN 1426
- PAX: F
- CAO: 412
- LGK: 4.3
- Disposal: 26

Applications: Reducing agent, synthesis of oraganic product.

S5032-1 Sodium borohydride, reagent grade

HS-No: 2850 00 20 90

Assay (Oxidimetric)	min. 96.0 %	Arsenic (As)	max. 0.001 %
Identity	passes test	Bismuth (Bi)	max. 0.0005 %
Chloride (Cl)	max. 0.5 %	Iron (Fe)	max. 0.005 %
Sulphate (SO_4)	max. 0.005 %	Mercury (Hg)	max. 0.001 %
Heavy metals (as Pb)	max. 0.005 %		

Code	Capacity
S5032-1-0101	100 g

SODIUM CARBONATE ANHYDROUS

Synonyms: Anhydrous Soda

- Na_2CO_3
- M = 105.99 g/mol
- CAS [497-19-8]
- EC number: 207-838-8

Physical data:
> Spec. density: 2.53 g/cm^3
> Bulk density: ~ 1100 kg/m^3
> Solub. in water (20 °C): 220 g/l
- Melting point: 854 °C
- Boiling point: 1600 °C (decomposes)
- pH (50 g/l H_2O, 25 °C) 11.5

Toxicological data:
- LD 50 (oral, rat): 4090 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 011-005-00-2
- R: 36
- S: 22-26
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5039-1 Sodium carbonate anhydrous, reagent grade

HS-No: 2836 20 00 00

Assay	min. 99.9 %	Calcium (Ca)	max. 0.005 %
Chlorides (Cl)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Silicate (SiO_2)	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Phosphate (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.0005 %
Total S (as SO_4)	max. 0.003 %	Potassium (K)	max. 0.005 %
Total N	max. 0.001 %	Zinc (Zn)	max. 0.0005 %
Heavy metals (as Pb)	max. 0.0005 %	Loss on drying (300 °C)	max. 0.5 %
Aluminium (Al)	max. 0.001 %		

Code	Capacity
S5039-1-0500	500 g

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SODIUM CARBONATE DECAHYDRATE

Synonyms: Soda decahydrate

- $Na_2CO_3 \cdot 10H_2O$
- M = 286.14 g/mol
- CAS [6132-02-1]
- EC number: 207-838-8

Physical data:
- Spec. density: 1.44 g/cm^3
- Bulk density: ~ 700 - 900 kg/m^3
- Solub. in water (20 °C): ~ 210 g/l
- Melting point: 33 °C
- pH (50 g/l H_2O, 25 °C) 11 - 12

Toxicological data:
- LD 50 (oral, rat): 4090 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- EC Index no.: 011-005-00-2
- R: 36
- S: 22-26
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5046-1 Sodium carbonate decahydrage, reagent grade

HS-No: 2836 20 00 00

Assay (acidimetric)	min. 99.5 %	Copper (Cu)	max. 0.0005 %
Chloride (Cl)	max. 0.0005 %	Heavy metals (as Pb)	max. 0.0005 %
Phosphates, Silicate (as SiO_2)	max. 0.001 %	Iron (Fe)	max. 0.0002 %
Total N	max. 0.0005 %	Lead (Pb)	max. 0.0002 %
Total S (as SO_4)	max. 0.002 %	Magnesium (Mg)	max. 0.0002 %
Aluminium (Al)	max. 0.0005 %	Potassium (K)	max. 0.005 %
Arsenic (As)	max. 0.00001 %	Zinc (Zn)	max. 0.0005 %
Calcium (Ca)	max. 0.002 %		

Code	Capacity
S5046-1-0500	500 g
S5046-1-1000	1 kg

SODIUM CARBONATE, VOLUMETRIC SOLUTIONS

S5048-0 Sodium carbonate, solution 0.05 mol/l (0.1 N)

Synonyms:

HS-No: 2836 20 00 00

- Na_2CO_3
- M = 105.99 g/mol
- CAS [497-19-8]
- EC number: 207-838-8

Physical data:
- Density: ~ 1.1 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 011-005-00-2
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1ml = 0.005299 g Na_2CO_3

Code	Capacity
S5048-0-1000	1.0 L

S5049-0 Sodium carbonate, solution 0.5 mol/l (1 N)

Synonyms:

HS-No: 2836 20 00 00

- Na_2CO_3
- M = 105.99 g/mol
- CAS [497-19-8]
- EC number: 207-838-8

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 011-005-00-2
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1ml = 0.05299 g Na_2CO_3

Code	Capacity
S5049-0-1000	1.0 L

SODIUM CHLORIDE

Synonyms: Salt, Common salt, Rock Salt, Sea salt

- NaCl
- M = 58.44 g/mol
- CAS [7647-14-5]
- EC number: 231-598-3

Physical data:
- Spec. density: 2.17 g/cm^3
- Bulk density: ~ 1140 kg/m^3
- Solub. in water (20 °C): 358 g/l
- Melting point: 801 °C
- Boiling point: 1461 °C
- Vapour pressure: (865 °C) 1.3 hPa
- pH (100 g/l H2O, 20 °C) ~ 4.5 - 7.0

Toxicological data:
- LD 50 (oral, rat): 3000 mg/kg
- WGK: 1

Safety:
- Poison calss CH (Swiss): F

Transport/storage:
- LGK: 10-13

S5065-0 Sodium chloride, solution 0.1 mol/l (0.1 N)

HS-No: 2836 20 00 00

- NaCl
- M = 58.44 g/mol
- CAS [7647-14-5]
- EC number: 231-598-3

Physical data:
- Form: Liquid
- Density: 1.004 g/m^3

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1ml = 0.005844 g NaCl

Code	Capacity
S5065-0-1000	1.0 L

S5068-1 Sodium chloride, reagent grade

HS-No: 2501 00 10 00

Assay	min. 99.8%	Arsenic (As)	max. 0.00004%
Insoluble in water	max. 0.005%	Barium (Ba)	max. 0.001%
pH (5%, H_2O)	5 - 8	Calcium (Ca)	max. 0.002%
Bromides (Br)	max. 0.005%	Copper (Cu)	max. 0.0002%
Chlorates and Nitrates (as NO_3)	max. 0.003%	Heavy metals (as Pb)	max. 0.0003%
Hexacyanoferrate (II) ($Fe(CN)_6$)	max. 0.0001%	Iron (Fe)	max. 0.0001%
Iodides (I)	max. 0.001%	Magnesium (Mg)	max. 0.0005%
Phosphates (PO_4)	max. 0.0005%	Nickel (Ni)	max. 0.0005%
Sulfates (SO_4)	max. 0.001%	Potassium (K)	max. 0.005%
Total N	max. 0.0005%		

Code	Capacity
S5068-1-0500	500 g
S5068-1-1000	1 kg

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S5068-3 Sodium chloride, extra pure

HS-No: 2501 00 10 00

Assay (argentometric)	min. 99.5 %	Aluminium (Al)	max. 0.00002 %
Appearance of solution	clear and colourless	Ammonium (NH_4)	max. 0.001 %
pH (5%, H_2O)	5.0 - 7.5	Arsenic (As)	max. 0.0001 %
Free acid (a HCl)	max. 0.001 %	Barium (Ba)	max. 0.001 %
Free alkali (as NaOH)	max. 0.002 %	Calcium (Ca)	max. 0.002 %
Bromides (Br)	max. 0.005 %	Heavy metals (as Pb)	max. 0.0005 %
Hexacyanoferrate [$Fe(Cn)_6$]	max. 0.0001 %	Iron (Fe)	max. 0.0001 %
Iodides (I)	max. 0.001 %	Magnesium (Mg)	max. 0.001 %
Nitrites (absorbance of an aqueous)		Potassium (K)	max. 0.01 %
solution 10% at 354 nm	max. 0.01 A.U.	Loss on drying (130 °C)	max. 0.3 %
Phosphates (PO_4)	max. 0.001 %	Residual solvents (Ph Eur/ICH)	excluded by production process
Sulfates (SO_4)	max. 0.005 %		

Code	Capacity
S5068-3-0500	500 g
S5068-3-1000	1 kg

SODIUM CHROMATE, ANHYDROUS

Synonyms:

- Na_2CrO_4
- M = 161.97 g/mol
- CAS [7775-11-3]
- EC number: 231-889-5

Physical data:
- Spec. density: 2.72 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (30 °C): 873 g/l
- Melting point: ~ 792 °C
- pH (50 g/l H_2O, 20 °C) 8.5 - 10

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 024-017-00-8
- R: 49-43-50/53
- S: 53-24-37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 6.1 B
- Disposal: 15

S5069-1 Sodium chromate anhydrous, reagent grade

HS-No: 2841 50 00 00

Assay (iodometric)	min. 99.5 %	Calcium (Ca)	max. 0.005 %
pH (5%, H_2O)	8.5 - 10.0	Copper (Cu)	max. 0.001 %
Chloride (Cl)	max. 0.005 %	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %		

Code	Capacity
S5069-1-0500	500 g

SODIUM CHROMATE TETRAHYDRATE

Synonyms:

$Na_2CrO_4 \cdot 4H_2O$

- $Na_2CrO_4 \cdot 4H_2O$
- M = 234.03 g/mol
- CAS [10034-82-9]
- EC number: 231-889-5

Physical data:
- Form: Solid
- Spec. density: 2.73 g/cm³
- Bulk density: 800 ~ 900 kg/m³
- Solub. in water (20 °C): 443 g/l
- Melting point: ~ 792 °C
- pH (50 g/l H_2O, 20 °C) 8.5 - 10

Toxicological data:
- WGK: 3

Safety:
- EC Index no.: 024-018-00-3
- R: 45-46-60-61-E25-E26-34-42/43-E48/23-50/53
- S: 53-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 TC4 I UN 3290
- IMDG: 6.1 I UN 3290
- IATA/ICAO: 6.1 I UN 3290
- PAX: 606
- CAO: 607
- LGK: 6.1 B
- Disposal: 15

S5070-3 Sodium chromate tetrahydrate, extra pure

HS-No: 2841 50 00 00

Assay (iodometric)	min. 99.5 %	Calcium (Ca)	max. 0.005 %
pH (5%, H_2O)	8.5 - 10.0	Copper (Cu)	max. 0.001 %
Chlorides (Cl)	max. 0.01 %	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %		

Code	Capacity
S5070-3-0500	500 g

SODIUM DICHROMATE DIHYDRATE

Synonyms: Sodium bichromate, Sodium pyrochromate

- $Na_2Cr_2O_7 \cdot 2H_2O$
- M = 298.00 g/mol
- CAS [7789-12-0]
- EC number: 234-190-3

Physical data:
- Spec. density: 2.52 g/cm³ (anhydrous substance)
- Bulk density: ~ 1200 kg/m³
- Solub. in water (20 °C): 731.8 g/l
- Melting point: 356.7 °C (anhydrous substance)
- Boiling point: 400 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) 3.5

Toxicological data:
- LD 50 (oral, rat): 50 mg/kg
- WGK: 3

Safety:
- EC Index no.: 024-004-01-4
- R: 49-46-E21-E25-E26-37/38-41-43-50/53
- S: 53-36/37-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 III UN 3288
- IMDG: 6.1 III UN 3288
- IATA/ICAO: 6.1 III UN 3288
- PAX: 619
- CAO: 619
- LGK: 6.1B
- Disposal: 15

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S5087-1 Sodium dichromate dihydrate, reagent grade

HS-No: 2841 30 00 00

Assay (iodometric)	min. 99.5 %	Calcium (Ca)	max. 0.002 %
Insoluble matter and precipitable by ammonium hydroxide	max. 0.005 %	Copper (Cu)	max. 0.001 %
Chlorides (Cl)	max. 0.001 %	Iron (Fe)	max. 0.002 %
Sulfates (SO_4)	max. 0.005 %	Lead (Pb)	max. 0.002 %
Aluminium (Al)	max. 0.002 %	Potassium (K)	max. 0.01 %

Code	Capacity
S5087-1-0500	500 g
S5087-1-1000	1 kg

S5087-3 Sodium dichromate dihydrate, extra pure

HS-No: 2841 30 00 00

Assay (Iodometric)	min. 99.0%
Chloride (Cl)	min. 0.1%
Sulphate (SO_4)	min. 0.5%

Code	Capacity
S5087-3-1000	1 kg

SODIUM DIHYDROGEN PHOSPHATE ANHYDROUS

Synonyms: Sodium biphosphate, Sodium phosphate monobasic

- NaH_2PO_4
- M = 120.0 g/mol
- CAS [7558-80-7]
- EC number: 231-449-2

Physical data:
- Bulk density: ~ 940 kg/m^3
- Solub. in water (20 °C): 850 g/l
- Melting point: 200 °C
- pH (50 g/l H_2O, 20 °C) ~ 4.5

Toxicological data:
- LD 50 (oral, rat): 8290 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5092-1 Sodium dihydrogen phosphate anhydrous, reagent grade

HS-No: 2835 22 00 00

Assay (acidimetric)	min. 99.0%	Cobalt (Co)	max. 0.005%
pH-value(5%,water at 25 °C)	4.0 - 4.5	Iron (Fe)	max. 0.005%
Chloride (Cl)	max. 0.01%	Potassium (K)	max. 0.03%
Sulphate (SO_4)	max. 0.05%	Nickel (Ni)	max. 0.005%
Calcium (Ca)	max. 0.02%	Lead (Pb)	max. 0.005%
Copper (Cu)	max. 0.005%	Zinc (Zn)	max. 0.005%
Cadmium (Cd)	max. 0.005%		

Code	Capacity
S5092-1-0500	500 g
S5092-1-1000	1 kg

S5092-3 Sodium dihydrogen phosphate anhydrous, extra pure

HS-No: 2835 22 00 00

Assay (acidimetric)	min. 99 %	Arsenic (As)	max. 0.0002 %
Insoluble in water	max. 0.005 %	Heavy metals (as Pb)	max. 0.001 %
pH (5%, H_2O)	4.2 - 4.5	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.005 %	Organic volatile impurities	passes test
Sulfates (SO_4)	max. 0.03 %	Loss on drying (130 °C)	max. 1 %
aluminium, calcium and related dements	passes test		

Code	Capacity
S5092-3-1000	1 kg

SODIUM DIHYDROGEN PHOSPHATE DIHYDRATE

Synonyms: Sodium biphosphate, mono-Sodium orthophosphate, Sodium phosphate monobasic

- $NaH_2PO_4 \cdot 2H_2O$
- M = 156.01 g/mol
- CAS [13472-35-0]
- EC number: 231-449-2

Physical data:
- Spec. density: 1.92 g/cm^3
- Bulk density: ~ 1000 kg/m^3
- Solub. in water (20 °C): 850 g/l
- Melting point: 60 °C
- pH (50 g/l H_2O, 20 °C) ~ 4.2 - 4.5

Toxicological data:
- LD 50 (oral,rat): 8290 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5099-1 Sodium dihydrogen phosphate dihydrate, reagent grade

HS-No: 2835 22 00 00

Assay (acidimetric)	min. 99 %	Calcium (Ca)	max. 0.005 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.0002 %
pH (5%, H_2O)	4.2 - 4.5	Heavy metals (as Pb)	max. 0.0005 %
N compounds (as N)	max. 0.001 %	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Lead (Pb)	max. 0.0002 %
Sulfates (SO_4)	max. 0.003 %	Magnesium (Mg)	max. 0.005 %
Arsenic (As)	max. 0.0002 %	Nickel (Ni)	max. 0.001 %

Code	Capacity
S5099-1-0500	500 g
S5099-1-1000	1 kg

SODIUM DIHYDROGEN PHOSPHATE MONOHYDRATE

Synonyms: Sodium biphosphate, Monosodium orthophosphate, Primary sodium phosphate, Sodium phosphate monobasic

- $NaH_2PO_4 \cdot H_2O$
- M = 137.99 g/mol
- CAS [10049-21-5]
- EC number: 231-449-2

Physical data:
- Spec. density: 2.04 g/cm^3
- Bulk density: ~ 880 kg/m^3
- Solub. in water (20 °C): 850 g/l
- Melting point: ~ 100 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 4.1 - 4.5

Toxicological data:
- LD 50 (oral, rat): 8290 mg/kg (anhydrous substance)
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5108-1 Sodium dihydrogen phosphate monohydrate, reagent grade

HS-No: 2835 22 00 00

Assay	min. 98 %	Arsenic (As)	max. 0.0002 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.01 %
pH (5%, H_2O)	4.2 - 4.5	Heavy metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.014 %	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.03 %	Potassium (K)	max. 0.01 %
Total N	max. 0.005 %		

Code	Capacity
S5108-1-0250	250 g
S5108-1-0500	500 g
S5108-1-1000	1 kg

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SODIUM DISULFITE

Synonyms: Sodium metabisulfite, Sodium pyrosulfite

- $Na_2S_2O_5$
- M = 190.10 g/mol
- CAS [7681-57-4]
- EC number: 231-673-0

Physical data:
- Form: Powder
- Spec. density: 1.48 g/cm^3
- Bulk density: ~ 1100 - 1200 kg/m^3
- Solub. in water (20 °C): ~ 650 g/l
- Melting point: ~ 150 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 3.5 - 5.0

Toxicological data:
- LD 50 (oral, rat): 1540 mg/kg
- WGK: 1

Safety:
- R: 22-31-37-41
- S: 26-39-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5110-1 Sodium disulfite, reagent grade

HS-No: 2832 10 00 00

Assay (Iodometric)	min. 98.0 %	Arsenic (As)	max. 0.0005 %
Identity	passes test	Copper (Cu)	max. 0.0005 %
Appearance of solution	passes test	Heavy metals (as Pb)	max. 0.001 %
Insoluble in water	max. 0.005 %	Iron (Fe)	max. 0.0005 %
pH (5%, H_2O)	3.5 - 5.0	Lead (Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.005 %	Zinc (Zn)	max. 0.001 %
Thiosulfates (S_2O_3)	max. 0.05 %		

Code	Capacity
S5110-1-0500	500 g

S5110-3 Sodium disulfite, extra pure

HS-No: 2832 10 00 00

Assay (Iodometric)	min. 97 %	Iron (Fe)	max. 0.001 %
Appearance of solution	passes test	Lead (Pb)	max. 0.0005 %
pH (5%, H_2O)	3.5 - 5.0	Mercury (Hg)	max. 0.0001 %
Chlorides (Cl)	max. 0.01 %	Selenium (Se)	max. 0.0006 %
Thiosulfates (S_2O_3)	max. 0.02 %	Zinc (Zn)	max. 0.001 %
Arsenic (As)	max. 0.0002 %	Residual solvents (Ph Eur/ICH)	excluded by production process
Copper (Cu)	max. 0.01 %		

Code	Capacity
S5110-3-0500	500 g
S5110-3-1000	1 kg

SODIUM FLUORIDE

Synonyms: Chemifluor, Ossalin, Ossin, Zymafluor

- NaF
- M = 41.99 g/mol
- CAS [7681-49-4]
- EC number: 231-667-8

Physical data:
- Spec. density: 2.8 g/cm^3
- Bulk density: ~ 800 km/m^3
- Solub. in water (20 °C): 42 g/l
- Melting point: 933 °C
- Boiling point: 1704 °C
- Vopour pressure: (1077 °C) 1 hPa
- pH (40 g/l H_2O, 20 °C) ~ 10.2

Toxicological data:
- LD 50 (oral, rat): 52 mg/kg
- MAK: 2.5 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 009-004-0-7
- R: 25-32-36/38
- S: 22-36-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 6.1 T5 III UN 1690
- IMDG: 6.1 III UN 1690
- IATA/ICAO: 6.1 III UN 1690
- PAX: 619
- CAO: 619
- LGK: 6.1 B
- Disposal: 23

S5115-1 Sodium fluoride, reagent grade

HS-No: 2826 11 00 00

Assay	min. 99%	Sodium hexafluorosilicate (Na_2SiF_4)	max. 0.1%
Loss on drying (150 °C)	max. 0.2%	Heavy metals (as Pb)	max. 0.001%
Free acid (as HF)	max. 0.1%	Chloride (Cl)	max. 0.02%
Free alkali (as NaOH)	max. 0.1%	Sulfate (SO_4)	max. 0.02%
Fe	max. 0.003%		

Code	Capacity
S5115-1-0500	500 g
S5115-1-1000	1 kg

S5115-3 Sodium fluoride, extra pure

HS-No: 2826 11 00 00

Assay (complexometric)	min. 98.5 %	Copper (Cu)	max. 0.002 %
Appearance of solution	clear and colourless	Heavy metals (as Pb)	max. 0.002 %
Free acid (as HF)	max. 0.2 %	Iron (Fe)	max. 0.005 %
Free alkali (as NaOH)	max. 0.1 %	Lead (Pb)	max. 0.002 %
Chlorides (Cl)	max. 0.001 %	Nickel (Ni)	max. 0.002 %
Phosphates (PO_4)	max. 0.002 %	Loss on drying (150 °C)	max. 0.5 %
Sodium Hexafluorosilicate (Na_2SiF_6)	max. 0.1 %	Organic volatile impurities	passes test
Sulfates (SO_4)	max. 0.01 %	Residual solvents (Ph Eur/ICH)	excluded by production process

Code	Capacity
S5115-3-0500	500 g
S5115-3-1000	1 kg

SODIUM HEXAMETAPHOSPHATE

Synonyms: Sodium polyphosphate, Graham's salt

- $(NaPO_3)n$
- CAS [10124-56-8]
- EC number: 233-782-9

Physical data:
- Spec. density: 2.48 g/cm^3
- Bulk density: ~ 900 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 628 °C
- pH (10 g/l H_2O, 20 °C) ~ 5.7

Toxicological data:
- LD 50 (oral, rat): 5000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

S5124-1 Sodium hexametaphosphate, reagent grade

HS-No: 2835 39 00 00

Assay (as P_2O_5)	65.0% ~ 70.0%	Phosphate (PO_4)	passes test
Insoluble matter in water	max. 0.01%	Arsenic (As)	max. 0.0002%
Chlories (Cl)	max. 0.005%	Heavy metals (as Pb)	max. 0.002%
Sulfates (SO_4)	max. 0.01%	Reduced permanganate potassium material	passes test
Iron (Fe)	max. 0.005%		

Code	Capacity
S5124-1-1000	1 kg

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S5124-3 Sodium hexametaphosphate, extra pure

HS-No: 2835 39 00 00

Assay (in P_2O_5) (acidimetric)	min. 67 %	Copper (Cu)	max. 0.0025 %
Insoluble in water	max. 0.01 %	Iron (Fe)	max. 0.01 %
Chlorides (Cl)	max. 0.03 %	Lead (Pb)	max. 0.0025 %
Sulfates (SO_4)	max. 0.1 %	Nickel (Ni)	max. 0.0025 %
Arsenic (As)	max. 0.0002 %		

Code	Capacity
S5124-3-1000	1 kg

SODIUM HYDROGEN CARBONATE

Synonyms: Sodium bicarbonate

- $NaHCO_3$
- M = 84.01 g/mol
- CAS [144-55-8]
- EC number: 205-633-8

Physical data:
- Spec. density: 2.22 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (20 °C): 95.5 g/l
- Melting point: 270 °C (decmoposes)
- Vapour pressure: (30 °C) 8.3 hPa
- pH (50 g/l H_2O, 20 °C) ⩽ 8.6

Toxicological data:
- LD 50 (oral, rat): 4220 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5135-1 Sodium hydrogen carbonate, reagent grade

HS-No: 2836 30 00 00

Assay (acidimetric)	min. 99.7%	Copper (Cu)	max. 0.0002%
Insoluble in water	max. 0.015%	Heavy metals (as Pb)	max. 0.005%
Chlorides (Cl)	max. 0.001%	Iron (Fe)	max. 0.0005%
Phosphates (PO_4)	max. 0.001%	Lead (Pb)	max. 0.0005%
Phosphates and silicates (as SiO_2)	max. 0.005%	Magnesium (Mg)	max. 0.005%
S compounds as (SO_4)	max. 0.003%	Potassium (K)	max. 0.005%
Total N	max. 0.0005%	Zinc (Zn)	max. 0.0005%
Ammonium (NH_4)	max. 0.0005%	I red. matter (as SO_2)	max. 0.005%
Calcium (Ca)	max. 0.005%	Loss on drying (silica gel)	max. 0.2%
Cadmium (Cd)	max. 0.0005%		

Code	Capacity
S5135-1-0500	500 g
S5135-1-1000	1 kg

SODIUM HYDROGEN SULFATE MONOHYDRATE

S

Synonyms:

- $NaHSO_4 \cdot H_2O$
- M = 138.07 g/mol
- CAS [10034-88-5]
- EC number: 231-665-7

Physical data:
- Spec. density: 2.12 g/cm³ (20 °C)
- Solub. in water 670 g/l (20 °C)
- pH value -1 (50 g/l H_2O, 20 °C)
- Melting point - 58.2 °C
- Bulk density 900 - 970 kg/m³

Toxicological data:
- WGK: 1

Safety:
- Irritant
- R: 41
- S: 24-26
- Poison class (CH) 3
- EC Index no.: 016-046-00-X

Transport/storage:
- LGK: 8B
- Packing-cat: E
- Disposal: 14
- Road/Rail: 8/16
- IMDG-Code: 8/III UN 3260
- IATA/DGR: 8 III UN 3260
- CAO: 823
- PAX: 882

S5122-1 Sodium hydrogen sulfate monohydrate, reagent grade

HS-No: 2833 19 00 00

Assay	min. 99 %	Arsenic (As)	max. 0.0005 %
Substances insoluble in water	max. 0.005 %	Aluminium (Al)	max. 0.001 %
Nitrate (NO_3)	max. 0.00025 %	Magnesium (Mg)	max. 0.0004 %
Chloride (Cl)	max. 0.001 %	Potassium (K)	max. 0.002 %
Phosphates (PO_4)	max. 0.0005 %	Calcium (Ca)	max. 0.001 %
Heavy metals (as Pb)	max. 0.0005 %	Iron (Fe)	max. 0.0005 %

Code	Capacity
S5122-1-0500	500 g

SODIUM HYDROSULFITE

Synonyms:

- $Na_2S_2O_4$
- M = 174.11 g/mol
- CAS [7775-14-6]
- EC number: 231-890-0

Physical data:
- Spec. density: 2.38 g/cm³ (20 °C)
- Solub. in water ~ 250 g/l (20 °C) (decomposes)
- pH value ~7 - 9 (50 g/l H_2O, 20 °C)
- Melting point ~ 100 °C (decomposes)
- Bulk density ~1250 kg/m³
- Ignition temp. > 200 °C

Toxicological data:
- WGK: 1
- LD 50 (oral, rat) ~ 2500 mg/kg

Safety:
- Harmful
- R: 7-22-31
- S: 7/8-26-28.1-43.6
- Poison class (CH) 3
- EC Index no.: 016-028-00-1

Transport/storage:
- LGK: 42
- Packing-cat: E
- Disposal: 14
- Road/Rail: 4.2/13b
- IMDG-Code: 4.2/II UN 1384
- IATA/DGR: 4.2 II UN 1384
- CAO: 418
- PAX: 416

S5123-3 Sodium hydrosulfite, reagent grade

HS-No: 2826 11 00 00

Assay (iodometric)	min. 87 %	Chlorides (Cl)	max. 0.01 %
Identity	passes test	Iron (Fe)	max. 0.002 %

Code	Capacity
S5123-3-0500	500 g

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Sodium bicarbonate

Synonyms:

- Formula: $NaHCO_3$
- F.W.: 84.01
- CAS: 144-55-8

Physical Data:
- Vapour pressure : 972 hPa(100 °)
- Density (g/ml, 22 °C): 2.22
- Melting point (°C): 270
- Solubility of water (%,20°C): 96 g/l

Transport/storage:
- No Dangerous good

S5135-4 Sodium bicarbonate, HPLC Grade

See specification in Solvents Specification - 50

HS-No: 2836 30 00

Code	Capacity
S5135-4-1001	1.0 L
S5135-4-4001	4.0 L

SODIUM HYDROXIDE

Synonyms: Caustic soda

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Form: Solid
- Spec. density: 2.13 g/cm³
- Solub. in water (20 °C): soluble
- Melting point: 323 °C
- Boiling point: 1390 °C
- pH (50 g/l H_2O, 20 °C) ~ 14

Toxicological data:
- MAK: 2 mg/m³
- WGk: 1

Safety:
- EC Index no.: 011-002-00-6
- R: 35
- S: 26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C6 II UN 1823
- IMDG: 8 II UN 1823
- IATA/ICAO: 8 II UN 1823
- PAX: 814
- CAO: 816
- LGK: 8 B
- Disposal: 13

S5158-1 Sodium hydroxide pellets, reagent grade

HS-No: 2815 11 00 00

Assay (acidimetric)	min. 99%	Calcium (Ca)	max. 0.0005%
Carbonate (as potassium carbonate)	max. 1%	Copper (Cu)	max. 0.0005%
Chloride (Cl)	max. 0.0005%	Iron (Fe)	max. 0.0005%
Phosphate (PO_4)	max. 0.0005%	Lead (Pb)	max. 0.0002%
Sulphate (SO_4)	max. 0.0005%	Manganese (Mn)	max. 0.0005%
Silicates (SiO_2)	max. 0.001%	Mercury (Hg)	max. 0.000005%
Total nitrogen (N)	max. 0.0003%	Nickel (Ni)	max. 0.0005%
Heavy metals (as Pb)	max. 0.0005%	Potassium (K)	max. 0.02%
Aluminium (Al)	max. 0.0005%	Zinc (Zn)	max. 0.0005%
Arsenic (As)	max. 0.0001%		

Code	Capacity
S5158-1-1000	1 kg
S5158-1-5000	5 kg

S5158-3 Sodium hydroxide pellets, extra pure

HS-No: 2815 11 00 00

Assay (acidimetric)	min. 98.0 - 100.5%	Copper (Cu)	max. 0.0005%
Carbonate (as Na_2CO_3)	max. 1%	Iron (Fe)	max. 0.001%
Chloride (Cl)	max. 0.005%	Mercury (Hg)	max. 0.00001%
Phosphate (PO_4)	max. 0.002%	Lead (Pb)	max. 0.0005%
Sulphate (SO_4)	max. 0.003%	Potassium (K)	max. 0.10%
Silicates (SiO_2)	max. 0.01%	Zinc (Zn)	max. 0.0025%
Total nitrogen (N)	max. 0.0005%	Identity	passes test
Heavy metals (as Pb)	max. 0.0005%	Appearance of solution	passes test
Aluminium (Al)	max. 0.001%	Insoluble substances and organic matter	passes test
Arsenic (As)	max. 0.0003%		

Code	Capacity
S5158-3-9050	50 kg

SODIUM HYDROXIDE 50%

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Form: Liquid
- Density: 1.4 g/cm³
- Solub. in water (20 °C): miscible
- Melting point: 12 °C
- Boiling point: 143 °C
- Vapour pressure: (20 °C) 2 hPa
- pH (20 °C) >14

Toxicological data:
- WGk: 1

Safety:
- EC Index no.: 011-002-00-6
- R: 35
- S: 23.2-51-26-36/37/39-45

Transport/storage:
- ADR: 8 C5 II UN 1824
- IMDG: 8 II UN 1824
- IATA/ICAO: 8 II UN 1824
- PAX: 809
- CAO: 813
- LGK: 8 B

S5159-1 Sodium hydroxide 50%, reagent grade

HS-No: 2815 12 00 00

Assay	min. 50.0 %	Copper (Cu)	max. 1 ppm
Colour	max. 10 Hazen	Iron (Fe)	max. 3 ppm
Silicates (SiO_2)	max. 10 ppm	Lead (Pb)	max. 2 ppm
Phosphate (PO_4)	max. 1 ppm	Magnesium (Mg)	max. 0.5 ppm
Aluminium (Al)	max. 5 ppm	Mercury (Hg)	max. 0.2 ppm
Cadmium (Cd)	max. 1 ppm	Nickel (Ni)	max. 3 ppm
Chromium (Cr)	max. 1 ppm	Potassium (K)	max. 200 ppm
Calcium (Ca)	max. 3 ppm		

Code	Capacity
S5159-1-9025	25 kg
S5159-1-930E	300 kg

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S5159-10 Sodium hydroxide 50%, Selective grade

HS-No: 2815 12 00 00

Assay	min. 49.0 %	Sulfate (SO_4)	max. 5 ppm
Sodium carbonate (Na_2CO_3)	max. 0.05 %	Aluminium (Al)	max. 5 ppm
Colour	max. 10 Hazen	Calcium (Ca)	max. 3 ppm
Insoluble matter	max. 20 ppm	Copper (Cu)	max. 1 ppm
Chloride (Cl)	max. 10 ppm	Iron (Fe)	max. 3 ppm
Heavy metals (as Ag)	max. 2 ppm	Lead (Pb)	max. 2 ppm
Nitrogen compounds (as N)	max. 1 ppm	Magnesium (Mg)	max. 1 ppm
Phosphate (PO_4)	max. 1 ppm	Mercury (Hg)	max. 2 ppm
Potassium (K)	max. 200 ppm	Nickel (Ni)	max. 3 ppm

Code	Capacity
S5159-10-930E	300 kg

S5159-6 Sodium hydroxide 50%, LE

HS-No: 2815 12 00 00

Assay	min. 50.0 %	Copper (Cu)	max. 1 ppm
Colour	max. 10 Hazen	Iron (Fe)	max. 3 ppm
Silicates (SiO_2)	max. 10 ppm	Lead (Pb)	max. 2 ppm
Phosphate (PO_4)	max. 1 ppm	Magnesium (Mg)	max. 0.5 ppm
Aluminium (Al)	max. 5 ppm	Mercury (Hg)	max. 0.2 ppm
Cadmium (Cd)	max. 1 ppm	Nickel (Ni)	max. 3 ppm
Chromium (Cr)	max. 1 ppm	Potassium (K)	max. 200 ppm
Calcium (Ca)	max. 3 ppm		

Code	Capacity
S5159-6-9025	25 kg

S5159-6 Sodium hydroxide 50%, EC-100 (EL Grade)

HS-No: 2815 12 00 00

Assay	min. 49.0 %	Calcium (C)	max. 1000 ppb
Colour	max. 10 Hazen	Copper (Cu)	max. 500 ppb
Chloride (Cl)	max. 10 ppm	Iron (Fe)	max. 1000 ppb
Silicates (SiO_2)	max. 10 ppm	Lead (Pb)	max. 1000 ppb
Phosphate (PO_4)	max. 1 ppm	Magnesium (Mg)	max. 500 ppb
Aluminium (Al)	max. 500 ppb	Nickel (Ni)	max. 500 ppb
Chromium (Cr)	max. 500 ppb	Zinc (Zn)	max. 500 ppb

Code	Capacity
S5159-6-930E	300 kg

S5159-8 Sodium hydroxide 50%, CMOS grade

HS-No: 2815 12 00 00

Assay	50.0 - 52.0 %	Aluminium (Al)	max. 100 ppb
Colour	max. 10 APHA	Calcium (Ca)	max. 1500 ppb
Insoluble matter	max. 30 ppm	Chromium (Cr)	max. 500 ppb
Sodium carbonate (Na_2CO_3)	max. 0.05 %	Copper (Cu)	max. 50 ppb
Ammonium hydroxide precipitate	max. 0.005 %	Iron (Fe)	max. 600 ppb
Chloride (Cl)	max. 20 ppm	Lead (Pb)	max. 250 ppb
Heavy metals (as Ag)	max. 2 ppm	Magnesium (Mg)	max. 300 ppb
Nitrogen compounds (as N)	max. 1 ppm	Mercury (Hg)	max. 50 ppg
Phosphate (PO_4)	max. 1 ppm	Nickel (Ni)	max. 100 ppb
Potassium (K)	max. 50 ppm	Silicon (Si)	max. 1000 ppb
Sulfate (SO_4)	max. 5 ppm	Zinc (Zn)	max. 250 ppb

Code	Capacity
S5159-8-920E	200 kg

S

SODIUM HYDROXIDE, VOLUMETRIC SOLUTIONS

S5161-0 Sodium hydroxide, solution 0.01 mol/l (0.01 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.00 g/cm^3
- pH (20 °C) ~12.5

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1ml = 0.000400 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5161-0-1000	1.0 L

S5165-0 Sodium hydroxide, solution 0.02 mol/l (0.02 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.00 g/cm3
- pH (20 °C) ~ 12.5

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1ml = 0.00080 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5165-0-1000	1.0 L

S5166-0 Sodium hydroxide, solution 0.025 mol/l (0.025 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 821
- LGK: 8 B

1ml = 0.0010 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5166-0-1000	1.0 L

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S5166-0 Sodium hydroxide, solution 0.025 mol/l (0.025 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 821
- LGK: 8 B

1ml = 0.0010 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5166-0-1000	1.0 L

S5167-0 Sodium hydroxide, solution 0.05 mol/l (0.05 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.003 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1ml = 0.0020 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5167-0-1000	1.0 L

S5168-0 Sodium hydroxide, solution 0.1 mol/l (0.1 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.00 g/cm^3
- pH (20 °C) ~12.7

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1ml = 0.00400 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5168-0-1000	1.0 L

S5171-0 Sodium hydroxide, solution 0.2 mol/l (0.2 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 13

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.008002 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5171-0-1000	1.0 L

S5172-0 Sodium hydroxide, solution 0.25 mol/l (0.25 N)

Synnyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 13.5

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.0100 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5172-0-1000	1.0 L

S5175-0 Sodium hydroxide, solution 0.4 mol/l (0.4 N)

Synnyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 13.5

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.01600 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5175-0-1000	1.0 L

S

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S5176-0 Sodium hydroxide, solution 0.5 mol/l (0.5 N)

Synnyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 13.5

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 0

Safety:
- EC Index no.: 011-002-00-6
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.02000 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5176-0-1000	1.0 L

S5179-0 Sodium hydroxide, solution 1 mol/l (1 N)

Synnyms:

- NaOH
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.05 g/cm^3
- pH (20 °C) ~ 13.7

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 1

Safety:
- R: 34
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.0400 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5179-0-1000	1.0 L

S5186-0 Sodium hydroxide, solution 2 mol/l (2 N)

Synnyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: 1.09 g/cm^3
- pH (20 °C) ~ 13.8

Toxicological data:
- MAK: 2 mg/m^3 (pure substance)
- WGK: 1

Safety:
- EC Index no.: 011-002-00-6
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.080 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5186-0-1000	1.0 L

S5199-0 Sodium hydroxide, solution 5 mol/l (5 N)

Synnyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: ~1.18 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 011-002-00-6
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.2000 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5199-0-1000	1.0 L

S5201-0 Sodium hydroxide, solution 6 mol/l (6 N)

Synonyms:

- NaOH
- M = 40.00 g/mol
- CAS [1310-73-2]
- EC number: 215-185-5

Physical data:
- Density: ~1.23 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 011-002-00-6
- R: 35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C5 III UN 1824
- IMDG: 8 III UN 1824
- IATA/ICAO: 8 III UN 1824
- PAX: 819
- CAO: 813
- LGK: 8 B

1ml = 0.24 g NaOH

HS-No: 2815 12 00 00

Code	Capacity
S5201-0-1000	1.0 L

S

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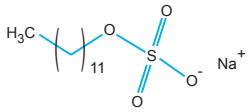
SODIUM LAURYL SULPHATE

Synonyms: Dodecy culfate sodium salt, SDS



- $C_{12}H_{25}NaO_4S$
- M = 288.38 g/mol
- CAS [151-21-3]
- EC number: 205-788-1

Physical data:
- Form: Powder
- Spec. density: 1.1 g/cm^3
- Bulk density: ~ 490 - 560 kg/m^3

- Solub. in water (20 °C): ~ 150 g/l
- Melting point: 204 - 207 °C
- Flash point: > 100 °C
- pH (10 g/l H_2O, 20 °C) 7.5 - 9.0

Toxicological data:
- LD 50 (oral, rat): 1288 mg/kg
- WGK: 2

Safety:
- R: 22-36/38
- S: 46
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

S5200-3 Sodium lauryl sulphate, purity grade

HS-No: 2920 90 10 90

Assay	min. 99.5 %	Chloride (Cl)	0.2 %
pH (1%, H_2O)	6.0 - 7.5	Lead (Pb)	2 ppm
C_{12} content	min. 99 %	A_{200} (3%, H_2O)	0.4
Water	1.0 %	A_{200} (3%, H_2O)	0.1
Phosphate (PO_4)	1 ppm		

Code	Capacity
S5200-3-0100	100 g
S5200-3-0500	500 g
S5200-3-1000	1 kg

SODIUM HYPOCHLORITE SOLUTION 5%

Synonyms: Clorox

- NaClO
- M = 74.44 g/mol
- CAS [7681-52-9]
- EC number: 231-668-3

Physical data:
- Form: Liquid
- Density: 1.094 g/cm^3

Toxicological data:
- WGK: 2

Safety:
- EC Index no.: 017-011-00-1
- R: 31-36/38
- S: 23.2-51-26-28.1-36/37/39-45-50-1
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C9 III UN 1791
- IMDG: 8 III UN 1791
- IATA/ICAO: 8 III UN 1791
- PAX: 819
- CAO: 821
- LGK: 8

S5203-3 Sodium hypochlorite 5%, extra pure

HS-No: 2828 90 00 00

Assay (Iodometric) ..... approx. 5 %

Code	Capacity
S5203-3-1000	1.0 L
S5203-3-4000	4.0 L

SODIUM HYPOCHLORITE 10%

Synonyms: Clorox

NaClO

- ClNaO
- M = 74.44 g/mol
- CAS [7681-52-9]
- EC number: 231-853-9

Physical data:
- Form: Liquid
- Density: 1.22 - 1.25 g/cm^3

Toxicological data:
- WGK: 2

Safety:
- EC Index no.: 017-011-00-1
- R: 15-25-34
- S: 26-28.1-36/37/39-45-50-1

Transport/storage:
- ADR: 8 C9 III UN 1791
- IMDG: 8 III UN 1791
- IATA/ICAO: 8 III UN 1791
- PAX: 819
- CAO: 821
- LGK: 8

S5204-3 Sodium hypochlorite 10%, extra pure

HS-No: 2828 90 00 00

Assay (Iodometric) ..... approx. 10 %

Code	Capacity
S5204-3-4000	4.0 L

SODIUM IODIDE

Synonyms: NaI

- NaI
- M = 149.89 g/mol
- CAS [7681-82-5]
- EC number: 231-679-3

Physical data:
- Form: Powder
- Spec. density: 3.67 g/cm^3
- Bulk density: ~ 1500 - 2000 kg/m^3

- Solub. in water (20 °C): soluble
- Melting point: 662 °C
- Boiling point: 1304 °C
- Vapour presure: (767 °C) 1.3 hPa
- pH (50 g/l H_2O, 20 °C) ~ 6 - 9

Toxicological data:
- LD 50 (oral, rat): 4340 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5211-1 Sodium iodide, reagent grade

HS-No: 2827 60 00 90

Assay (argentometric)	min. 99.5 %	Calcium (Ca)	max. 0.001 %
Insoluble in water	max. 0.01 %	Copper (Cu)	max. 0.0001 %
pH (5%, H_2O)	6.0 - 9.0	Heavy metals (as Pb)	max. 0.0005 %
Chlorides, bromides (as Cl)	max. 0.01 %	Iron (Fe)	max. 0.0005 %
Iodates (IO_3)	max. 0.0002 %	Lead (Pb)	max. 0.0001 %
Phosphates (PO_4)	max. 0.001 %	Magnesium (Mg)	max. 0.001 %
Sulfates (SO_4)	max. 0.002 %	Nickel (Ni)	max. 0.00001 %
Total N	max. 0.002 %	Potassium (K)	max. 0.01 %
Barium (Ba)	max. 0.002 %	Loss on drying (105 °C)	max. 0.5 %

Code	Capacity
S5211-1-0500	500 g

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SODIUM HYPOPHOSPHITE MONOHYDRATE

Synonyms:

- $NaH_2PO_2 \cdot H_2O$
- M = 105.99 g/mol
- CAS [10039-56-2]
- EC number: 231-669-9

Physical data:
- Form: Crystals
- Bulk density: ~ 800 - 1000 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: > 90 °C (decomposes)
- pH (100 g/l H_2O, 20 °C) 5.5 - 7.0

Toxicological data:
- WGK: 3*

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

S5220-1 Sodium hypophosphite monohydrate, reagent grade

HS-No: 2835 10 00 00

Assay (bromometric)	min. 99 %	Sulfates (SO_4)	max. 0.02 %
Appearance of solution	passes test	Arsenic (As)	max. 0.0002 %
Acidly reacting impurities	passes test	Calcium (Ca)	max. 0.02 %
Chlorides (Cl)	max. 0.02 %	Heavy metals (as Pb)	max. 0.0005 %
Phosphates, phosphates	passes test	Iron (Fe)	max. 0.0005 %

Code	Capacity
S5220-1-0500	500 g

SODIUM PERSULFATE

Synonyms: Sodium peroxodisulfate, Peroxydisulfuric acid disodium salt

- $Na_2S_2O_8$
- M = 238.09 g/mol
- CAS [7775-27-1]
- EC number: 231-892-1

Physical data:
- Spec. density: 1.10 g/cm³
- Bulk density: ~ 1150 kg/m³
- Solub. in water (20 °C): 545 g/l
- pH (100 g/l H_2O, 20 °C) 3.5 - 3.8

Toxicological data:
- LD 50 (oral, rat): 920 mg/kg
- WGK: 1

Safety:
- R: 8-22-36/37/38-42/43
- S: 22-24-26-37-45
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1505
- IMDG: 5.1 III UN 1505
- IATA/ICAO: 5.1 III UN 1505
- PAX: 516
- CAO: 518
- LGK: 5.1B
- Disposal: 22

S5230-1 Sodium persulfate, reagent grade

HS-No: 2833 40 00 10

Assay (Iodometric)	min. 98.0%	Iron (Fe)	max. 0.0003%
Chlorides (Cl)	max. 0.005%	Identity	passes test
Heavy metal (as Pb)	max. 0.003%	Appearance of solution (10 °C; water)	passes test
Ammonium (NH_4)	max. 0.05%		

Code	Capacity
S5230-1-0500	500 g

S5230-3 Sodium persulfate, extra pure

HS-No: 2833 40 00 10

Assay (iodometric)	min. 98 %	Copper (Cu)	max. 0.002 %
Insoluble in water	max. 0.05 %	Iron (Fe)	max. 0.002 %
Clorides compounds (as Cl)	max. 0.05 %	Lead (Pb)	max. 0.002 %
Nitrogen compoinds (as N)	max. 0.05 %	Magnesium (Mg)	max. 0.01 %
Calcium (Ca)	max. 0.01 %	Nickel (Ni)	max. 0.001 %

Code	Capacity
S5230-3-1000	1 kg

SODIUM METAPERIODATE

Synonyms: Sodium periodate

- $NaIO_4$
- M = 213.89 g/mol
- CAS [7790-28-5]
- EC number: 232-197-6

Physical data:
- Form: Crystals
- Spec. density: 3.87 g/cm³
- Bulk density: 2000 - 2400 kg/m³
- Solub. in water (20 °C): 91 g/l
- Melting point: 300 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 5.2

Toxicological data:
- WGK: 1

Safety:
- R: 8
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 I UN 1479
- IMDG: 5.1 I UN 1479
- IATA/ICAO: 5.1 I UN 1479
- PAX: 509
- CAO: 512
- LGK: 5.1 A
- Disposal: 22

S5233-1 Sodium metaperiodate, reagent grade

HS-No: 2829 90 80 00

Assay (argentometric)	99.8 - 100.3 %	Nitrates (NO_3)	max. 0.01 %
pH (5%, H_2O)	4.0 - 4.5	Sulfates (SO_4)	max. 0.005 %
Iodides (I)	max. 0.001 %	Manganese (Mn)	max. 0.0001 %
Other halogens (as Cl)	max. 0.01 %		

Code	Capacity
S5233-1-0101	100 g
S5233-1-0251	250 g

SODIUM MOLYBDATE DIHYDRATE

Synonyms:

- $Na_2MoO_4 \cdot 2H_2O$
- M = 241.95 g/mol
- CAS [10102-40-6]
- EC number: 231-551-7

Physical data:
- Form: Crystals
- Spec. density: 3.6 g/cm³
- Bulk density: ~ 1000 kg/m³
- Solub. in water (25 °C): 840 g/l
- pH (50 g/l H_2O, 20 °C) ~ 7.9 - 10.3

Toxicological data:
- LD 50 (oral, rat): 98 mg/kg
- MAK: 5 mg/m³
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 15

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S5237-3 Sodium molybdate dihydrate, extra pure

HS-No: 2814 70 00 00

Assay	min. 99 %	Heavy metals (as Pb)	max. 0.001 %
Appearance of solution	passes test	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.005 %	Lead (Pb)	max. 0.001 %
Phosphates, arseniates, silicates (as PO_4)	max. 0.05 %	Loss on drying (140 °C, 3h)	14 - 16 %
Silicates (as PO_4)	max. 0.001 %	Residual solvents (Ph Eur/USP)	excluded by production process
Ammonium (NH_4)	max. 0.001 %		

Code	Capacity
S5237-3-1000	1 kg

SODIUM NITRATE

Synonyms: Nitric acid sodium salt

- $NaNO_3$
- M = 84.99 g/mol
- CAS [7631-99-4]
- EC number: 231-554-3

Physical data:
- Spec. density: 2.26 g/cm³
- Bulk density: ~ 1200 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 308 °C
- pH (50 g/l H_2O, 20 °C) 5.5 - 8.3

Toxicological data:
- LD 50 (oral, rat): 1267 mg/kg
- WGK: 1

Safety:
- R: 8-22-36
- S: 22-24-41-46
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 5.1 O2 III UN 1498
- IMDG: 5.1 III UN 1498
- IATA/ICAO: 5.1 III UN 1498
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 14

S5248-1 Sodium nitrate, reagent grade

HS-No: 3102 50 90 00

Assay (acidimetric)	min. 99.5 %	Cadmium (Cd)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.002 %
pH (5%, H_2O)	5.5 - 8.0	Copper (Cu)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Heavy metals (as Pb)	max. 0.0005 %
Iodates (IO_3)	max. 0.0005 %	Iron (Fe)	max. 0.0002 %
Nitrites (NO_2)	max. 0.001 %	Lead (Pb)	max. 0.0005 %
Phosphates (PO_4)	max. 0.0002 %	Magnesium (Mg)	max. 0.001 %
Sulfates (SO_4)	max. 0.003 %	Potassium (K)	max. 0.005 %
Ammonium (NH_4)	max. 0.002 %	Zinc (Zn)	max. 0.0005 %

Code	Capacity
S5248-1-1000	1 kg

S

SODIUM NITRITE

Synonyms:

- $NaNO_2$
- M = 69.00 g/mol
- CAS [7632-00-0]
- EC number: 231-555-9

Physical data:
- Spec. density: 2.1 g/cm³
- Bulk density: ~ 1200 kg/m³
- Solub. in water (20 °C): soluble
- Melting point: 280 °C (decomposes)
- Ignition temp.: 489 °C
- pH (100 g/l H_2O, 20 °C) 9

Toxicological data:
- LD 50 (oral, rat): 85 mg/kg
- WGK: 2

Safety:
- EC Index no.: 007-010-00-4
- R: 8-25-50
- S: 45-61
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 5.1 OT2 III UN 1500
- IMDG: 5.1 III UN 1500
- IATA/ICAO: 5.1 III UN 1500
- PAX: 516
- CAO: 518
- LGK: 5.1 B
- Disposal: 28

S5252-1 Sodium nitrite, reagent grade

HS-No: 2834 10 00 00

Assay (iodometric)	min. 99 %	Calcium (Ca)	max. 0.002 %
Insoluble in water	max. 0.01 %	Heavy metals (as Pb)	max. 0.001 %
Chlorides (Cl)	max. 0.005 %	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.005 %	Magnesium (Mg)	max. 0.005 %

Code	Capacity
S5252-1-1000	1 kg

SODIUM SILICATE

Synonyms:

- Na_2SiO_3
- M = 122.07 g/mol
- CAS [1344-09-8]
- EC number: 215-687-4

Physical data:
- Density: 1.37 g/cm³
- Solub. in water (20 °C): miscible
- pH (50 g/l H_2O, 20 °C) 11 - 11.5

Toxicological data:
- WGK: 1

Safety:
- R: 36/37/38
- S: 26-37

Transport/storage:
- LGK: 10-13

S5272-1 Sodium silicate, reagent grade

HS-No: 2839 10 00 90

Total Solid Content	37.8 - 39.5 % wt	Alkaline (as Na_2O)	8.8 - 9.4 % wt
Special Gravity (at 20 °C,O, ° Be')	41.1 - 44.2	Silica (as SiO_2)	29.0 - 30.1 % wt
Weight Ration (SiO_2: Na_2O)	3.20 - 3.30	Viscosity (at 20 °C), cP	400 - 1200

Code	Capacity
S5272-1-1000	1 kg

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SODIUM SULFATE ANHYDROUS

Synonyms: Sulfuric acid sodium salt

- Na_2SO_4
- M = 142.04 g/mol
- CAS [7757-82-6]
- EC number: 231-820-9

Physical data:
- Spec. density: 2.70 g/cm^3
- Bulk density: ~ 1400 - 1600 g/cm^3

- Solub. in water (20 °C): 160 g/l
- Melting point: 888 °C
- Boiling point: > 890 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) 5 - 8

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

S5281-1 Sodium sulfate anhydrous, reagent grade

HS-No: 2833 11 00 00

Assay	min. 99 %	Calcium (Ca)	max. 0.005 %
Free acid (as H_2SO_4)	max. 0.05 %	Heavy metals (as Pb)	max. 0.0005 %
Free alkali (as NaOH)	max. 0.03 %	Iron (Fe)	max. 0.0005 %
pH (5%, H_2O)	5.2 - 8.0	Magnesium (Mg)	max. 0.001 %
Total N	max. 0.0005 %	Potassium (K)	max. 0.01 %
Chlorides (Cl)	max. 0.001 %	Zinc (Zn)	max. 0.01 %
Phosphates (PO_4)	max. 0.002 %	Loss on drying (800 °C)	max. 0.5 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
S5281-1-0500	500 g
S5281-1-1000	1 kg

S5281-3 Sodium sulfate anhydrous, extra pure

HS-No: 2833 11 00 00

Assay	min. 99 %	Calcium (Ca)	max. 0.045 %
pH (5%, H_2O)	5.5 - 7.5	Heavy metals (as Pb)	max. 0.0045 %
Free acid (as H_2SO_4)	max. 0.05 %	Iron (Fe)	max. 0.009 %
Free alkali (as NaOH)	max. 0.04 %	Magnesium (Mg)	max. 0.02 %
Chlorides (Cl)	max. 0.05 %	Zinc (Zn)	max. 0.01 %
Arsenic (As)	max. 0.005 %	Loss on drying (130 °C)	max. 0.5 %

Code	Capacity
S5281-3-1000	1 kg

S5281-11 Sodium sulfate anhydrous, Pesticide grade

HS-No: 2833 11 00 00

See specification in Solvents Specification - 30

Code	Capacity
S5281-11-0500	500 g
S5281-11-1000	1 Kg

S

SODIUM SULFITE

Synonyms:

- Na_2SO_3
- M = 126.04 g/mol
- CAS [7757-83-7]
- EC number: 231-821-4

Physical data:
- Spec. density: 2.63 g/cm^3
- Bulk density: ~ 1480 kg/m^3

- Solub. in water (20 °C): 220 g/l
- Melting point: > 500 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 8.8 - 10

Toxicological data:
- LD 50 (oral, rat): 2610 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 28

S5303-1 Sodium sulfite, reagent grade

HS-No: 2832 10 00 00

Assay (Iodometric)	min. 98 %	Copper (Cu)	max. 0.0005 %
Insoluble in water	max. 0.005 %	Hevy Metals (as Pb)	max. 0.001 %
Free Acid	passes test	Iron (Fe)	max. 0.001 %
Free Alkali (a Na_2CO_3)	max. 0.15 %	Lead (Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.02 %	Zinc (Zn)	max. 0.001 %
Arsenic (As)	max. 0.0001 %		

Code	Capacity
S5303-1-0500	500 g
S5303-1-1000	1 kg

SODIUM THIOSULFATE ANHYDROUS

Synonyms: Antichhlor

- $Na_2S_2O_3$
- M = 158.10 g/mol
- CAS [77772-98-7]
- EC number: 231-867-5

Physical data:
- Spec. density: 1.667 g/cm^3
- Bulk density: ~ 1350 kg/m^3
- Solub. in water (20 °C): 500 g/l
- Melting point: 48 °C
- Boiling point: 100 °C
- pH (50 g/l H_2O, 20 °C) ~ 6.0 - 8.5

Toxicological data:
- WGK: 1

Safety:
- Poison calss CH (Swiss): 4

Transport/storage:
- LGK: 10-13

S5314-1 Sodium thiosulfate anhydrous, reagent grade

HS-No: 2832 30 00 00

Assay (Iodometri, on dried substance)	min. 98.0 %	Copper (Cu)	max. 0.001 %
Insoluble in water	max. 0.01 %	Heavy metals (as Pb)	max. 0.005 %
pH (sol 5%, H_2O)	6.0 - 8.5	Iron (Fe)	max. 0.005 %
Chlorides (Cl)	max. 0.15 %	Lead (Pb)	max. 0.001 %
Sulfates and sulfites (as SO_4)	max. 0.2 %	Nickel (Ni)	max. 0.001 %
Sulfides (S)	max. 0.0005 %	Potassium (K)	max. 0.01 %
Calcium (Ca)	max. 0.004 %	Zinc (Zn)	max. 0.001 %
Cadmium (Cd)	max. 0.001 %	Loss on drying	max. 0.5 %
Cobalt (Co)	max. 0.001 %		

Code	Capacity
S5314-1-0500	500 g

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SODIUM THIOSULFATE PENTAHYDRATE

Synonyms:

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Spec. density: 1.73 g/cm^3
- Bulk density: ~ 1000 kg/m

- Solub. in water (20 °C): 680 g/l
- Melting point: 48.5 °C
- pH (100 g/l H_2O, 20 °C) 6.0 - 8.4

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 28

S5316-1 Sodium thiosulfate pentahydrate, reagent grade

HS-No: 2832 30 00 00

Assay (Iodometric)	min. 99.5 %	Calcium (Ca)	max. 0.002 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.0005 %
pH (5%, H_2O)	6.0 - 8.4	Iron (Fe)	max. 0.0005 %
Total N	max. 0.002 %	Lead (Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.008 %	Magnesium (Mg)	max. 0.001 %
Sulfates, sulfites (as SO_4)	max. 0.1 %	Potassium (K)	max. 0.001 %
Sulfides (S)	max. 0.0001 %		

Code	Capacity
S5316-1-0500	500 g
S5316-1-1000	1 kg

SODIUM THIOSULFATE, VOLUMETRIC SOLUTIONS

S5320-0 Sodium thiosulfate, solution 0.002 mol/l (0.02 N)

Synonyms: Antichlor

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

HS-No: 2832 30 00 00

Code	Capacity
S5320-0-2501	2.5 L

1ml = 0.00496 g $Na_2S_2O_3 \cdot 5H_2O$

S5321-0 Sodium thiosulfate, solution 0.002 mol/l (0.002 N)

Synonyms: Antichlor

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

HS-No: 2832 30 00 00

Code	Capacity
S5321-0-1000	1.0 L

1ml = 0.0004964 g $Na_2S_2O_3 \cdot 5H_2O$

S5322-0 Sodium thiosulfate, solution 0.01 mol/l (0.01 N)

Synonyms: Antichlor

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

HS-No: 2832 30 00 00

Code	Capacity
S5322-0-1000	1.0 L

1ml = 0.002482 g $Na_2S_2O_3 \cdot 5H_2O$

S5323-0 Sodium thiosulfate, solution 0.05 mol/l (0.05 N)

Synonyms: Antichlor

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

HS-No: 2832 30 00 00

Code	Capacity
S5323-0-1000	1.0 L

1ml = 0.01241 g $Na_2S_2O_3 \cdot 5H_2O$

S5326-0 Sodium thiosulfate, solution 0.1 mol/l (0.1 N)

Synonyms: Antichlor

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.01 g/cm^3
- pH (20 °C) ~ 9 - 10

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

HS-No: 2832 30 00 00

Code	Capacity
S5326-0-1000	1.0 L

1ml = 0.0248 g $Na_2S_2O_3 \cdot 5H_2O$

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S5329-0 Sodium thiosulfate, solution 0.282 mol/l (0.282 N)

Synonyms: Antichlor

HS-No: 2832 30 00 00

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.03 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1ml = 0.06999 g $Na_2S_2O_3 \cdot 5H_2O$

Code	Capacity
S5329-0-1000	1.0 L

S5332-0 Sodium thiosulfate, solution 0.5 mol/l (0.5 N)

Synonyms: Antichlor

HS-No: 2832 30 00 00

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.06 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

1ml = 0.1241 g $Na_2S_2O_3 \cdot 5H_2O$

Code	Capacity
S5332-0-1000	1.0 L

S5333-0 Sodium thiosulfate, solution 1 mol/l (1 N)

Synonyms: Antichlor

HS-No: 2832 30 00 00

- $Na_2S_2O_3 \cdot 5H_2O$
- M = 248.18 g/mol
- CAS [10102-17-7]
- EC number: 231-867-5

Physical data:
- Density: 1.12 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

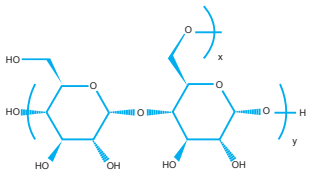
1ml = 0.2482 g $Na_2S_2O_3 \cdot 5H_2O$

Code	Capacity
S5333-0-1000	1.0 L

S

STARCH

Synonyms: Amylum, Potato starch



- $(C_6H_{10}O_5)_n$
- CAS [9005-84-9]
- EC number: 232-686-4

Physical data:
- Bulk density: ~ 300 kg/m^3
- Solub. in water (90 °C): 50 g/l
- pH (20 g/l H_2O, 25 °C) 6.0 - 7.5

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

S7003-1 Starch soluble, reagent grade

HS-No: 3505 10 90 00

pH (2%, H_2O)	5.0 - 7.0
Sensitivity to iodine	passes test
Loss on drying	10 - 20 %
Sulfated ash	0.1 - 1.0 %

Code	Capacity
S7003-1-0500	500 g

STRONTIUM CHLORIDE HEXAHYDRATE

Synonyms:

- $SrCl_2 \cdot 6H_2O$
- M = 266.62 g/mol
- CAS [10025-70-4]
- EC number: 233-971-6

Physical data:
- Spec. density: 1.95 g/cm3 (20 °C)
- Solub. in water 1062 g/l (20 °C)
- pH value ~ 5 - 7 (50 g/l, H_2O, 20 °C)
- Melting point: 61 °C
- Bulk density: ~ 1050 kg/m^3
- Boiling point: 100 °C
- Water absorption hygroscopic

Toxicological data:
- WGK: 1
- LD 50 (oral, rat) 2250 mg/kg (anhydrous subtance)

Safety:
- Poison class CH 3

Transport/storage:
- LGK: 10-13
- Disposal: 14

S7005-1 Strontium chloride hexahydrate, reagent grade

Assay	min. 99.5 %
pH value	4.6 - 6.5
Clarity of solution	passes test
Insoluble matter in water	max. 0.003 %
Nitrate (NO_3)	passes test
Calcium	max. 0.03 %
Iron (Fe)	max. 0.0001 %
Barium (Ba)	max. 0.02 %
Heavy metals (as Pb)	max. 0.0002 %
Alkali metals and magnesium (as sulfate)	max. 0.01 %

Code	Capacity
S7005-1-0100	100 g
S7005-1-0500	500 g

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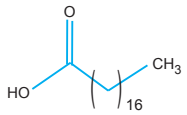
STERIC ACID

Synonyms: Octadecanoic acid



- $C_{18}H_{36}O_2$
- M = 284.47 g/mol
- CAS [57-11-4]
- EC number: 200-313-4

Physical data:
- Spec. dentity: 0.94 g/cm^3
- Bulk density: ~ 400 - 500 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: 67 °C
- Boiling point: (19.95 hPa) 232 °C
- Flash point: 196 °C
- Ignition temp.: 395 °C
- Vapoiur pressure: (148 °C) 0.13 hPa

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 4

S7007-3 Stearic acid, extra pure

HS-No: 2915 70 25 00

Code	Capacity
S7007-3-0500	500 g

Total content (plamitic + stearic acid, G.C)	min. 90 %
Appearance (Ph Eur)	passes test
Palitic acid (G.C.)	min. 40 %
Stearic acid (G.C.)	min. 40 %
Mineral acids	passes test
Acidity index	194 - 212
Iodine index	max. 4
Heavy metals (as Pb)	max. 0.001 %
Nickel (Ni)	max. 0.0001 %
Neutral fat, mineral fat	passes test
Organic volatile impurities (NF)	passes test
Sulfated ash (600 °C)	max. 0.1 %

SULPHURIC ACID 10%

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Form: Liquid

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- PAX: 809
- CAO: 813
- LGK: 8
- Disposal: 12

Special regulations:
- Drug precursor, cat 3

Applications: Analycal chemistry, laboratory reagent, neutralising agent

S7010-1 Sulphuric acid 10%, reagent grade

HS-No: 2837 20 00 00

Code	Capacity
S7010-1-2501	2.5 L

Assay	min. 10 %
Colour	max. 10 Hazen
Chloride (Cl)	max. 0.1 ppm
Nitrate (NO_3)	max. 0.2 ppm
Phosphate (PO_4)	max. 0.5 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm
Silver (Ag)	max. 0.02 ppm
Aluminium (Al)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm
Boron (B)	max. 0.05 ppm
Barium (Ba)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm
Bismuth (Bi)	max. 0.1 ppm
Calcium (Ca)	max. 0.2 ppm
Cadmium (Cd)	max. 0.05 ppm
Cobalt (Co)	max. 0.02 ppm
Chromium (Cr)	max. 0.02 ppm
Copper (Cu)	max. 0.01 ppm
Iron (Fe)	max. 0.1 ppm
Gallium (Ga)	max. 0.02 ppm
Germanium (Ge)	max. 0.1 ppm
Indium (In)	max. 0.02 ppm
Potassium (K)	max. 0.1 ppm
Lithium (Li)	max. 0.02 ppm
Magnesium (Mg)	max. 0.1 ppm
Manganese (Mn)	max. 0.02 ppm
Molybdenum (Mo)	max. 0.05 ppm
Ammonium (NH_4)	max. 2 ppm
Sodium (Na)	max. 0.2 ppm
Nickel (Ni)	max. 0.02 ppm
Lead (Pb)	max. 0.05 ppm
Platinum (Pt)	max. 0.2 ppm
Selen (Se)	max. 0.1 ppm
Tin (Sn)	max. 0.1 ppm
Strontium (Sr)	max. 0.05 ppm
Titanium (Ti)	max. 0.1 ppm
Thallium (Tl)	max. 0.05 ppm
Vanadium (V)	max. 0.05 ppm
Zinc (Zn)	max. 0.1 ppm
Zirconium (Zr)	max. 0.1 ppm
$KMnO_4$ reducing substances (as SO_2)	max. 2 ppm
Residue after ignition	max. 3 ppm

Line @thanhpho2002 Tel: 02 372 1845 - 6

S7020-1 Sulphuric acid 20%, reagent grade

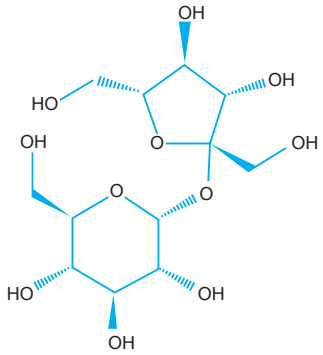
HS-No: 2837 20 00 00

Code	Capacity
S7020-1-2501	2.5 L

Assay	min. 20 %
Colour	max. 10 Hazen
Chloride (Cl)	max. 0.1 ppm
Nitrate (NO_3)	max. 0.2 ppm
Phosphate (PO_4)	max. 0.5 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm
Silver (Ag)	max. 0.02 ppm
Aluminium (Al)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm
Boron (B)	max. 0.05 ppm
Barium (Ba)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm
Bismuth (Bi)	max. 0.1 ppm
Calcium (Ca)	max. 0.2 ppm
Cadmium (Cd)	max. 0.05 ppm
Cobalt (Co)	max. 0.02 ppm
Chromium (Cr)	max. 0.02 ppm
Copper (Cu)	max. 0.01 ppm
Iron (Fe)	max. 0.1 ppm
Gallium (Ga)	max. 0.02 ppm
Germanium (Ge)	max. 0.1 ppm
Indium (In)	max. 0.02 ppm
Potassium (K)	max. 0.1 ppm
Lithium (Li)	max. 0.02 ppm
Magnesium (Mg)	max. 0.1 ppm
Manganese (Mn)	max. 0.02 ppm
Molybdenum (Mo)	max. 0.05 ppm
Ammonium (NH_4)	max. 2 ppm
Sodium (Na)	max. 0.2 ppm
Nickel (Ni)	max. 0.02 ppm
Lead (Pb)	max. 0.05 ppm
Platinum (Pt)	max. 0.2 ppm
Selen (Se)	max. 0.1 ppm
Tin (Sn)	max. 0.1 ppm
Strontium (Sr)	max. 0.05 ppm
Titanium (Ti)	max. 0.1 ppm
Thallium (Tl)	max. 0.05 ppm
Vanadium (V)	max. 0.05 ppm
Zinc (Zn)	max. 0.1 ppm
Zirconium (Zr)	max. 0.1 ppm
$KMnO_4$ reducing substances (as SO_2)	max. 2 ppm
Residue after ignition	max. 3 ppm

D(+)-SUCROSE

Synonyms: Cane sugar, Saccharose



- $C_{12}H_{22}O_{11}$
- M = 342.30 g/mol
- CAS [57-50-1]
- EC number: 200-334-9

Physical data:
- Bulk density: ~ 800 - 950 kg/m³
- Solub. in water (20 °C): freely soluble
- Melting point: 169 - 170 °C
- pH (100 g/l H_2O, 20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): 29700 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

S7030-1 D(+)-Sucrose, reagent grade

HS-No: 1701 99 10 80

Code	Capacity
S7030-1-0500	500 g

Special rotation (@25 °C)	+66.3 - +66.8°
Identity IR spectrum	passes test
Acidity of Alkalinity reacting impurities	passes test
Barium (Ba)	passes test
Dextines	passes test
Dye stuffs	passes test
Glucose, invert sugar	passes test
Iron (Fe)	max. 0.001 %
Sulfite (SO_3)	max. 0.001 %
Sulfated ash	max. 0.01 %
TCL-test	passes test
Water	max. 0.01 %

SULPHAMIC ACID

Synonyms: Amidosulfonic acid, Sulfaminic acid, Sulfamidic acid, Sulfamic acid, Aminosulfonic acid

- NH_2SO_3H
- M = 97.09 g/mol
- CAS [5329-14-6]
- EC number: 226-218-8

Physical data:
- Spec. density: 2.13 g/cm³
- Bulk density: ~ 600 kg/m³
- Solub. in water (20 °C): 213 g/l
- Melting point: 205 °C (demomposes)
- pH (10 g/l H_2O, 25 °C) 1.18

Toxicological data:
- LD 50 (oral, rat): 3160 mg/kg
- WGK: 1

Safety:
- EC Index no.: 016-026-00-0
- R: 36/38-52/53
- S: 26-28.1-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 III UN 2967
- IMDG: 8 III UN 2967
- IATA/ICAO: 8 III UN 2967
- PAX: 822
- CAO: 823
- LGK: 8 B
- Disposal: 14

S7034-1 Sulphamic acid, reagent grade

HS-No: 2811 19 80 10

Code	Capacity
S7034-1-1000	1 kg

Assay (dried basis)	min. 99 %
Insoluble in water	max. 0.01 %
Residue After Ignition	max. 0.01 %
Chloried (Cl)	max. 0.0001 %
Sulphate (SO_4)	max. 0.05 %
Heavy metals (as Pb)	max. 0.001 %
Iron (Fe)	max. 5 ppm

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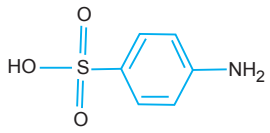
SULFANILIC ACID

Synonyms: 4-Aminobenzenesulfonic acid, Aniline-4-sulfonic acid, p-Anilinesulfonic acid



- $C_6H_7NO_3S$
- M = 173.19 g/mol
- CAS [121-57-3]
- EC number: 204-482-5

Physical data:
- Form: Solid
- Spec. density: 1.48 g/cm^3
- Bulk density: ~ 620 kg/m^3
- Solub. in water (20 °C): 10 g/l
- Melting point: 288 °C (decomposes)
- pH (10 g/l H_2O, 20 °C) ~ 2

Toxicological data:
- LD 50 (oral, rat): 12300 mg/kg
- WGK: 1

Safety:
- EC Index no.: 612-014-00-X
- R: 36/38-43
- S: 24-37
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13
- Disposal: 14

Applications: Analytical chemistry, laboratory reagent, for determination of: synthesis of organic products, manufacture of dyes, antibacterian.

S7037-1 Sulfanilic acid, reagent grade

HS-No: 2811 19 80 10

Assay (acidimetric)	min. 99 %	Sulphate (SO_4)	max. 0.005 %
Insoluble in sol. of Na_2CO_3	max. 0.01 %	Heavy metals (as Pb)	max. 0.001 %
TCL test	passes test	Sulfated ash	max. 0.01 %
Chloride (Cl)	max. 0.002 %	Water	max. 0.3 %
Nitrites (NO_2)	max. 0.00005 %		

Code	Capacity
S7037-1-0100	100 g

SULPHURIC ACID 50%

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.28 g/cm^3
- Solub. in water (20 °C): miscible

Toxicological data:
- MAK: 0.1 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 35
- S: 26-30-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- LGK: 8 B
- Disposal: 12

S

S7050-1 Sulphuric acid 50%, reagent grade

HS-No: 2807 00 10 00

Assay (acidimetric)	min. 50%	Iron (Fe)	max. 0.00001%
Colour	max. 10 Hazen	Lead (Pb)	max. 0.000002%
Chlorides (Cl)	max. 0.00001%	Magnesium (Mg)	max. 0.000005%
Phosphates (PO_4)	max. 0.00005%	Manganese (Mn)	max. 0.000001%
Cadmium (Cd)	max. 0.000002%	Nickel (Ni)	max. 0.000002%
Calcium (Ca)	max. 0.00002%	Potassium (K)	max. 0.00001%
Cobalt (Co)	max. 0.000001%	Sodium (Na)	max. 0.00005%
Copper (Cu)	max. 0.000001%	Zinc (Zn)	max. 0.000005%

Code	Capacity
S7050-1-2500	2.5 L
S7050-1-9200	200 L

S7050-6 Sulphuric acid 50%, EC-100

HS-No: 2807 00 10 00

Assay (acedimetric)	min. 50 %	Lithium (Li)	max. 0.02 ppm
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.01 ppm
Nitrate (NO_3)	max. 0.2 ppm	Manganese (Mn)	max. 0.01 ppm
Phosphate (PO_4)	max. 0.5 ppm	Molybdenum (Mo)	max. 0.05 ppm
Ammonium (NH_4)	max. 1.0 ppm	Nickel (Ni)	max. 1.0 ppm
Aluminium (Al)	max. 0.05 ppm	Potassium (K)	max. 1.0 ppm
Arsenic (As)	max. 0.01 ppm	Silver (Ag)	max. 0.02 ppm
Barium (Ba)	max. 0.1 ppm	Sodium (Na)	max. 0.1 ppm
Beryllium (Be)	max. 0.02 ppm	Titanium (Ti)	max. 0.1 ppm
Bismuth (Bi)	max. 0.1 ppm	Thallium (Tl)	max. 0.05 ppm
Cadmium (Cd)	max. 0.05 ppm	Vanadium (V)	max. 0.05 ppm
Calcium (Ca)	max. 0.2 ppm	Zinc (Zn)	max. 0.1 ppm
Cobalt (Co)	max. 0.02 ppm	Zirconium (Zr)	max. 0.1 ppm
Copper (Cu)	max. 0.01 ppm	Substances reducing potassium permanganate (a SO_2)	max. 2 ppm
Germanium (Ge)	max. 0.1 ppm	Residue after ignition	max. 3 ppm
Iron (Fe)	max. 1.0 ppm		
Lead (Pb)	max. 1.0 ppm		

Code	Capacity
S7050-6-930E	300 kg

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SULPHURIC ACID 95 - 97%

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.84 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: ~ -15 °C
- Boiling point: ~ 310 °C
- Vapour pressure: (100 °C) ~ 0.0001 hPa
- pH (49 g/l H_2O, 25 °C) 0.3

Toxicological data:
- LD 50 (oral, rat): 2140 mg/kg
- MAK: 0.1 mg/m^3
- WGk: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 35
- S: 26-30-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 1830
- IMDG: 8 II UN 1830
- IATA/ICAO: 8 II UN 1830
- PAX: 809
- CAO: 813
- LGK: 8 B
- Disposal: 12

S7061-0 Sulphuric acid 96%, CP Grade

HS-No: 2807 00 10 00

H_2SO_4% by mass	min. 96.0 %
Specific Gravity (as 25 °C)	1.83 - 1.84
Free Chloride (as Cl)	max. 5 ppm
Nitrate (NO_3)	max. 5 ppm
Ammonium (as NH_4)	max. 5 ppm
Arsenic (as As)	max. 0.4 ppm
Manganese (as Mn)	max. 0.5 ppm
Copper (as Cu)	max. 10 ppm
Iron (as Fe)	max. 20 ppm
Zinc (as Zn)	max. 5 ppm

Code	Capacity
S7061-0-2500	2.5 L

S7061-1 Sulphuric acid 95 - 97%, reagent grade

HS-No: 2807 00 10 00

Assay	min. 95-97%
Colour	max.10 Hazen
Chloride (Cl)	max. 0.1 ppm
Nitrate (NO_3)	max. 0.2 ppm
Phosphate (PO_4)	max. 0.5 ppm
Arsenic and Antimony (as As)	max. 0.01 ppm
Silver (Ag)	max. 0.02 ppm
Aluminium (Al)	max. 0.05 ppm
Gold (Au)	max. 0.1 ppm
Boron (B)	max. 0.05 ppm
Barium (Ba)	max. 0.05 ppm
Beryllium (Be)	max. 0.02 ppm
Bismuth (Bi)	max. 0.1 ppm
Calcium (Ca)	max. 0.2 ppm
Cadmium (Cd)	max. 0.05 ppm
Cobalt (Co)	max. 0.02 ppm
Chromium (Cr)	max. 0.02 ppm
Copper (Cu)	max. 0.01 ppm
Iron (Fe)	max. 0.1 ppm
Gallium (Ga)	max. 0.02 ppm
Germanium (Ge)	max. 0.1 ppm
Indium (In)	max. 0.02 ppm
Potassium (K)	max. 0.1 ppm
Lithium (Li)	max. 0.02 ppm
Magnesium (Mg)	max. 0.1 ppm
Manganese (Mn)	max. 0.02 ppm
Molybdenum (Mo)	max. 0.05 ppm
Ammonium (NH_4)	max. 2 ppm
Sodium (Na)	max. 0.2 ppm
Nickel (Ni)	max. 0.02 ppm
Lead (Pb)	max. 0.05 ppm
Platinum (Pt)	max. 0.2 ppm
Selen (Se)	max. 0.1 ppm
Tin (Sn)	max. 0.1 ppm
Strontium (Sr)	max. 0.05 ppm
Titanium (Ti)	max. 0.1 ppm
Thallium (Tl)	max. 0.05 ppm
Vanadium (V)	max. 0.05 ppm
Zinc (Zn)	max. 0.1 ppm
Zirconium (Zr)	max. 0.1 ppm
$KMnO_4$ - reducing substances (as SO_2)	max. 2 ppm
Residue after ignition	max. 3 ppm

Code	Capacity
S7061-1-1000	1.0 L
S7061-1-2500	2.5 L
S7061-1-2501	2.5 L

S7061-6 Sulphuric acid 95 - 97%, EC-100

HS-No: 2807 00 10 00

Assay	96.0 - 97.0 %
Color (Hazen)	max. 10 Hazen
Residue after ignition	max. 2000 ppb
Reducing agent ($KmNO_4$)	max. 2000 ppb
Chloride (Cl)	max. 100 ppb
Phosphate (PO_4)	max. 500 ppb
Ammonium (NH_4)	max. 2000 ppb
Nitrate (NO_3)	max. 200 ppb
Aluminium (Al)	max. 50 ppb
Arsenic (As)	max. 20 ppb
Barium (Ba)	max. 50 ppb
Boron (B)	max. 50 ppb
Cadmium (Cd)	max. 50 ppb
Calcium (Ca)	max. 200 ppb
Cobalt (Co)	max. 20 ppb
Copper (Cu)	max. 10 ppb
Chromium (Cr)	max. 20 ppb
Iron (Fe)	max. 100 ppb
Magnesium (Mg)	max. 100 ppb
Manganese (Mn)	max. 20 ppb
Molybdenum (Mo)	max. 50 ppb
Nickel (Ni)	max. 20 ppb
Lead (Pb)	max. 50 ppb
Lead (Pb)	max. 100 ppb
Tin (Sn)	max. 100 ppb
Titanium (Ti)	max. 100 ppb
Vanadium (V)	max. 50 ppb
Zinc (Zn)	max. 100 ppb
Zirconium (Zr)	max. 100 ppb

Code	Capacity
S7061-6-2500	2.5 L
S7061-6-9025	25 kg

S7061-7 Sulphuric acid 95 - 97%, EC-10

HS-No: 2807 00 10 00

Assay	96.0 - 97.0 %
Color (Hazen)	max. 10 Hazen
Residue after ignition	max. 3 ppm
Reducing agent ($KmNO_4$)	max. 1 ppm
Chloride (Cl)	max. 0.1 ppm
Phosphate (PO_4)	max. 0.2 ppm
Ammonium (NH_4)	max. 0.5 ppm
Nitrate (NO_3)	max. 0.2 ppm
Aluminium (Al)	max. 0.02 ppm
Arsenic (As)	max. 0.005 ppm
Barium (Ba)	max. 0.01 ppm
Boron (B)	max. 0.01 ppm
Cadmium (Cd)	max. 0.01 ppm
Calcium (Ca)	max. 0.05 ppm
Cobalt (Co)	max. 0.01 ppm
Copper (Cu)	max. 0.01 ppm
Chromium (Cr)	max. 0.01 ppm
Iron (Fe)	max. 0.05 ppm
Magnesium (Mg)	max. 0.02 ppm
Manganese (Mn)	max. 0.01 ppm
Molybdenum (Mo)	max. 0.01 ppm
Nickel (Ni)	max. 0.01 ppm
Lead (Pb)	max. 0.01 ppm
Tin (Sn)	max. 0.02 ppm
Titanium (Ti)	max. 0.01 ppm
Vanadium (V)	max. 0.01 ppm
Zinc (Zn)	max. 0.05 ppm
Zirconium (Zr)	max. 0.01 ppm

Code	Capacity
S7061-7-2500	2.5 L

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S7064-1 Sulphuric acid 98%, reagent grade

HS-No: 2807 00 10 00

Assay (Acidimetric)	min. 98%	Lithium (Li)	max. 0.01 ppm
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.5 ppm
Free Chloride (Cl)	max. 2 ppm	Manganese (Mn)	max. 0.2 ppm
Nitrate (NO_3)	max. 2 ppm	Molybdenum (Mo)	max. 0.01 ppm
Phosphate (PO_4)	max. 2 ppm	Ammonium (NH_4)	max. 1 ppm
Arsenic and Antimony (as As)	max. 1 ppm	Sodium (Na)	max. 0.2 ppm
Aluminium (Al)	max. 0.02 ppm	Nickel (Ni)	max. 0.05 ppm
Calcium (Ca)	max. 1 ppm	Zinc (Zn)	max. 1 ppm
Chromium (Cr)	max. 1 ppm	Zirconium (Zr)	max. 1 ppm
Iron (Fe)	max. 2 ppm	Specific Gravity (as 25 °C)	1.80 - 1.88
Potassium (K)	max. 0.1 ppm		

Code	Capacity
S7064-1-2500	2.5 L

SULPHURIC ACID,VOLUMETRIC SOLUTIONS

S7079-0 Sulphuric acid, solution 0.01 mol/l (0.02 N)

Synonys: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 5

1ml = 0.0009808 g H_2SO_4

Code	Capacity
S7079-0-1000	1.0 L

S7080-0 Sulphuric acid, solution 0.025 mol/l (0.05 N)

Synonyms: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8 B

1ml = 0.002452 g H_2SO_4

Code	Capacity
S7080-0-1000	1.0 L

S7081-0 Sulphuric acid, solution 0.05 mol/l (0.1 N)

Synonyms: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: ~1.00 g/cm^3
- pH (20 °C) ~ 1.3

Toxicological data:
- LD 50 (oral, rat): 2140 mg/kg
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8 B

1ml = 0.004904 g H_2SO_4

Code	Capacity
S7081-0-1000	1.0 L

S7084-0 Sulphuric acid, solution 0.1 mol/l (0.2 N)

Synonyms: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: ~1.00 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 4

1ml = 0.0098808 g H_2SO_4

Code	Capacity
S7084-0-1000	1.0 L

S7085-0 Sulphuric acid, solution 0.125 mol/l (0.25 N)

Synonyms: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.01 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 4

1ml = 0.01226 g H_2SO_4

Code	Capacity
S7085-0-1000	1.0 L

S7088-0 Sulphuric acid, solution 0.13 mol/l (0.26 N)

Synonyms: Sulphuric acid

HS-No: 2807 00 10 00

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.01 g/cm^3

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 8

1ml = 0.0127504 g H_2SO_4

Code	Capacity
S7088-0-1000	1.0 L

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S7091-0 Sulphuric acid, solution 0.25 mol/l (0.5 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.02 g/cm^3
- pH (20 °C) ~ 1.0

Toxicological data:
- LD 50 (oral,rat): 2140 mg/kg
- MAK: 0.1 mg/m^3
- WGK: 0

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 8B

1ml = 0.02452 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7091-0-1000	1.0 L

S7092-0 Sulphuric acid, solution 0.5 mol/l (1 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.03 g/cm^3
- pH (20 °C) ~ 0.6

Toxicological data:
- LD 50 (oral,rat): 2140 mg/kg (pure substance)
- MAK: 0.1 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 8B

1ml = 0.04904 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7092-0-1000	1.0 L

S7095-0 Sulphuric acid, solution 1 mol/l (2 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.06 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 36/38
- S: 26-30-37
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- PAX: 809
- CAO: 813

1ml = 0.09808 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7095-0-1000	1.0 L

S7097-0 Sulphuric acid, solution 2.5 mol/l (5 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.15 g/cm^3
- Boiling pont: ~ 103 °C

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 35
- S: 26-30-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- PAX: 809
- CAO: 813

1ml = 0.2452 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7097-0-1000	1.0 L

S7098-0 Sulphuric acid, solution 4 mol/l (8 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: ~1.23 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 35
- S: 26-30-36/37/39-45

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- LGK: 8 B
- Disposal: 12

1ml = 0.39232 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7098-0-1000	1.0 L

S7099-0 Sulphuric acid, solution 5 mol/l (10 N)

Synonyms: Sulphuric acid

- H_2SO_4
- M = 98.08 g/mol
- CAS [7664-93-9]
- EC number: 231-639-5

Physical data:
- Density: 1.28 g/cm^3

Toxicological data:
- MAK: 1 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 016-020-00-8
- R: 35
- S: 26-30-36/37/39-45
- Poison class CH (Swiss): 2

Transport/storage:
- ADR: 8 C1 II UN 2796
- IMDG: 8 II UN 2796
- IATA/ICAO: 8 II UN 2796
- LGK: 8 B

1ml = 0.4904 g H_2SO_4

HS-No: 2807 00 10 00

Code	Capacity
S7099-0-1000	1.0 L

S

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THINNER

Synonyms:

- $C_6H_{14}O_+$
- M = 142 g/mol
- CAS [Mixed]

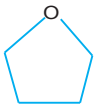
T1001-1 Thinner LM20, reagent grade

Appearance	liquid	Colour	max. 20 Hazen
Assay	min. 98.0 % wt	Evaporation Residue	max. 0.1 % wt
Specific Gravity (20 °C)	0.63 - 0.68	Water	max. 0.2 % wt

Code	Capacity
T1001-1-9020	20 kg

TETRAHYDROFURAN

Synonyms: THF, Tetramethylene oxide, Oxolane



- C_4H_8O
- M = 72.11 g/mol
- CAS [109-99-9]
- EC number: 203-726-8

Physical data:
- Form: Liquid
- Density: 0.89 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: -108.5 °C
- Boiling point: 65 - 66 °C
- Flash point: -21.5 °C
- Ignition temp.: 215 °C
- Vapour pressure: (20 °C) 173 hPa
- Refraction index: (n 20 °C/D) 1.407
- Viscosity: (20 °C) 0.47 mPas
- Dipolar moment: (20 °C) 1.63 Debye
- Dielectric const: (20 °C) 7.4
- Saturation conc.: (20 °C) 557 g/m^3
- Expl. limit (upper): 12.4 Vol%
- Expl. limit (lower): 1.5 Vol%
- pH (200 g/l H_2O, 20 °C) 7 - 8

Toxicological data:
- LD 50 (oral, rat): 1650 mg/kg
- MAK: 50 ml/m^3, 150 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-025-00-0
- R: 11-19-36/37
- S: 16-29-33
- VbF class: B
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 3 F1 II UN 2056
- IMDG: 3 II UN 2056
- IATA/ICAO: 3 II UN 2056
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

T2061-1 Tetrahydrofuran, reagent grade

HS-No: 2932 11 00 90

Purity (GC)	min. 99.5%	Cadmium (Cd)	max. 0.05 ppm
Identity (IR)	conforms	Cobalt (Co)	max. 0.02 ppm
Colour	max. 10 Hazen	Chromium (Cr)	max. 0.02 ppm
Acidity	max. 0.0005 meq/g	Copper (Cu)	max. 0.02 ppm
Alkalinity	max. 0.0002 meq/g	Iron (Fe)	max. 0.1 ppm
Peroxide (as H_2O_2)	max. 0.005%	Magnesium (Mg)	max. 0.02 ppm
Evaporation residue	max. 0.001%	Manganese (Mn)	max. 0.02 ppm
Water	max. 0.05%	Nickel (Ni)	max. 0.02 ppm
Aluminium (Al)	max. 0.5 ppm	Lead (Pb)	max. 0.1 ppm
Boron (B)	max. 0.02 ppm	Tin (Sn)	max. 0.1 ppm
Barium (Ba)	max. 0.1 ppm	Zinc (Zn)	max. 0.1 ppm
Calcium (Ca)	max. 0.5 ppm		

Code	Capacity
T2061-1-2500	2.5 L
T2061-1-2501	2.5 L
T2061-1-9025	25 L

T2061-4 Tetrahydrofuran, HPLC grade

HS-No: 2932 11 00 90

See specification in Solvents Specification - 30

Code	Capacity
T2061-4-1001	1.0 L
T2061-4-2001	2.5 L
T2061-4-4001	4.0 L

T2061-4 Tetrahydrofuran (Stabilized with BHT), HPLC Grade

HS-No: 2932 11 00 90

See specification in Solvents Specification - 51

Code	Capacity
T2061-4-1001	1.0 L
T2061-4-4001	4.0 L

T2061-14 Tetrahydrofuran, HPLC grade

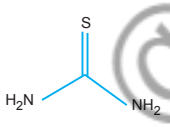
HS-No: 2932 11 00 90

See specification in Solvents Specification - 58

Code	Capacity
T2061-14-1001	1.0 L
T2061-14-4001	4.0 L

THIOUREA

Synonyms: Thiocarbamide



- CH_4N_2S
- M = 76.11 g/mol
- CAS [62-56-6]
- EC number: 200-543-5

Physical data:
- Spec. density: 1.405 g/cm^3
- Bulk density: 640 kg/m^3
- Solub. in water (20 °C): 137 g/l
- Melting point: 171 - 184 ºC
- Ignition temp.: 440 °C
- pH (50 g/l H_2O, 20 °C) 5 - 7

Toxicological data:
- LD 50 (oral, rat): 1750 mg/kg
- WGK: 2

Safety:
- EC Index no.: 612-082-00-0
- R: 22-40-51/53-63
- S: 36/37-46-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- LGK: 10-13
- Disposal: 3

T3017-1 Thiourea, reagent grade

HS-No: 2930 90 70 90

Assay (argentometric)	min. 99 %	Sensitivity to bismuth	passes test
Insoluble in water	max. 0.005 %	Sulfated ash	max. 0.05 %
Sulphate (SO_4)	max. 0.01 %	Loss on drying (105 °C)	max. 0.5 %
Iron (Fe)	max. 0.0005 %		

Code	Capacity
T3017-1-0500	500 g

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TIN (II) CHLORIDE DIHYDRATE

Synonyms: Hydrochloric acid tin (II)-salt dihydrae, Stannic chloride, Stannochlor

- $SNCl_2 \cdot 2H_2O$
- M = 225.63 g/mol
- CAS [10025-69-1]
- EC number: 231-868-0

Physical data:
- Spec. density: 2.71 g/cm^3
- Bulk density: ~ 1250 kg/m^3

- Solub. in water (20 °C): soluble
- Melting point: 37.7 °C
- pH (100 g/l H_2O, 20 °C) ~ 1 - 2

Toxicological data:
- LD 50 (oral, rat: 700 mg/kg (anhydrous substance)
- MAK: 2 mg/m^3
- WGK:1

Safety:
- R: 22-36/37/38
- S: 26-46
- Poison class CH (Swiss): 2

Transport/storage:
- LGK: 10-13
- Disposal: 15

T3032-1 Tin (II) chloride dihydrate, reagent grade

HS-No: 2827 39 10 00

Assay (iodometric)	min. 98%	Lead (Pb)	max. 0.005%
Insoluble in HCl	max. 0.005%	Magnesium (Mg)	max. 0.005%
Sulfates (SO_4)	max. 0.002%	Manganese (Mn)	max. 0.0005%
Ammonium (NH_4)	max. 0.002%	Nickel (Ni)	max. 0.0005%
Arsenic (As)	max. 0.0001%	Other metals (as Pb)	max. 0.01%
Calcium (Ca)	max. 0.005%	Potassium (K)	max. 0.005%
Copper (Cu)	max. 0.001%	Sodium (Na)	max. 0.005%
Iron (Fe)	max. 0.002%		

Code	Capacity
T3032-1-0500	500 g

TIN (IV) OXIDE

Synonyms: Tin dioxide, Stannic (IV) oxide

- SnO_2
- M = 150.70 g/mol
- CAS [18282-10-5]
- EC number: 242-159-0

Physical data:
- Spec. density: 6.95 g/cm^3
- Bulk density: ~ 500 - 600 kg/m^3

- Solub. in water (20 °C): insoluble
- Melting point: 1630 °C
- pH (50 g/l H_2O, 20 °C) 4 - 5

Toxicological data:
- LD 50 (oral, rat): > 20000 mg/kg
- WGK: 0

Safety:
- Poison class CH (Swiss): 4

Transport/storage:
- LGK: 10-13

T3042-3 Tin (IV) oxide, extra pure

HS-No: 2825 90 30 00

Assay (gravimetric)	min. 99 %	Loss on calcinations (900 °C)	max. 0.2 %
Chlorides (Cl)	max. 0.05 %	Iron (Fe)	max. 0.01 %
Sulfates (SO_4)	max. 0.05 %	Soluble in acid	max. 0.2 %

Code	Capacity
T3042-3-0500	500 g

TIN

Synonyms:

- Sn
- M = 118.69 g/mol
- CAS [7440-31-5]
- EC number: 231-141-8

Physical data:
- Bulk density: ~ 4000 kg/m^3

- Solub. in water (20 °C): insoluble
- Melting point: 232 °C
- Boiling point: 2362 °C

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 15

T3044-3 Tin, extra pure

HS-No: 8005 00 00 00

Antimony (Sb)	max. 0.0002 %	Copper (Cu)	max. 0.005 %
Arsenic (As)	max. 0.01 %	Iron (Fe)	max. 0.02 %
Bismuth (Bi)	max. 0.01 %	Lead (Pb)	max. 0.01 %

Code	Capacity
T3044-3-0500	500 g

TOLUENE

Synonyms: Methylbenzene, Phenylmethane

- C_7H_8
- M = 92.14 g/mol
- CAS [108-88-3]
- EC number: 203-625-9

Physical data:
- Density: 0.87 g/cm^3
- Solub. in water (20 °C): 0.52 g/l
- Melting point: -95 °C
- Boiling point: 111 °C
- Flash point: 4 °C
- Ignition temp.: 535 °C
- Vapour pressure: (20 °C) 29 hPa
- Viscosity: (20 °C) 0.58 mPa

- Dipolar moment: (20 °C) 0.36 Debye
- Dielectric const.: (25 °C) 2.3
- Saturation conc.: (20 °C) 110 g/m^3
- Expl. limit (upper): 8 Vol%
- Expl. limit (lower): 1.2 Vol%

Toxicological data:
- LD 50 (oral, rat): 636 mg/kg
- MAK: 50 ml/m3, 190 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 601-021-00-3

- R: 11-20
- S: 16-25-29-33
- VbF class: AI
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 II UN 1294
- IMDG: 3 II UN 1294
- IATA/ICAO: 3 II UN 1294
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

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T5031-1 Toluene, reagent grade

HS-No: 2902 30 00 00

Assay (G.C.)	min. 99.5%	Cadmium (Cd)	max. 0.000005 %
Colour (Hazen)	max. 10 Hazen	Calcium (Ca)	max. 0.00005 %
Acidity	max. 0.0003 meq/g	Cobalt (Co)	max. 0.000002 %
Alkalinity	max. 0.0006 meq/g	Copper (Cu)	max. 0.000002 %
Benzene (GC)	max. 0.005 %	Chromium (Cr)	max. 0.000002 %
Thiophene	max. 0.0001 %	Iron (Fe)	max. 0.00001 %
Sulfur compounds (as S)	max. 0.003 %	Tin (Sn)	max. 0.00001 %
Evaporation residue	max. 0.001 %	Magnesium (Mg)	max. 0.00001 %
Water	max. 0.03 %	Manganese (Mn)	max. 0.000002 %
Aluminium (Al)	max. 0.00005 %	Nickel (Ni)	max. 0.000002 %
Barium (Ba)	max. 0.00001 %	Lead (Pb)	max. 0.00001 %
Boron (B)	max. 0.000002 %	Zinc (Zn)	max. 0.00001 %

Code	Capacity
T5031-1-1001	1.0 L
T5031-1-2501	2.5 L

T5031-4 Toluene, HPLC grade

HS-No: 2902 30 00 00

See specification in Solvents Specification - 52

Code	Capacity
T5031-4-1001	1.0 L
T5031-4-2501	2.5 L
T5031-4-4001	4.0 L

T5031-11 Toluene, Pesticide grade

HS-No: 2902 30 00 00

See specification in Solvents Specification - 52

Code	Capacity
T5031-11-1001	1.0 L
T5031-11-4001	4.0 L

T5031-12 Toluene, Ultimate grade

HS-No: 2902 30 00 00

See specification in Solvents Specification - 18

Code	Capacity
T5031-12-1001	1.0 L
T5031-12-4001	4.0 L

T5031-15 Toluene, Ultimate grade

HS-No: 2902 30 00 00

See specification in Solvents Specification - 64

Code	Capacity
T5031-15-1001	1.0 L
T5031-15-4001	4.0 L

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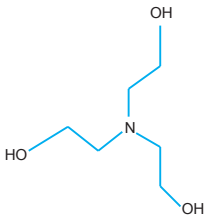
TRIETHANOLAMINE

Synonyms: Tris (2-hydroxyethyl) amine, 2,2',2"-Trihydroxytriethylamine, TEA



- $C_6H_{15}NO_3$
- M = 149.19 g/mol
- CAS [102-71-6]
- EC number: 203-049-8

Physical data:
- Density: 1.12 g/cm^3
- Solub. in water (20 °C): miscible
- Melting point: 21.2 °C
- Boiling point: (hPa) 208 °C
- Flash point: 190 °C
- Ignition temp.: 325 °C
- Vapour pressure: (20 °C) 0.01 hPa
- Expl. limit (upper): 7.2 Vol%
- Expl. limit (lower): 3.6 Vol%
- pH (15 g/l H_2O, 20 °C) 10.5

Toxicological data:
- LD 50 (oral, rat): 8000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 1

T6025-2 Triethanolamine, synthesis grade

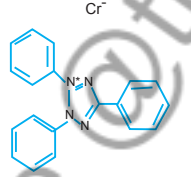
HS-No: 2922 13 10 00

Assay (GC)	min. 98 %
Mono + diethanolamine (G.C)	max. 2 %
Sulfated ash	max. 0.1 %
Water	max. 1 %

Code	Capacity
T6025-2-1000	1.0 L
T6025-2-2500	2.5 L

2,3,5-TRIPHENYL TETRAZOLIUM CHLORIDE

Synonyms:



- $C_{19}H_{15}ClN_4$
- M = 334.81 g/mol
- CAS [298-96-4]
- EC number: 206-071-6

Physical data:
- Solub. in water ~ 150 g/l (20 °C)
- pH value ~ 3.7 (10 g/l, H_2O, 20 °C)
- Melting point: 243 °C (decomposes)
- Bulk density ~ 230 kg/m^3

Safety:
- Poison class (CH) NK

Transport/storage:
- LGK: 10-13

T6030-1 2,3,5-Triphenyl tetrazolium chloride, reagent grade

HS-No: 2933 90 95 00

Molar absorptivity (L/cm-mol)	min. 2.0 x 10_4	Heavy metals (as Pb)	max. 0.001 %
Sensitivity test	passes test	Iron (Fe)	max. 0.001 %
Solubility test	passes test	Residue after ignition (as sulfate)	max. 0.5 %
Loss on drying	max. 3.0 %		

Code	Capacity
T6030-1-0010	10 g

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Triethylamine

Synonyms:

- Formula: $(C_2H_5)_3N$
- F.W.: 101.19
- CAS: 121-44-8

Physical Data:
- Density (g/ml, 25 °C): 0.73
- Boilling point (°C): 88.8
- Refractive index (25 °C): 1.4

Transport/storage:
- ADR : 3(8). II UN 1296
- IMDG : 3(8). II UN 1296
- IATA/ICAO : 3(8). II UN 1296

T6035-14 Triethylamine, Bio Grade

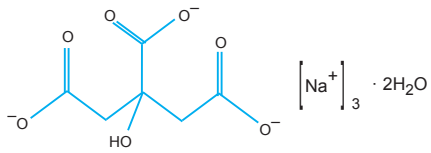
HS-No: 2921 19 10

See specification in Solvents Specification - 59

Code	Capacity
T6035-14-1001	1.0 L
T6045-14-4001	4.0 L

TRI-SODIUM CITRATE DIHYDRATE

Synonyms:



- $C_6H_5Na_3O_2 \cdot 2H_2O$
- M = 294.10 g/mol
- CAS [6132-04-3]
- EC number: 200-675-3

Physical data:
- Spec. density: 1.76 g/cm³
- Bulk density: ~ 600 kg/m³

- Solub. in water (25 °C): 425 g/l
- Melting point: 150 °C (anhydrous substance)
- pH (50 g/l H_2O, 20 °C) 7.5 - 9.5

Toxicological data:
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 14

T6066-1 Tris-sodium citrate dihydrate, reagent grade

HS-No: 2918 15 00 00

Assay (titr. with $HClO_4$)	min. 99.5 %	Ammonium (NH_4)	max. 0.003 %
Insoluble in water	max. 0.005 %	Calcium (Ca)	max. 0.005 %
pH (5%, H_2O)	7.5 - 9.0	Copper (Cu)	max. 0.0005 %
Chlorides (Cl)	max. 0.001 %	Heavy metals (as Pb)	max. 0.0005 %
Oxalate (C_2O_4)	max. 0.02 %	Iron (Fe)	max. 0.0005 %
Phosphates (PO_4)	max. 0.002 %	Lead (Pb)	max. 0.0002 %
Sulfates (SO_4)	max. 0.001 %	Zinc (Zn)	max. 0.0005 %
Total N	max. 0.001 %	Water	11 - 13 %

Code	Capacity
T6066-1-0250	250 g
T6066-1-0500	500 g

T

TRI-SODIUM PHOSPHATE DODECAHYDRATE

Synonyms: Trisodium phosphate, Sodium phosphate tribasic

- $Na_3PO_4 \cdot 12H_2O$
- M = 380.12 g/mol
- CAS [10101-89-0]
- EC number: 231-509-8

Physical data:
- Spec. density: 1.62 g/cm³
- Bulk density: ~620 kg/m³

- Solub. in water (20 °C): 285 g/l
- Melting point: 75 °C
- pH (10 g/l H_2O, 20 °C) ~ 12

Toxicological data:
- LD 50 (oral, rat): 7400 mg/kg
- WGK: 1

Safety:
- R: 36/38
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 14

T6072-1 Tri-Sodium phosphate dodecahydrate, reagent grade

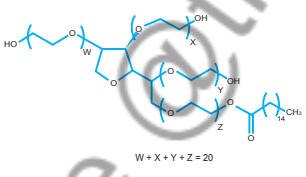
HS-No: 2835 23 00 00

Assay (acidimetric)	min. 98 %	Sulfates (SO_4)	max. 0.005 %
Insoluble in water	max. 0.01 %	Total N	max. 0.001 %
Free alkali (as NaOH)	max. 2.5 %	Arsenic (As)	max. 0.0001 %
Chlorides (Cl)	max. 0.0005 %	Heavy metals (as Pb)	max. 0.001 %
Fluorides (F)	max. 0.0005 %	Iron (Fe)	max. 0.001 %

Code	Capacity
T6072-1-0500	500 g
T6072-1-1000	1 kg

TWEEN® 20

Synonyms: Polyoxyethylene sorbitan monostearate



- $C_{54}H_{114}O_{26}$
- CAS [9005-65-4]

Physical data:
- Form: Thick liquid
- Density: 1.11 g/cm³
- Solub. in water (25 °C): 100 g/l

- Boiling point: > 1000 °C
- Flash point: > 150 °C
- Vapour pressure: (20 °C) < 1.4 hPa
- pH (50 g/l H_2O, 20 °C) 6 - 8

Toxicological data:
- LD 50 (oral, rat): 38000 mg/kg

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 28

T8000-2 Tween® 20, synthesis grade

HS-No: 3402 13 00 00

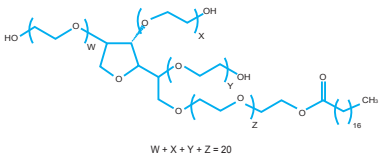
Identity (IR-spectrum)	passes test	Saponificatin index	40 - 50
Acidity index	3	Sulfated ash	max. 0.5 %
Hydroxyl number	96 - 108		

Code	Capacity
T8000-2-1000	1.0 L

Lne @thanhvo12562 Tel: 02 312 1456

TWEEN® 60

Synonyms: Polyoxyethylene sorbitan monostearate



- $C_6H_{126}O_{26}$
- CAS [9005-67-8]

Physical data:
- Density: 1.08 g/cm^3
- Solub. in water (25 °C): miscible
- Boiling point: > 100 °C
- Flash point: > 149 °C
- Vapour pressure: (20 °C) < 14 hPa
- Viscosity: (25 °C) ~ 600 mPas
- pH ~ 7

Toxicological data:
- LD 50 (oral, rat): > 38000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 28

T8007-2 Tween® 60, synthesis grade

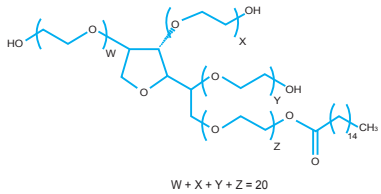
HS-No: 3402 13 00 00

Hydroxyl number	81 - 95
Saponification index	45 - 55

Code	Capacity
T8007-2-1000	1.0 L

TWEEN® 80

Synonyms: Polyoxyethylene sorbitan monooleate



- $C_{64}H_{124}O_{26}$
- CAS [9005-65-6]

Physical data:
- Density: 1.07 g/cm^3
- Solub. in water (25 °C): miscible
- Boiling point: > 100 °C
- Flash point: > 149 °C
- Ignition temp.: > 180 °C
- Vapour pressure: (20 °C) < 1.33 hPa
- Viscosity: (25 °C) 375 - 480 mPas
- pH (50 g/l H_2O, 20 °C) 5 - 7

Toxicological data:
- LD 50 (oral, rat): > 38000 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 28

T8009-2 Tween® 80, synthesis grade

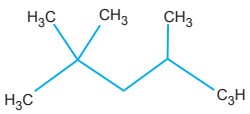
HS-No: 3402 13 00 00

Arsenic (As)	max. 0.0001 %
Heavy metals (as Pb)	max. 0.001 %
Acidity index	3
Hydroxyl number	65 - 80
Iodine index	18 - 24
Saponificatin index	45 - 55
Sulfated ash	max. 0.5 %

Code	Capacity
T8009-2-1000	1.0 L

T

2,2,4-TRIMETHYLPENTANE



Synonyms: Isooctace, Isobutyltrimethylmethane, Iso-Octane

- C_8H_{18}
- M = 114.26 g/mol
- CAS [540-84-1]
- EC number: 208-759-1

Physical data:
- Form: Liquid
- Density: 0.69 g/cm^3
- Solub. in water (20 °C): 0.56 mg/l
- Melting point: -170 °C
- Boiling point: 99 °C
- Flash point: -12 °C
- Ignition temp.: 410 °C
- Vapour pressure: (20 °C) 51 hPa
- Viscosity: (22 °C) 0.51 mPas
- Dielectric const.: (20 °C) 1.9
- Evap. heat: (99 °C) 344 kJ/kg
- Saturation conc.: (20 °C) 239 g/m^3
- Expl. limit (upper): 6 Vol%
- Expl. limit (lower): 1 Vol%
- pH ~ 7

Toxicological data:
- LD 50 (oral, rat): > 2000 mg/kg
- MAK: 500 ml/m^3, 2400 mg/m^3
- WGK: 1

Safety:
- EC Index no.: 603-009-00-8
- R: 11-38-50/53-65-67
- S: 9-16-29-33-46-60-61-62
- VbF class: AI
- Poison class CH (Swiss): 5

Transport/storage:
- ADR: 3 F1 II UN 1262
- IMDG: 3 II UN 1262
- IATA/ICAO: 3 II UN 1262
- PAX: 305
- CAO: 307
- LGK: 3 A
- Disposal: 1

Special regulations:
- Product submitted to special taxes law

TR105-1 2,2,4-Trimethylpentane, reagent grade

HS-No: 2901 10 00 00

Assay	min. 99.5%	Iron (Fe)	max. 0.00001%
Colour	max. 10 Hazen	Magnesium (Mg)	max. 0.00001%
Acidity	max. 0.0003 meq/g	Manganese (Mn)	max. 0.000002%
Aluminium (Al)	max. 0.00005%	Nickel (Ni)	max. 0.000002%
Barium (Ba)	max. 0.00001%	Lead (Pb)	max. 0.00001%
Boron (B)	max. 0.000002%	Tin (Sn)	max. 0.00001%
Cadmium (Cd)	max. 0.000005%	Zinc (Zn)	max. 0.00001%
Calcium (Ca)	max. 0.00005%	Sulphur compounds (as S)	max. 0.005%
Chromium (Cr)	max. 0.000002%	Substances Darkened by H_2SO_4	passes test
Cobalt (Co)	max. 0.000002%	Non-volatile matter	max. 0.0005%
Copper (Cu)	max. 0.000002%	Water	max. 0.01%

Code	Capacity
TR105-1-2501	2.5 L

TR105-3 2,2,4-Trimethylpentane, extra pure

HS-No: 2901 10 00 00

Assay	min. 99 %	Lead (Pb)	max. 0.00002 %
Acidity	max. 0.005 meq/g	Nickel (Ni)	max. 0.00002 %
Sulphur compounds (as S)	max. 0.002 %	Non-volatile matter	max. 0.001 %
Copper (Cu)	max. 0.00002 %	Water	max. 0.02 %
Iron (Fe)	max. 0.00005 %		

Code	Capacity
TR105-3-2501	2.5 L

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TR105-4 2,2,4-Trimethylpentane (Isooctane), spectroscopy grade

HS-No: 2901 10 00 00

See specification in Solvents Specification - 43

Code	Capacity
TR105-4-1001	1.0 L
TR105-4-4001	4.0 L

TR105-5 2,2,4-Trimethylpentane (Isooctane), spectroscopy grade

HS-No: 2901 10 00 00

Purity (GC)	min. 99.8 %	Colour	max. 10 Hazen
Evaporation residue	max. 0.0005 %	Acidity	max. 0.0005 meq/g
Water	max. 0.005 %	Alkalinity	max. 0.0002 meq/g

Fluorescence

- as quinine at 254 nm	max. 1 ppb
- as quinine at 365 nm	max. 1 ppb

Transmissiion

- at 205 nm	min. 10 %
- at 215 nm	min. 50 %
- at 225 nm	min. 80 %
- at 235 nm	min. 90 %
- from 255 nm	min. 98 %

Code	Capacity
TR105-5-2501	2.5 L

TR105-11 2,2,4-Trimethylpentane (Isooctane), spectroscopy grade

HS-No: 2901 10 00 00

See specification in Solvents Specification - 24

Code	Capacity
TR105-11-1001	1.0 L
TR105-11-4001	4.0 L

TR105-12 2,2,4-Trimethylpentane (Isooctane), spectroscopy grade

HS-No: 2901 10 00 00

See specification in Solvents Specification - 15

Code	Capacity
TR105-12-1001	1.0 L
TR105-12-4001	4.0 L

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Line @thankyou2562 Tel. 02 372 1545 - 6

Chemical list : U

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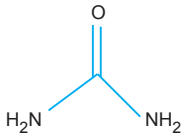
UREA

Synonyms:



- CH_4N_2O
- M = 60.06 g/mol
- CAS [57-13-6]
- EC number: 200-315-5]

Physical data:
- Spec. density: 1.34 g/cm^3
- Bulk density: ~ 750 kg/m^3

- Solub. in water (20 °C): 590 g/l
- Melting point: 132.5 - 134.5 °C
- Vapour pressure: (75 °C) ~ 0.002 hPa
- pH (100 g/l H_2O, 20 °C) ~ 9.5

Toxicological data:
- LD 50 (oral, rat): 8471 mg/kg
- WGK: 1

Safety:
- Poison class CH (Swiss): 5

Transport/storage:
- LGK: 10-13
- Disposal: 31

U6006-1 Urea, reagent grade

HS-No: 3102 10 10 00

Assay	min. 99.5 %	Sulphate (SO_4)	max. 0.001 %
Insoluble matter	max. 0.01 %	Heavy metals (as Pb)	max. 0.001 %
Residue after ignition	max. 0.01 %	Iron (Fe)	max. 0.001 %
Chloride (Cl)	max. 5 ppm		

Code	Capacity
U6006-1-0500	500 g
U6006-1-1000	1 kg

U6006-8 Urea 99.5%, ultra pure grade

HS-No: 3102 10 10 00

Assay	min. 99.5 %	Heavy metals (as Pb)	max. 0.001 %
A280 (5M, H_2O)	max. 0.05 %	Iron (Fe)	max. 0.001 %
Melting point	132 - 135 °C	Cyanate	none detected
Chloride (Cl)	max. 0.0005 %	Ammonia	none detected

Code	Capacity
U6006-8-2500	2.5 kg

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Chemical list : W

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WATER

Synonyms:

- H_2O
- M = 18.02 g/mol
- CAS [7732-18-5]
- EC number: 231-71-2

Physical data:
- Density: 1.00 g/cm^3
- Melting point: 0 °C
- Boiling point: 100 °C
- Vapour pressure: (20 °C) 23 hPa
- Viscosity: (20 °C) 0.95 mPas
- Dipolar moment: (20 °C) 1.85 Debye
- Dielectric const.: (20 °C) 80.2
- Evap. heat: (20 °C) 2253 kJ/kg
- pH (20 °C) 7

Toxicological data:
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13

W1001-1 DI Water 17 - 18 Mega ohm

HS-No: 2851 00 10 00

Water	17 - 18 mega ohm
Chloride (Cl)	max. 0.005 %
Phosphates (PO_4)	max. 0.005 %
Sulphate (SO_4)	max. 0.005 %

Code	Capacity
W1001-1-2500	2.5 L

W1001-1 Water deionized, reagent grade

HS-No: 2851 00 10 00

Chloride (Cl)	max. 0.005 %
Phosphates (PO_4)	max. 0.005 %
Sulphates (SO_4)	max. 0.005 %

Code	Capacity
W1001-1-9020	20 L

W1001-3 Water, extra pure

HS-No: 2851 00 10 00

Appearance	clear, colorless liquid	Nitrite nitrogen	passes test
Acidity or alkalinity	passes test	Ammonium (NH_4)	passes test
Chloride (Cl)	passes test	Heavy metals (as Pb)	passes test
Sulfate (SO_4)	passes test	Substances reducing permanganate	passes test
Nitrate nitrogen	passes test	Residue after evaporation	max. 0.001 %

Code	Capacity
W1001-3-9020	20 L

W1001-4 Water, HPLC grade

HS-No: 2851 00 10 00

See specification in Solvents Specification - 52

Code	Capacity
W1001-4-1001	1.0 L
W1001-4-4001	4.0 L

W1001-13 Water, LC-MS grade

HS-No: 2851 00 10 00

See specification in Solvents Specification - 7

Code	Capacity
W1001-4-1001	1.0 L
W1001-4-4001	4.0 L

WIJS SOLUTION

Synonyms:

- ICI

Physical data:
- Density: 10.6 g/cm^3
- Solub. in water (20 °C): miscible (decomposes)
- Flash point: 40 °C
- pH (20 °C) < 1

Toxicological data:
- LD 50 (oral, rat): 3310 mg/kg (chief component)
- MAK: 10 ml/m^3, 25 mg/m^3
- WGK: 1

Safety:
- R: 10-35
- S: 23.2-51-26-36/37/39-45
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 CF1 II UN 2920
- IMDG: 5.1 II UN 2920
- IATA/ICAO: 5.1 II UN 2920
- PAX: 809
- CAO: 813
- LGK: 3A

W3001-0 Wijs solution for determination of the iodine number c(ICl) = 0.1 mol/l (0.1N)

HS-No: 2812 10 99 00

Amount-of-substance concentration ...	c(ICl)=0.1 mol/l+/-0.2 %
Titer (20 °C)	1.000

Code	Capacity
W3001-0-2501	2.5 L

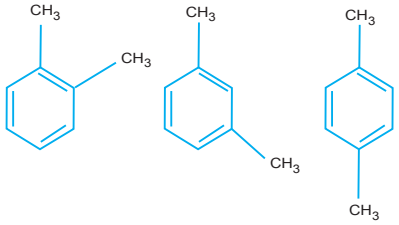
Line @thanky12562 Tel. 08372 1545 - 6

Chemical list : X

Line @thankyou2562 Tel. 02 372 1545 - 6

XYLENE, MIXTURE OF ISOMERS

Synonyms: Dimethylbenzene, Xylol



- C_8H_{10}
- M = 106.17 g/mol
- CAS [1330-20-7]
- EC number: 215-535-7

Physical data:
- Density: 0.86 g/cm^3
- Solub. in water (25 °C): 0.2 g/l
- Melting point: > -34 °C
- Boiling point: 137 - 143 °C
- Flash point: 25 °C
- Ignition temp.: ~ 465 °C
- Vapour pressure: (20 °C) 10 hPa
- Dielectric const.: (25 °C) 2.4
- Saturation conc.: (20 °C) 30 - 38 g/m^3
- Expl. limit (upper): 7.5 Vol%
- Expl. limit (lower): 1.7 Vol%

Toxicological data:
- LD 50 (oral, rat): 4300 mg/kg
- MAK: 100 ml/m^3, 440 mg/m^3
- WGK: 2

Safety:
- EC Index no.: 601-022-00-9 [4]
- R: 10-20/21-38
- S: 25-36/37
- VbF class: AII
- Poison class CH (Swiss): 4

Transport/storage:
- ADR: 3 F1 III UN 1307
- IMDG: 3 III UN 1307
- IATA/ICAO: 3 III UN 1307
- PAX: 309
- CAO: 310
- LGK: 3 A
- Disposal: 1

X8001-1 Xylene, mixture of isomers, reagent grade

HS-No: 2902 44 00 00

Assay (Xylene isomers + Ethylbenzene < 25 %)	min. 98.5 %	Substances Darkened by Sulphuric Acid	passes test
Colour	max. 10 APHA	Sulphur compounds (as S)	max. 0.003 %
Residur After Evaporation	max. 0.002 %	Water	max. 0.05 %

Code	Capacity
X8001-1-2501	2.5 L

X8008-1 Xylenol orange, tetrasodium salt, reagent grade

HS-No: 2902 44 00 00

Absorption maximum a (pH 14.0)	582 - 585 nm	Suitability as indicator for metal titration	passes test
Absorptivity (A1%/1cm; a max, pH 14.0 on dried material)	600 - 650	Loss on drying (110 °C)	max. 7%

Code	Capacity
X8008-1-0005	5 g

X

Line @thankyou2562 Tel. 02 372 1055 - 6

Chemical list : Z

Line @thankyou2502 Tel. 02 372 1545 - 6

ZINC STANDARD SOLUTION 1000MG/L FOR AA

Synonyms: Zinc nitrate in nitric acid 0.5 mol/l

Physical data:
- Density: ~ 1.02 g/cm^3
- Solub. in water (20 °C): miscible
- pH (20 °C) < 1

Safety:
- R: 36/38
- S: 26-37
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C1 III UN 3264
- IMDG: 8 III UN 3264
- IATA/ICAO: 8 III UN 3264
- PAX: 818
- CAO: 820
- LGK: 8 B

Z1001-0 Zinc standard solution 1000mg/l for AA

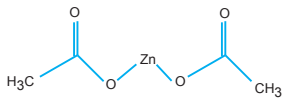
HS-No: 3822 00 00 00

Composition ..... 1000±5 mg/l

Code	Capacity
Z1001-0-0500	500 ml

ZINC ACETATE DIHYDRATE

Synonyms: Acetic acid zinc salt dihydrate



· 2H$_2$O

- Zn(CH$_3$COO)$_2$·2H$_2$O
- M = 219.49 g/mol
- CAS [5970-45-6]
- EC number: 209-170-2

Physical data:
- Spec. density: 1.77 g/cm^3
- Bulk density: ~ 900 kg/m^3
- Solub. in water (20 °C): 430 g/l
- Melting point: ~ 100 °C
- pH (50 g/l H$_2$O, 20 °C) 6 - 8

Toxicological data:
- LD 50 (oral, rat): 794 mg/kg
- WGK: 1

Safety:
- R: 22
- S: 25-46
- Poison class CH (Swiss): 3

Transport/storage:
- LGK: 10-13
- Disposal: 15

Z3005-1 Zinc acetate dihydrate, reagent grade

HS-No: 2915 29 00 90

Assay (complexometric)	min. 99.5 %	Copper (Cu)	max. 0.0005 %
Insoluble in (CH$_3$COOH) (0.5%)	max. 0.005 %	Iron (Fe)	max. 0.0005 %
pH (5%, H$_2$O)	6 - 7	Lead (Pb)	max. 0.0005 %
Chlorides (Cl)	max. 0.0005 %	Magnesium (Mg)	max. 0.0005 %
Sulfates (SO$_4$)	max. 0.005 %	Manganese (Mn)	max. 0.0005 %
Total N	max. 0.001 %	Potassium (K)	max. 0.001 %
Cadmium (Cd)	max. 0.0005 %	Sodium (Na)	max. 0.001 %
Calcium (Ca)	max. 0.001 %		

Code	Capacity
Z3005-1-1000	1 kg

ZINC CARBONATE

Synonyms:

- CAS [5263-02-5]
- EC number: 226-076-7

Physical data:
- Spec. density: 3.5 g/cm^3 (20 °C)
- Solub. in water (20 °C): almost insoluble
- pH value ~ 9.5 (50 g/l, H$_2$O, 20 °C) (suspension)
- Melting point: 1970 °C
- Bulk density ~ 400 kg/m^3

Toxicological data:
- LD 50 (oral, rat) > 10000 mg/kg

Safety:
- Poison class CH 4
- WGK: 1

Transport/storage:
- LGK: 10-13

Z3010-3 Zinc carbonate, extra pure

HS-No: 2836 99 18 00

Assay (complexometric, Zn)	min. 58.0 %	Iron (Fe)	max. 0.02 %
Chloride (Cl)	max. 0.05 %	Lead (Pb)	max. 0.002 %
Sulphate (SO$_4$)	max. 0.5 %	Residue on ignition	70 - 80 %
Arsenic (As)	max. 0.0005 %	Bulk density	35 - 45 g/100ml
Calcium (Ca)	max. 0.5 %		

Code	Capacity
Z3010-3-0500	500 g

ZINC CHLORIDE

Synonyms:

- ZnCl$_2$
- M = 136.28 g/mol
- CAS [7646-85-7]
- EC number: 231-592-0

Physical data:
- Form: Solid
- Spec. density: ~ 2.9 g/cm^3
- Bulk density: ~ 1400 - 1800 kg/m^3
- Solub. in water (20 °C): soluble
- Melting point: 318 °C
- Boiling point: 730 °C
- pH (100 g/l H$_2$O, 20 °C) ~ 5

Toxicological data:
- LD 50 (oral, rat): 350 mg/kg
- WGK: 1

Safety:
- EC Index no.: 030-003-00-2
- R: 22-34-50/53
- S: 28.1-26-36/37/39-45-60-61
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 8 C2 III UN 2331
- IMDG: 8 III UN 2331
- IATA/ICAO: 8 III UN 2331
- PAX: 822
- CAO: 823
- LGK: 8 B
- Disposal: 24

Z3015-0 Zinc chloride, CP grade

HS-No: 2827 36 00 00

Assay	min. 98 %	Lead	max. 0.01 %
Sulphate	max. 0.03 %	NO_2	max. 0.006 %
Iron	max. 0.002 %		

Code	Capacity
Z3015-0-1000	1 kg

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Z3015-1 Zinc chloride, reagent grade

HS-No: 2827 36 00 00

Assay (complexometric)	min. 98 %	Cadmium (Cd)	max. 0.0005 %
Insoluble substances	max. 0.005 %	Calcium (Ca)	max. 0.001 %
Oxichloride (acidimetric, as ZnO)	max. 1.2 %	Copper (Cu)	max. 0.001 %
pH (10%, H_2O)	4.6 - 5.5	Iron (Fe)	max. 0.0005 %
Nitrates (NO_3)	max. 0.003 %	Lead (Pb)	max. 0.001 %
Sulfates (SO_4)	max. 0.002 %	Magnesium (Mg)	max. 0.001 %
Total N	max. 0.001 %	Potassium (K)	max. 0.001 %
Ammonium (NH_4)	max. 0.005 %	Sodium (Na)	max. 0.001 %

Code	Capacity
Z3015-1-0250	250 g

Z3015-3 Zinc chloride, extra pure

HS-No: 2827 36 00 00

Assay (complexometric)	min. 98 %	Arsenic (As)	max. 0.0002 %
Appearance of solution	passes test	Calcium (Ca)	max. 0.01 %
pH (10%, H_2O)	4.6 - 5.5	Iron (Fe)	max. 0.001 %
Sulfates (SO_4)	max. 0.01 %	Lead (Pb)	max. 0.005 %
Total N	max. 0.001 %	Potassium (K)	max. 0.15 %
Aluminium, caldium, magnesium iron, heavy metals	passes test	Sodium (Na)	max. 0.01 %
Ammonium (NH_4)	max. 0.04 %	Organic volatile impurities	passes test

Code	Capacity
Z3015-3-0500	500 g
Z3015-3-1000	1 kg

ZINC NITRATE HEXAHYDRATE

Synonyms: Nitric acid zinc salt hexahydrate

- $Zn(NO_3)_2 \cdot 6H_2O$
- M = 297.46 g/mol
- CAS [10196-18-6]
- EC number: 231-943-8

Physical data:
- Spec. density: 2.06 g/cm^3
- Solub. in water (20 °C): soluble
- Melting poing: ~ 36 °C
- pH (50 g/l H_2O, 20 °C) 5.1

Toxicological data:
- LD 50 (oral, rat): 1190 mg/kg
- WGK: 1

Safety:
- R: 8-22-36/37/38
- S: 26-46
- Poison class CH (Swiss): 3

Transport/storage:
- ADR: 5.1 O2 II UN 1514
- IMDG: 5.1 II UN 1514
- IATA/ICAO: 5.1 II UN 1514
- PAX: 508
- CO: 511
- LGK: 5.1B

Z3020-1 Zinc nitrate hexahydrate, reagent grade

HS-No: 2834 29 80 00

Assay (complexometric)	min. 98.5 %	Cadmium (Cd)	max. 0.001 %
Insoluble in water	max. 0.005 %	Copper (Cu)	max. 0.0005 %
Free acid (as HNO_3)	max. 0.02 %	Iron (Fe)	max. 0.001 %
Chlorides (Cl)	max. 0.002 %	Lead (Pb)	max. 0.005 %
Sulfates (SO_4)	max. 0.01 %	Magnesium (Mg)	max. 0.002 %
Ammonium (NH_4)	max. 0.01 %	Nickel (Ni)	max. 0.0005 %

Code	Capacity
Z3020-1-0500	500 g

ZINC OXIDE

Synonyms:

- ZnO
- M = 81.37 g/mol
- CAS [1314-13-2]
- EC number: 215-222-5

Physical data:
- Spec. density: 5.47 g/cm^3
- Bulk density: ~ 300 - 500 kg/m^3
- Solub. in water (20 °C): insoluble
- Melting point: ~ 1970 °C
- pH (50 g/l H_2O, 20 °C) ~ 7

Toxicological data:
- LD 50 (oral, rat): > 8437 mg/kg
- MAK: 1.5 mg/m^3
- WGK: 0

Safety:
- Poison class CH (Swiss): F

Transport/storage:
- LGK: 10-13
- Disposal: 15

Z3027-1 Zinc oxide, reagent grade

HS-No: 2817 00 00 11

Assay (complexometric)	min. 99 %	Calcium (Ca)	max. 0.001 %
Insoluble in H_2SO_4	max. 0.01 %	Copper (Cu)	max. 0.0005 %
Free alkali	passes test	Iron (Fe)	max. 0.0005 %
Chlorides (Cl)	max. 0.001 %	Lead (Pb)	max. 0.002 %
Nitrates (NO_3)	max. 0.003 %	Magnesium (Mg)	max. 0.002 %
Phosphates (PO_4)	max. 0.0005 %	Manganese (Mn)	max. 0.005 %
Sulfates (SO_4)	max. 0.01 %	Potassium (K)	max. 0.002 %
Total N	max. 0.0005 %	Sodium (Na)	max. 0.001 %
Arsenic (As)	max. 0.00005 %	$KMnO_4$ red. matter (as O)	max. 0.001 %
Cadmium (Cd)	max. 0.0005 %	Loss on ignition (500 °C)	max. 0.5 %

Code	Capacity
Z3027-1-1000	1 kg

Line @hanky2562 Tel. 02372 1145 - 6

ZINC SULFATE HEPTAHYDRATE

Synonyms: Sulfuric acid zinc salt heptahydrate, Zinc vitriol

- $ZnSO_4 \cdot 7H_2O$
- M = 287.54 g/mol
- CAS [7446-20-0]
- EC number: 231-793-3

Physical data:
- Spec. density: 1.97 g/cm^3
- Bulk density: ~ 800 - 1000 kg/m^3
- Solub. in water (20 °C): 960 g/l
- Melting point: ~ 40 °C (decomposes)
- pH (50 g/l H_2O, 20 °C) ~ 4 - 6

Toxicological data:
- LD 50 (oral, rat): > 2150 mg/kg
- WGk: 1

Safety:
- EC Index no.: 030-006-00-9
- R: 36/38-50/53
- S: 22-25-60-61
- Poison class CH (Swis): 3

Transport/storage:
- ADR: 9 M7 III UN 3077
- IMDG: 9 III UN 3077
- IATA/ICAO: 9 III UN 3077
- PAX: 911
- CAO: 911
- LGK: 10-13
- Disposal: 15

Z3038-1 Zinc sulfate heptahydrate, reagent grade

HS-No: 2833 26 00 00

Assay (complexometric)	min. 99.5 %	Copper (Cu)	max. 0.0005 %
pH (5%, H_2O)	4.4 - 5.6	Iron (Fe)	max. 0.0005 %
Chloride (Cl)	max. 0.0005 %	Lead (Pb)	max. 0.0005 %
Total N	max. 0.0005 %	Magnesium (Mg)	max. 0.001 %
Arsenic (As)	max. 0.00005 %	Manganese (Mn)	max. 0.0002 %
Cadmium (Cd)	max. 0.0002 %	Potassium (K)	max 0.001 %
Calcium (Ca)	max. 0.001 %	Sodium (Na)	max. 0.0005 %

Code	Capacity
Z3038-1-0500	500 g
Z3038-1-1000	1 kg

ZINC SULFATE, VOLUMETRIC SOLUTIONS

Z3042-0 Zinc sulfate, solution 0.05 mol/l (0.025N)

Synonyms: Zinc vitriol

HS-No: 2833 26 00 00

- $ZnSo_4 \cdot 7H_2O$
- M = 287.54 g/mol
- CAS [7446-20-0]
- EC number: 231-793-3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 030-006-00-9
- R: 51/53
- S: 61

Transport/storage:
- LGK: 10-13
- Disposal: 15

1ml = 0.00807 g $ZnSO_4$

Code	Capacity
Z3042-0-1000	1.0 L

Z3043-0 Zinc sulfate, solution 0.1 mol/l (0.05N)

Synonyms: Zinc vitriol

HS-No: 2833 26 00 00

- $ZnSO_4 \cdot 7H_2O$
- M = 287.54 g/mol
- CAS [7446-20-0]
- EC number: 231-793-3

Physical data:
- Density: 1.00 g/cm^3

Toxicological data:
- WGK: 1

Safety:
- EC Index no.: 030-006-00-9
- R: 51/53
- S: 61

Transport/storage:
- LGK: 10-13
- Disposal: 15

1ml = 0.01614 g $ZnSO_4$

Code	Capacity
Z3043-0-1000	1.0 L

ZINC

Synonyms:

- Zn
- M = 65.38 g/mol
- CAS [7440-66-6]
- EC number: 231-175-3

Physical data:
- Spec. density: 7.14 g/cm^3
- Solub. in water (20 °C): hydrolysis reaction
- Melting point: 420 °C
- Boiling poing: 908 °C
- Ignition temp.: 460 °C
- Vapour pressure: (487 °C) 1.33 hPa

Toxicological data:
- WGK: 0

Safety:
- EC Index no.: 030-002-00-7
- R: 10-15
- S: 7/8-43.3
- Poison class CH (Swiss): F

Transport/storage:
- ADR: 4.3 WS II UN 1436
- IMDG: 4.3 II UN 1436
- IATA/ICAO: 4.3 II UN 1436
- PAX: 415
- CAO: 417
- LGK: 4.3
- Disposal: 15

Z3045-3 Zinc powder, extra pure

HS-No: 7903 90 00 00

Assay (complexometric)	min. 97 %	Cadmium (Cd)	max. 0.005 %
Insoluble in hydrochloric acid	max. 0.05 %	Iron (Fe)	max. 0.005 %
Arsenic (As)	max. 0.00001 %	Lead (Pb)	max. 0.01 %

Code	Capacity
Z3045-3-1000	1 kg

Line @thaikou2562 Tel.02 312 1545-6

QRëC®
Laboratory Chemicals

LV-MS
Ultimate
Pesticide
HPLC
DAN Biosynthesis
Ultra Dry

High Purity
Solvents

Line @thankyou2562 Tel. 02 372 1545 - 6

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General Product Guide

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GENERAL PRODUCT GUIDE

LC-MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

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LC - MS

No LC-MS TIC signals higher than 100ppb Reserpine

Features

- No LC-MS TIC signals higher than
  - 50ppb Reserpine (ESI + mode)
  - 50ppb 4-Nitrophenol (ESI - mode)
- Very low metal concentration (<100ppb)
- Low particles

Applications

- LC-MS
- HPLC
- Spectrophotometry

Packaging

- 1L, 4L Glass bottle

ITEM

Acetonitrile

Methanol

Water

Line @thankyou2562 Tel. 02 372 1545 - 6

Ultimate solvents

Features

- **Highest Quality !**
- **Multi purpose grade for HPLC, Trace organic analysis by GC-ECD/GC-FID & Spectrophotometry**
- **Minimal UV Absorbance**
- **Low water, residue after evaporation**
- **Low organic impurities**

Applications

- **HPLC**
- **Trace organic analysis by GC-ECD / GC-FID**
- **Spectrophotometry**
- **Applications requiring ACS reagent-grade solvent**

Packaging

- **1L, 4L Glass bottle**

ITEM

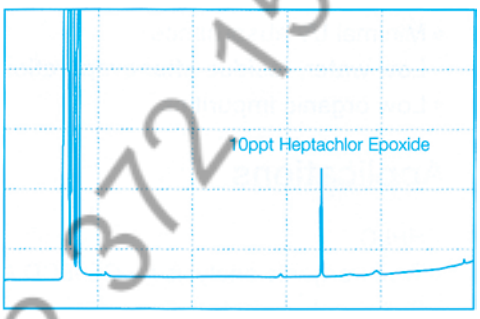
Acetone
Acetonitrile
Benzene
Chloroform (stabilized with Amylene)
Chloroform (stabilized with Ethanol)
Dichloromethane
Ethyl Acetate
Ethyl Ether (stabilized with Ethanol)
n-Heptane 97%
n-Heptane 99%
n-Hexane 95%
Isooctane
Methanol
Methyl t-Butyl Ether
n-Pentane
Petroleum Ether (35~60 ºC)
2-Propanol
Toluene

Line @thankyou2562 Tel. 02 372 1515 - 6

Pesticide Solvents

Features

- **Meets Extraction-Concentration Suitability (GC-ECD)**
- **Low water content and residue after evaporation**



Applications

- **Pesticide Multi residue Analysis by GC-ECD**
- **Gas Chromatography**

Packaging

- **1L, 4L Glass bottle**

ITEM

Acetone

Acetonitrile

Benzene

1-Butanol

Chloroform (stabilized with Amylene)

Chloroform (stabilized with Ethanol)

Cyclohexane

Dichloromethane

Ethyl Acetate

Ethyl Ether (stabilized with Ethanol)

n-Heptane 97%

n-Heptane 99%

n-Hexane 95%

Isooctane

Methanol

Methyl t-Butyl Ether

n-Pentane

Petroleum Ether (35~60 °C)

2-Propanol

Sodium sulfate, Anhydrous

Toluene

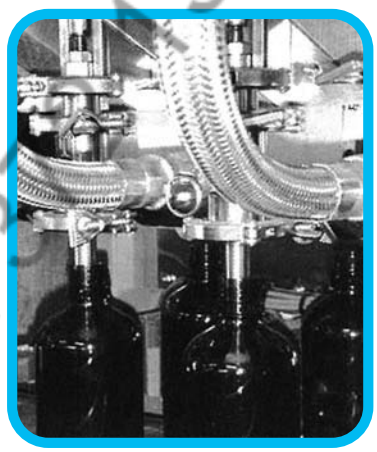
Line @thankyou2562 Tel. 02 372 1545 - 6

HPLC Solvents

Solvents

Features

- **ACS Certified**
- **Low UV absorbance, High GC assay**
- **Low water content and residue after evaporation**
- **Packaged with Nitrogen & Sub-micron filtration**



Applications

- **HPLC**
- **Spectrophotometry**
- **Applications requiring ACS reagent-grade solvent**

Packaging

- **1L, 4L Glass bottle**

ITEM

Acetic acid, glacial
Acetone
Acetonitrile
Benzene
1-Butanol
n-Butyl acetate
Chlorobenzene
Chloroform (stabilized with Amylene)
Chloroform (stabilized with Ethanol)
Cyclohexane
o-Dichlorobenzene
1,2-Dichloromethane
Dichloromethane
N,N-Dimethylacetamide
N,N-Dimethylformamide
Dimethyl Sulfoxide
1,4-Dioxane
Ethanol

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HPLC Solvents

ITEM

Ethyl Acetate

Ethyl Ether (stabilized with Ethanol)

n-Heptane 97%

n-Heptane 99%

n-Hexane 95%

Isooctane

Methanol

Methyl t-Butyl Ether

Methyl Etyhl Ketone

Methyl Isobutyl Ketone

N-Methyl-2-Pyrrolidone

n-Pentane

Petroleum Ether (35~60 °c)

1-Propanol

2-Propanol

Pyridine

Tetrahydrofuran

Tetrahydrofuran (stabilized with BHT)

Toluene

Water

Acid & Buffers for HPLC

ITEM

Ammonium acetate

Ammonium carbonate

Ammonium phosphate, monobasic

Phosphoric acid 85%

Potassium phosphate, monobasic

Sodium acetate trihydrate

Sodium bicarbonate

Line @thankyou2562 Tel. 02 372 1545 - 6

BIO Solvents

Features

- Specially purified for Bio synthesis
- Minimal water contents to optimize the yields in Bio synthesis
- Low water content and non-volatile residue

Applications

- Biosynthesis
  : nucleic acid & peptide synthesis
- Spectrophotometry
- Applications requiring Low-water solvent

Packaging

- 1L, 4L Glass bottle

ITEM

Acetonitrile
Dichloromethane (stabilized with Amylene)
N,N - Dimethylformamide
Dimethyl Sulfoxide
Methanol
N-Methyl-2-Pyrrolidone
Pyridine
Tetrahydrofuran
Triethylamine

Line @thankyou2562 Tel. 02 372 1545 - 6

Ultra Dry Solvents

Features

- **Specially designed process for low water content**
- **Minimal water contents from 10 ppm to 50 ppm**

Applications

- **Biosynthesis**
- **Applications requiring Low-water solvent**

Packaging

- **1L, 4L Glass bottle**

ITEM

Acetonitrile (water 10)

Acetonitrile (water 30)

Chloroform (stabilized with Ethanol)

1,4 - Dioxane

Ethyl Acetate

Ethyl ether (stabilized with Ethanol)

n-Hexane 95%

Methanol

Pyridine

Toluene

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Solvent Specifications

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SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

Line @thankyou2562 Tel. 02 372 1545 - 6

Solvent name synonyms

Solvent name	QRec Product	CAS No.
Ammonium dihydrogen Phosphate	Ammonium phosphate, monobasic	7722-76-1
n-Butyl Alcohol	1-Butanol	71-36-3
2-Butanone	Methyl Ethyl Detone	78-93-3
tert-Butyl Methyl Ether	Methyl t-Butyl Ether	1634-04-4
DCM	Dichloromethane	75-09-2
DMAC	N,N-Dimethylacetamide	127-19-5
DMF	N,N-Dimethylformamide	68-12-2
DMSO	Dimethyl Sulfoxide	67-68-5
1,2-Dichlorobenzene	o-Dichlorobenzene	95-50-1
Diethyl ether	Ethyl Ether	60-29-7
Diethylene Dioxide	1,4-Dioxane	123-91-1
Diethylene Ether	1,4-Dioxane	123-91-1
Ether	Ethyl Ether	60-29-7
Ethyl Alcohol	Ethanol	64-17-5
Ethyl Methyl Ketone	Methyl Ethyl Ketone	78-93-3
Ethylene Dichloride	1,2-Dichloroethane	107-06-2
Isopropanol	2-Propanol	67-63-0
Isopropyl Alcohol	2-Propanol	67-63-0
MEK	Methyl Ethyl Ketone	78-93-3
MIBK	Methyl Isobutyl Ketone	108-10-1
MTBE	Methyl t-Butyl Ether	1634-04-4
Methyl Alcohol	Methanol	67-56-1
Methyl Cyanide	Acetonitrile	75-05-8
Methylene Chloride	Dichloromethane	75-09-2
4-Methyl-2-Pentanone	Methyl Isobutyl Ketone	108-10-1
1-Methyl-2-Pyrrolidinone	N-Methyl-2-Pyrrolidone	872-50-4
N-Methyl-2-Pyrrolidinone	N-Methyl-2-Pyrrolidone	872-50-4

Line @thankyou2562 Tel. 02 372 1545 - 6

Solvent name	QRec Product	CAS No.
N-Methylpyrrolidone	N-Methyl-2-Pyrrolidone	872-50-4
1-Methyl-2-pyrrolidinone	N-Methyl-2-Pyrrolidone	872-50-4
Methyl Sulfoxide	Dimethyl Sulfoxide	67-68-5
Monochlorobenzene	Chlorobenzene	108-90-7
NMP	N-Mthyl-2-Pyrrolidone	872-50-4
n-Propyl Alcohol	1-Propanol	71-23-8
n-Propanol	1-Propanol	71-23-8
Potassium dihydrogen phosphate	Potassium phosphate, monobasic	7778-77-0
Sodium hydrogen carbonate	Sodium bicarbonate	144-55-8
TEA	Trietylamine	121-44-8
THF	Tetrahydrofuran	109-99-9
TMP	Isooctane	540-84-1
2,2,4-Trimethylpentane	Isooctane	540-84-1

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SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

Line @thankyou2562 Tel. 02 372 1545 - 6

DSP LC-MS

Item	LC-MS Suitability		Metal impurities		
	ESI +, Reserpine (max. ppb)	ESI -, 4-Nitrophenol (max. ppb)	Na (ppb)	Al, Ca, Mg, K (ppb)	Ba, Cd, Cr, Co, Cu, Fe Pb, Li, Ni, Sn, Zn (PPb)
Acetonitrile	50	50	50	25	5
Methanol	50	50	50	25	5
Water	50	50	50	25	5

Line @thankyou2562 Tel. 02 372 1545 - 6

Acetonitrile

LC-MS Grade

- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

A1133-13 Acetonitrile, LC-MS Grade

HS-No: 2926 90 95 90

Code	Capacity
A1133-13-1001	1.0 L
A1133-13-4001	4.0 L

LC-MS Suitability

ESI+ mode (as Reserpine)	50 ppb
ESI- mode (as 4-Nitrophenol)	50 ppb
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.01 %
Residue after evapoartion	1 ppm
Titrable acid	0.008 meq/g
Titrable base	0.0003 meq/g
Ultra Violet Spectrophotometry	
Maximum UV Absorbance	
190nm	1.00
195nm	0.15
200nm	0.05
205nm	0.04
210nm	0.02
220nm	0.01
254nm	0.005
LC Gradient Suitability	To pass test

Metal impurities

Aluminum (Al)	25 ppb
Barium (Ba)	5 ppb
Cadmium (Cd)	5 ppb
Calcium (Ca)	25 ppb
Chromium (Cr)	5 ppb
Cobalt (Co)	5 ppb
Copper (Cu)	5 ppb
Iron (Fe)	5 ppb
Lead (Pb)	5 ppb
Magnesium (Mg)	25 ppb
Manganese (Mn)	5 ppb
Lithium (Li)	5 ppb
Nickel (Ni)	5 ppb
Potassium (K)	25 ppb
Siver (Ag)	5 ppb
Sodium (Na)*	50 ppb
Tin (Sn)	5 ppb
Zin (Zn)	5 ppb

*** May change over time**

Methanol

LC-MS Grade

- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

M2097-13 Methanol, LC-MS Grade

HS-No: 2905 11 00 00

Code	Capacity
M2097-13-1001	2.5 L
M2097-13-4001	4.0 L

LC-MS Suitability

ESI+ mode (as Reserpine)	50 ppb
ESI- mode (as 4-Nitrophenol)	50 ppb
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.05 %
Residue after evapoartion	10 ppm
Titrable acid	0.0003 meq/g
Titrable base	0.0002 meq/g
Ultra Violet Spectrophotometry	
Maximum UV Absorbance	
205nm	1.00
220nm	0.25
230nm	0.15
254nm	0.02
280nm	0.01
LC Gradient Suitability	To pass test

Metal impurities

Aluminum (Al)	25 ppb
Barium (Ba)	5 ppb
Cadmium (Cd)	5 ppb
Calcium (Ca)	25 ppb
Chromium (Cr)	5 ppb
Cobalt (Co)	5 ppb
Copper (Cu)	5 ppb
Iron (Fe)	5 ppb
Lead (Pb)	5 ppb
Magnesium (Mg)	25 ppb
Manganese (Mn)	5 ppb
Lithium (Li)	5 ppb
Nickel (Ni)	5 ppb
Potassium (K)	25 ppb
Siver (Ag)	5 ppb
Sodium (Na)*	50 ppb
Tin (Sn)	5 ppb
Zin (Zn)	5 ppb

*** May change over time**

Line @thankyou2562 Tel. 02-312-1545 - 6

Water

LC-MS Grade

- Formula: H_2O
- F.W.: 18.01
- CAS: 7732-18-5

W1001-13 Water, LC-MS Grade

HS-No: 2851 00 10 00

Code	Capacity
W1001-13-1001	1.0 L
W1001-13-4001	4.0 L

LC-MS Suitability

ESI+ mode (as Reserpine)	50 ppb
ESI- mode (as 4-Nitrophenol)	50 ppb
Color (APHA)	10
Residue after evapoartion	10 ppm
Ultra Violet Spectrophotometry	
Maximum UV Absorbance	
190nm	0.01
200nm	0.01
250 ~ 400nm	0.005
LC Gradient Suitability	To pass test

Metal impurities

Aluminium (Al)	25 ppb
Barium (Ba)	5 ppb
Cadmium (Cd)	5 ppb
Calcium (Ca)	25 ppb
Chromium (Cr)	5 ppb
Cobalt (Co)	5 ppb
Copper (Cu)	5 ppb
Iron (Fe)	5 ppb
Lead (Pb)	5 ppb
Magnesium (Mg)	25 ppb
Manganese (Mn)	5 ppb
Lithium (Li)	5 ppb
Nickel (Ni)	5 ppb
Potassium (K)	25 ppb
Siver (Ag)	5 ppb
Sodium (Na)*	50 ppb
Tin (Sn)	5 ppb
Zin (Zn)	5 ppb

*** May change over time**

Line @thankyou2562 Tel. 02 372 1545 - 6

SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

Line @thankyou2562 Tel. 02 372 1545 - 6

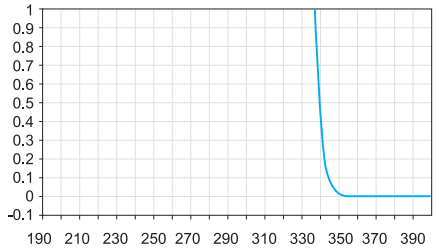
Ultimate

Item	Extraction-Concentration Suitability		UV Cutoff (max. nm)	Assay (min. %)	Water (max. %)	Residue aft. evaporation (max. ppm)
	ECD (max. ppt)	FID (max. ppt)				
Acetone	10	5	330	99.9	0.2	1
Acetonitrile	10	5	<190	99.9	0.01	1
Benzene	10		280	99.9	0.03	1
Chloroform w /Amylene	10	5	245	99.9	0.02	1
chloroform w /Ethanol	10	5	245	99.9	0.02	1
Dichloromethane	10	5	233	99.9	0.02	1
Ethyl Acetate	10	5	255	99.9	0.02	1
Ethyl Ether w /Ethanol	10	5	218	99.9	0.01	1
n-Heptane 97%	10	5	197	97	0.02	1
n-Heptane 99%	10	5	197	99	0.02	1
n-Hexane 95%	10	5	195	95	0.02	1
Isooctane	10	5	205	99.8	0.02	1
Methanol	10	5	205	99.9	0.05	1
Methyl t-Butyl Ether	10	5	210	99.5	0.05	1
n-Pentane	10	5	190	98	0.02	1
Petroleum Ether 35~60 °C	10	5	-	-	0.01	1
2-Propanol	10	5	205	99.9	0.05	1
Toluene	10	5	286	99.9	0.02	1

Line @thankyou2562 Tel. 02 372 1545 - 6

Acetone

Ultimate Grade



- Formula: $(CH_3)_2CO$
- F.W.: 58.08
- CAS: 67-64-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.56
- Polarity Index (P'): 5.1
- Viscosity (cP, 25 °C): 0.306
- Density (g/ml, 25 °C): 0.785
- Boilling point (°C): 56
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.357

A1084-12 Acetone, Ultimate Grade

HS-No: 2914 11 00 00

Code	Capacity
A1084-12-1001	1.0 L
A1084-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

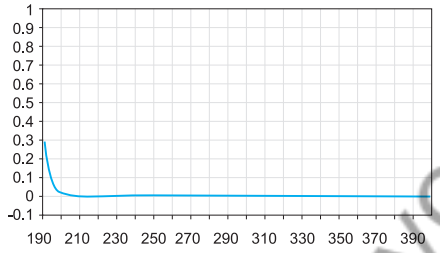
Ultraviolet Spectrophotometry

Maximum UV Absorbance	
330 nm	1.00
340 nm	0.06
350 nm	0.01
UV Cutoff	max. 330 nm
Assay (by GC)	min. 99.9 %

Color (APHA)	10
Water	0.2 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Titrable acid	0.0003 mEq/g
Titrable base	0.0006 mEq/g
Solubility in water	To pass test
Substances reducing permanganate	To pass test
Aldehyde (as HCHO)	0.002 %
Methanol (as CH_3OH)	0.05 %
Isopropyl Alcohol (as $(CH_3)_2CHOH$)	0.05 %

Acetonitrile

Ultimate Grade



- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.65
- Polarity Index (P'): 5.8
- Viscosity (cP, 25 °C): 0.369
- Density (g/ml, 25 °C): 0.779
- Boilling point (°C): 82
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.342

A1133-12 Acetonitrile, Ultimate Grade

HS-No: 2926 90 95 90

Code	Capacity
A1133-12-2501	2.5 L
A1133-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
190 nm	1.00
195 nm	0.15
200 nm	0.05
205 nm	0.04
210 nm	0.02
220 nm	0.01
254 nm	0.009
UV Cutoff	max. 190 nm

LC Gradient Suitability

Gradient Elution test	To pass test
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	1 ppm
Fluorescence Background	0.008 mEq/g
Titrable acid	To pass test
Titrable base	0.0006 mEq/g

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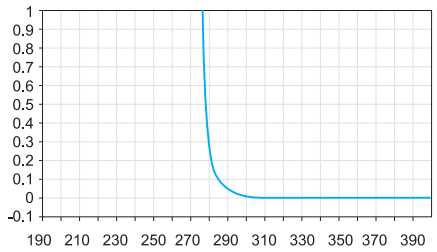
Benzene

Ultimate Grade



- Formula: C_6H_6
- F.W.: 78.10
- CAS: 71-43-2

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.32
- Viscosity (cP, 25 °C): 0.604
- Density (g/ml, 25 °C): 0.872
- Boilling point (°C): 80
- Solubility of water (%, 25 °C): 0.063
- Refractive index (25 °C): 1.498

B2027-12 Benzene, Ultimate Grade

HS-No: 2902 20 00 00

Code	Capacity
B2027-12-1001	1.0 L
B2027-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt

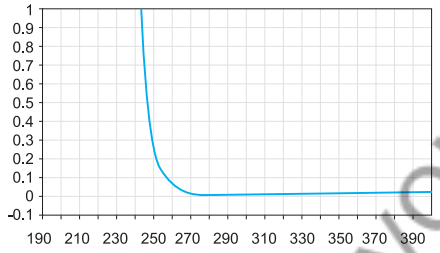
Ultraviolet Spectrophotometry

Maximum UV Absorbance	
280 nm	1.00
290 nm	0.15
300 nm	0.05
330 nm	0.01
350 nm	0.005
UV Cutoff	max. 280 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.03 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Substances darkened by sulfuric acid	To pass test
Thiophene (limit abour 1 ppm)	To pass test
Sulfur compounds (as S)	0.005 %

Chloroform (Stabilized with Amylene)

Ultimate Grade



- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 40~20 ppm Amylene

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.40
- Polarity Index (P'): 4.1
- Viscosity (cP, 25 °C): 0.537
- Density (g/ml, 25 °C): 1.480
- Boilling point (°C): 61
- Solubility of water (%, 20 °C): 0.056
- Refractive index (25 °C): 1.444

C3059-12 Chloroform (Stabilized with Amylene), Ultimate Grade

HS-No: 2903 13 00 00

Code	Capacity
C3057-4-1001	1.0 L
C3057-4-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
245 nm	1.00
250 nm	0.33
254 nm	0.15
270 nm	0.02
280 nm	0.01
UV Cutoff	max. 245 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Preservative (Amylene)	40 ~ 200 ppm
Lead (Pb)	0.05 ppm
Acid and Chloride	To pass test
Free Chlorine	To pass test
Suitability for use in Dithizone test	To pass test
Acetone and Aldehyde	0.005 %

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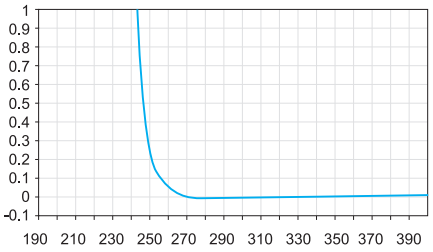
Chloroform (Stabilized with Ethanol)

Ultimate Grade



- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 0.5~1.0% Ethanol

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.40
- Polarity Index (P'): 4.1
- Viscosity (cP, 25 °C): 0.537
- Density (g/ml, 25 °C): 1.480
- Boilling point (°C): 61
- Solubility of water (%, 20 °C): 0.056
- Refractive index (25 °C): 1.444

C3059-12 Chloroform (Stabilized with Ethanol), Ultimate Grade

HS-No: 2903 13 00 00

Code	Capacity
C3058-12-1001	1.0 L
C3058-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue	
(as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue	
(as 2-Octanol)	max. 5 ppb

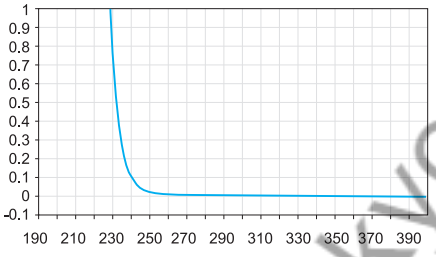
Ultraviolet Spectrophotometry

Maximum UV Absorbance	
245 nm	1.00
250 nm	0.33
254 nm	0.15
270 nm	0.02
280 nm	0.01
UV Cutoff	max. 245 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Preservative (Ethanol)	0.5 ~ 1.0 %
Lead (Pb)	0.05 ppm
Acid and Chloride	To pass test
Free Chlorine	To pass test
Substances darkened by sulfuric acid	To pass test
Suitability for use in Dithizone test	To pass test
Acetone and Aldehyde	0.005 %

Dichloromethane (Stabilized with Amylene)

Ultimate Grade



- Formula: CH_2Cl_2
- F.W.: 84.93
- CAS:75-09-2
- Stabilized with 40~200 ppm Amylene

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.42
- Polarity index (P'): 3.1
- Viscosity (cP, 25 °C): 0.413
- Density (g/ml, 25 °C): 1.318
- Boilling point (°C): 40
- Solubility of water (%, 20 °C): 0.24
- Refractive index (25 °C): 1.421

D3056-12 Dichloromethane (Stabilized with Amylene), Ultimate Grade

HS-No: 2903 12 00 00

Code	Capacity
D3056-12-1001	1.0 L
D3056-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue	
(as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue	
(as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
233 nm	1.00
235 nm	0.50
240 nm	0.15
254 nm	0.01
280 nm	0.01
UV Cutoff	max. 233 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Preservative (Amylene)	40 ~ 200 ppm
Titrable acid	0.0003 mEq/g
Free Halogens	To pass test

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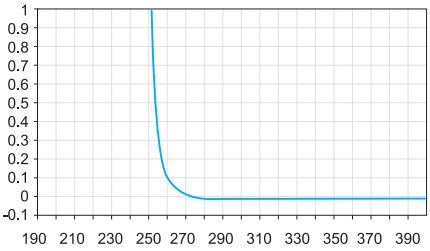
Ethyl Acetate

Ultimate Grade



- Formula: $CH_3COOC_2H_6$
- F.W.: 88.11
- CAS:141-78-6

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.58
- Polarity Index (P'): 4.4
- Viscosity (cP, 25 °C): 0.423
- Density (g/ml, 25 °C): 0.894
- Boilling point (°C): 77
- Solubility of water (%, 20 °C): 3.3
- Refractive index (25 °C): 1.370

E7100-12 Ethyl Acetate, Ultimate Grade

HS-No: 2903 13 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance

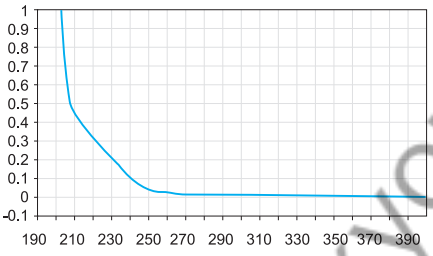
255 nm	1.00
260 nm	0.15
270 nm	0.025
UV Cutoff	max. 255 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Titrable acid	0.0009 mEq/g
Substances darkened by sulfuric acid	To pass test

Code	Capacity
C3059-12-1001	1.0 L
C3059-12-4001	4.0 L

Ethyl Ether, Anhydrous (Stabilized with Ethanol)

Ultimate Grade



- Formula: $C_2H_5OC_2H_5$
- F.W.: 74.12
- CAS: 60-29-7
- Stabilized with 1.5~2.5% Ethanol

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.38
- Polarity index (P*): 2.8
- Viscosity (cP, 25 °C): 0.24
- Density (g/ml, 25 °C): 0.708
- Boilling point (°C): 34
- Solubility of water (%, 20 °C): 1.26
- Refractive index (25 °C): 1.352

Ethyl Ether, Anhydrous (Stabilized with Ethanol), Ultimate Grade

HS-No:

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance

218 nm	1.00
254 nm	0.07
280 nm	0.02
350 nm	0.01
UV Cutoff	max. 218 nm

Assay (by GC, Excluding preservative)	min. 99.9 %
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Titrable acid	0.0002 mEq/g
Preservative (C_2H_5OH)	1.5 ~ 2.5 %
Peroxide (as H_2O_2, at time of packaging)	max. 5 ppm
Carbonyl compounds (as HCHO)	0.001 %
Substances darkened by sulfuric acid	To pass test

Code	Capacity
D3103-12-1001	1.0 L
D3103-12-4001	4.0 L

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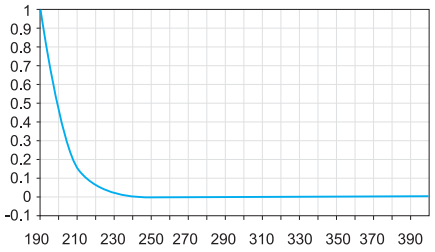
n-Heptane 97%

Ultimate Grade



- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.01
- Polarity Index (P'): 0.1
- Viscosity (cP, 25 °C): 0.40
- Density (g/ml, 25 °C): 0.681
- Boilling point (°C): 98
- Solubility of water (%, 25 °C): 0.01
- Refractive index (25 °C): 1.385

N3008-12 n-Heptane 97%, Ultimate Grade

HS-No: 2901 10 90 00

Code	Capacity
N3008-12-1001	1.0 L
N3008-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

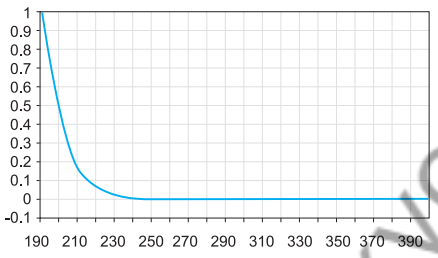
Ultraviolet Spectrophotometry

Maximum UV Absorbance	
197 nm	1.00
200 nm	0.75
215 nm	0.20
254 nm	0.01
UV Cutoff	max. 197 nm

Assay (by GC, n-Heptane)	min. 97.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Substances darkened by sulfuric acid	To pass test

n-Heptane 99%

Ultimate Grade



- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.01
- Polarity Index (P'): 0.1
- Viscosity (cP, 25 °C): 0.40
- Density (g/ml, 25 °C): 0.681
- Boilling point (°C): 98
- Solubility of water (%, 20 °C): 0.01
- Refractive index (25 °C): 1.385

N3008-12 n-Heptane 99%, Ultimate Grade

HS-No: 2901 10 90 00

Code	Capacity
N3008-12-1001	1.0 L
N3008-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
197 nm	1.00
200 nm	0.75
215 nm	0.20
254 nm	0.01
UV Cutoff	max. 197 nm

Assay (by GC, n-Heptane)	min. 99.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Substances darkened by sulfuric acid	To pass test

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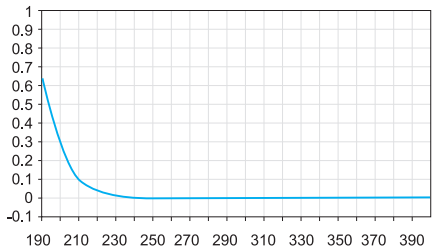
n-Hexane 95%

Ultimate Grade



- Formula: $CH_2(CH_2)_4CH_3$
- F.W.: 86.18
- CAS: 110-54-3

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity Index (P'): 0.1
- Viscosity (cP, 25 °C): 0.300
- Density (g/ml, 25 °C): 0.656
- Boilling point (°C): 69
- Solubility of water (%, 20 °C): 0.01
- Refractive index (25 °C): 1.372

N3057-12 n-Hexane 95%, Ultimate Grade

HS-No: 2901 10 90 00

Code	Capacity
N3057-12-1001	1.0 L
N3057-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

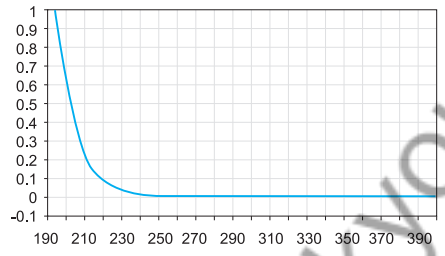
Ultraviolet Spectrophotometry

Maximum UV Absorbance	
195 nm	1.00
210 nm	0.25
220 nm	0.075
254 nm	0.005
UV Cutoff	max. 195 nm

Assay (by GC, n-Hexane)	min. 95.0 %
(total C6 Hydrocarbons)	min. 99.8 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Water soluble titrable acid	0.0003 mEq/g
Sulfur compounds (as S)	0.005 %
Thiophene	To pass test

Isooctane (2,2,4-Trimethylpentane)

Ultimate Grade



- Formula: $(CH_3)_2CHCH_2C(CH_3)_3$
- F.W.: 114.23
- CAS: 540-84-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity Index (P'): 0.1
- Viscosity (cP, 25 °C): 0.51
- Density (g/ml, 25 °C): 0.691
- Boilling point (°C): 99
- Solubility of water (%, 20 °C): 0.006
- Refractive index (25 °C): 1.389

TR105-12 Isooctane (2,2,4-Trimethylpentane), Ultimate Grade

HS-No: 2901 10 90 00

Code	Capacity
TR105-12-1001	1.0 L
TR105-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
205 nm	1.00
225 nm	0.10
254 nm	0.014
UV Cutoff	max. 205 nm

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Water soluble titrable acid	0.0003 mEq/g
Sulfur compounds (as S)	0.005 %

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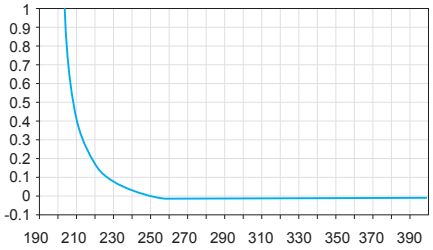
Methanol

Ultimate Grade



- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.95
- Polarity Index (P'): 5.1
- Viscosity (cP, 25 °C): 0.544
- Density (g/ml, 25 °C): 0.787
- Boilling point (°C): 65
- Solubility of water (%, 20 °C): Miscible
- Refractive index (25 °C): 1.326

M2097-12 Methanol, Ultimate Grade

HS-No: 2905 11 00 00

Code	Capacity
M2097-12-1001	1.0 L
M2097-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance

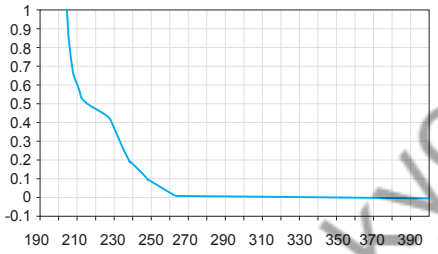
205 nm	1.00
220 nm	0.25
230 nm	0.15
254 nm	0.02
280 nm	0.01
UV Cutoff	max. 205 nm

LC Gradient Suitability

Gradient Elution test	To pass test
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Titrable acid	0.0003 mEq/g
Titrable base	0.0002 mEq/g
Carbonyl compounds (each of Acetone, Formaldehyde and Acetaldehyde)	0.001 %
Substances darkened by sulfuric acid	To pass test
Substances reducing permanganate	To pass test
Solubility in water	To pass test

Methyl t-Butyl Ether

Ultimate Grade



- Formula: $(CH_3)_3COCH_3$
- F.W.: 88.14
- CAS: 1634-04-4

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.35
- Polarity Index (P'): 2.5
- Viscosity (cP, 25 °C): 0.28
- Density (g/ml, 25 °C): 0.740
- Boilling point (°C): 55
- Solubility of water (%, 20 °C): 1.5
- Refractive index (25 °C): 1.366

M2060-12 Methyl t-Butyl Ether, Ultimate Grade

HS-No: 2905 14 10

Code	Capacity
M2060-12-1001	1.0 L
M2060-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance

210 nm	1.00
225 nm	0.50
254 nm	0.10
300 nm	0.01
UV Cutoff	max. 210 nm

Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Peroxide (as H_2O_2, at time of packaging)	max. 1 ppm

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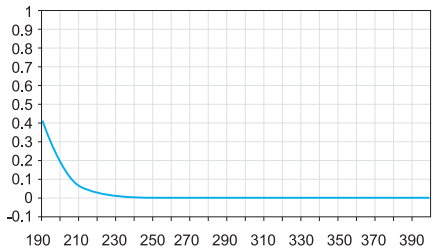
n-Pentane

Ultimate Grade



- Formula: $CH_3(CH_2)_3CH_3$
- F.W.: 72.15
- CAS: 109-66-0

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.00
- Polarity Index (P'): 0.00
- Viscosity (cP, 25 °C): 0.22
- Density (g/ml, 25 °C): 0.621
- Boilling point (°C): 36
- Solubility of water (%, 20 °C): 0.009
- Refractive index (25 °C): 1.355

N6015-12 n-Pentane,Ultimate Grade

HS-No: 2901 10 90 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
190 nm	1.00
200 nm	0.30
210 nm	0.10
254 nm	0.01
UV Cutoff	max. 190 nm

Assay (by GC, n-Pentane)	min. 98.0 %
(total C5 hydrocarbons)	min. 99.9 %
Color (APHA)	5
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Substances darkened by sulfuric acid	To pass test

Code	Capacity
N6015-12-1001	1.0 L
N6015-12-4001	4.0 L

Petroleum Ether (35 ~ 60 °C)

Ultimate Grade

CAS: 8032-32-4

Physical Data:
- Density (g/ml, 20 °C): 0.64
- Boilling point (°C): 35 ~ 60
- Refractive index (20 °C): 1.365

P2049-12 Petroleum Ether (35 ~ 60°C), Ultimate Grade

HS-No: 2710 11 25 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb
Boiling range (Initial to dry point)	35 ~ 60 °C

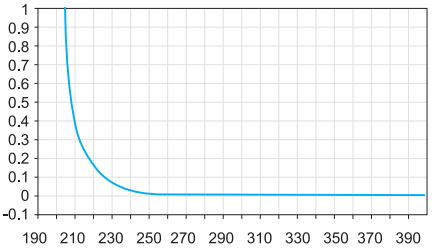
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Acidity	To pass test

Code	Capacity
P2049-12-1001	1.0 L
P2049-12-4001	4.0 L

Line @thankyou2562 Tel. 02 372 1545 - 6

2-Propanol (Isopropyl Alcohol)

Ultimate Grade



- Formula: $(CH_3)_2CHOH$
- F.W.: 60.10
- CAS: 67-63-0

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.82
- Polarity Index (P'): 3.9
- Viscosity (cP, 25 °C): 2.038
- Density (g/ml, 25 °C): 0.782
- Boilling point (°C): 82
- Solubility of water (%, 20 °C): Miscible
- Refractive index (25 °C): 1.375

PR141-12 2-Propanol (Isopropyl Alcohol), Ultimate Grade

HS-No: 2905 12 00 00

Code	Capacity
PR141-12-1001	1.0 L
PR141-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

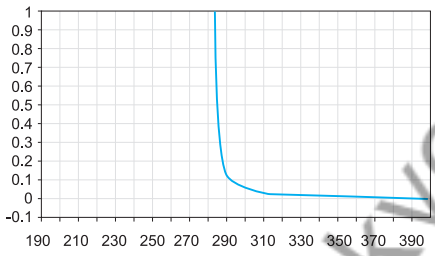
Maximum UV Absorbance

205 nm	1.00
220 nm	0.25
230 nm	0.13
254 nm	0.02
UV Cutoff	max. 205 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Titrable acid or Base	0.0001 mEq/g
Solubility in water	To pass test

Toluene

Ultimate Grade



- Formula: $C_6H_5CH_3$
- F.W.: 92.14
- CAS: 108-88-3

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.29
- Polarity Index (P'): 2.4
- Viscosity (cP, 25 °C): 0.560
- Density (g/ml, 25 °C): 0.864
- Boilling point (°C): 111
- Solubility of water (%, 25 °C): 0.033
- Refractive index (25 °C): 1.494

T5031-12 Toluene, Ultimate Grade

HS-No: 2902 30 00 00

Code	Capacity
T5031-12-1001	1.0 L
T5031-12-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
FID Detectable residue (as 2-Octanol)	max. 5 ppb

Ultraviolet Spectrophotometry

Maximum UV Absorbance

286 nm	1.00
288 nm	0.40
300 nm	0.10
350 nm	0.01
UV Cutoff	max. 286 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	1 ppm
Fluorescence Background	To pass test
Sulfur compounds (as S)	0.003 %
Substances darkened by sulfuric acid	To pass test

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SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

Line @thankyou2562 Tel. 02 372 1545 - 6

Pesticide

Item	Extraction-Concentration Suitability – ECD (max.ppt)	Assay (min. %)	Water (max. %)	Residue aft. Evaporation (max. ppm)
Acetone	10	99.8	0.25	5
Acetonitrile	10	99.8	0.05	5
Benzen	10	99.7	0.03	5
1-Butanol	20	99.5	0.1	5
Chloroform w / Amylene	10	99.8	0.02	2
Chloroform w / Ethanol	10	99.8	0.02	2
Cyclohexane	10	99.7	0.01	5
Dichloromethane	10	99.7	0.02	5
Ethyl Acetate	10	99.8	0.02	5
Ethyl Ether w / Ethanol	10	99.5	0.08	3
n-Heptane 97%	10	97.0	0.02	3
n-Heptane 99%	10	99.0	0.02	3
n-Hexane 95 %	10	95.0	0.01	5
Isooctane	10	99.0	0.01	5
Methanol	10	99.8	0.1	5
Methyl t-Butyl Ether	10	99.0	0.05	5
n-Pentane	10	98.0	0.02	5
Petroleum Ether (35~60 °C)	10	-	0.05	5
2-Propanol	10	99.7	0.1	5
Sodium sulfate, anhydrous	-	99.0	-	-
Toluene	10	99.8	0.03	5

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Acetone

Pesticide Grade

- Formula: $(CH_3)_2CO$
- F.W.: 58.08
- CAS: 67-64-1

A1084-11 Acetone, Pesticide Grade

HS-No: 2914 11 00 00

Extration-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.8 %	Water	0.25 %
		Residue after Evaporation	5 ppm

Code	Capacity
A1084-11-1001	1.0 L
A1084-11-4001	4.0 L

Acetonitrile

Pesticide Grade

- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

A1133-11 Acetonitrile, Pesticide Grade

HS-No: 2926 90 95 90

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.8 %	Water	0.05 %
		Residue after Evaportion	5 ppm

Code	Capacity
A1133-11-1001	1.0 L
A1133-11-4001	4.0 L

Benzene

Pesticide Grade

- Formula: C_6H_6
- F.W.: 78.10
- CAS: 71-43-2

B2027-11 Benzene, Pesticide Grade

HS-No: 2902 20 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.7 %	Water	0.03 %
		Residue after Evaportion	5 ppm

Code	Capacity
B2027-11-1001	1.0 L
B2027-11-4001	4.0 L

1-Butanol (n-Butyl Alcohol)

Pesticide Grade

- Formula: $CH_3(CH_2)_3OH$
- F.W.: 74.12
- CAS: 71-36-3

BU103-11 1-Butanol (n-Butyl Alcohol), Pesticide Grade

HS-No: 2905 13 00 00

Extration-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.5 %	Water	0.1 %
		Residue after Evaporation	5 ppm

Code	Capacity
BU103-11-1001	1.0 L
BU103-11-4001	4.0 L

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Chloroform (Stabilized with Amylene)

Pesticide Grade

- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 40~200 ppm Amylene

C3059-11 Chloroform (Stabilized with Amylene), Pesticide Grade

HS-No: 2903 13 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Water	0.02 %
Assay (by GC)	min. 99.8 %	Residue after Evaportion	2 ppm
Color (APHA)	10	Chloride (Cl)	10 ppm

Code	Capacity
C3057-11-1001	1.0 L
C3057-11-4001	4.0 L

Chloroform (Stabilized with Ethanol)

Pesticide Grade

- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 0.5~1.0 ppm Ethanol

C3059-11 Chloroform (Stabilized with Ethanol), Pesticide Grade

HS-No: 2903 13 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC, Excluding preservative)	min. 99.8 %	Water	0.02 %
		Residue after Evaportion	2 ppm

Code	Capacity
C3058-4-1001	1.0 L
C3058-4-4001	4.0 L

Cyclohexane

Pesticide Grade

- Formula: C_6H_{12}
- F.W.: 84.16
- CAS: 110-82-7

C6033-11 Cyclohexane, Pesticide Grade

HS-No: 2902 11 00 00

Extration-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.7 %	Water	0.01 %
		Residue after Evaporation	5 ppm

Code	Capacity
C6033-11-1001	1.0 L
C6033-11-4001	4.0 L

Dichloromethane (Stabilized with Amylene)

Pesticide Grade

- Formula: CH_2Cl_2
- F.W.: 84.93
- CAS: 75-09-2
- Stabilized with 40~200 ppm Amylene

D3056-11 Dichloromethane (Stabilized with Amylene), Pesticide Grade

HS-No: 2903 12 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Water	0.02 %
Assay (by GC)	min. 99.7 %	Residue after Evaportion	5 ppm
Color (APHA)	10	Chloride (Cl)	10 ppm

Code	Capacity
D3056-11-1001	1.0 L
D3056-11-4001	4.0 L

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Ethyl Acetate

Pesticide Grade

- Formula: $CH_3COOC_2H_5$
- F.W.: 88.11
- CAS: 141-78-6

E7100-11 Ethyl Acetate, Pesticide Grade

HS-No: 2915 31 00 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	0.02 %
Residue after Evaportion	5 ppm
Titrable acid	0.0009 mEq/g

Code	Capacity
E7100-11-1001	1.0 L
E7100-11-4001	4.0 L

Ethyl Ether, Anhydrous (Stabilized with Ethanol)

Pesticide Grade

- Formula: $C_2H_5OC_2H_5$
- F.W.: 74.12
- CAS: 60-29-7
- Stabilized with 1.5 ~ 2.5% Ethanol

Ethyl Ether, Anhydrous (Stabilized with Ethanol), Pesticide Grade

HS-No: 2902 11 00 00

Extration-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.08 %
Residue after Evaporation	3 ppm
Peroxide (as H_2O_2, at time of packaging)	5 ppm
Titrable acid	0.0002 mEq/g

Code	Capacity
C6033-11-1001	1.0 L
C6033-11-4001	4.0 L

n-Heptane 97%

Pesticide Grade

- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

N3008-11 n-Heptane 97%, Pesticide Grade

HS-No: 2901 10 90 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
Assay (by GC, n-Heptane)	min. 97.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaportion	3 ppm

Code	Capacity
M3008-11-1001	1.0 L
M3008-11-4001	4.0 L

n-Heptane 99%

Pesticide Grade

- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

N3008-11 n-Heptane 99%, Pesticide Grade

HS-No: 2901 10 90 00

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt
Assay (by GC, n-Heptane)	min. 99.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaportion	3 ppm

Code	Capacity
M3008-11-1001	1.0 L
M3008-11-4001	4.0 L

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n-Hexane 95%

Pesticide Grade

- Formula: $CH_3(CH_2)_4CH_3$
- F.W.: 86.18
- CAS: 110-54-3

N3057-11 n-Hexane 95%, Pesticide Grade

HS-No: 2901 10 90 00

Extration-Concentration Suitability

ECD Detectable residue		Color (APHA)	10
(as Heptachlor epoxide)	max. 10 ppt	Water	0.01 %
Assay (by GC)	min. 95.0 %	Residue after Evaporation	5 ppm
(total C6 Hydrocarbons)	min. 99.8 %		

Code	Capacity
N3057-11-1001	1.0 L
N3057-11-4001	4.0 L

Isooctane (2,2,4-Trimethylpentane)

Pesticide Grade

- Formula: $(CH_3)_2CHCH_2C(CH_3)_3$
- F.W.: 114.23
- CAS: 540-84-1

TR105-11 Isooctane (2,2,4-Trimethylpentane), Pesticide Grade

HS-No: 2901 10 90 00

Extraction-Concentration Suitability

ECD Detectable residue		Color (APHA)	10
(as Heptachlor epoxide)	max. 10 ppt	Water	0.01 %
Assay (by GC)	min. 99.0 %	Residue after Evaportion	5 ppm

Code	Capacity
TR105-11-1001	1.0 L
TR105-11-4001	4.0 L

Methanol

Pesticide Grade

- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

M2097-11 Methanol, Pesticide Grade

HS-No: 2905 11 00 00

Extraction-Concentration Suitability

ECD Detectable residue		Color (APHA)	10
(as Heptachlor epoxide)	max. 10 ppt	Water	0.1 %
Assay (by GC)	min. 99.8 %	Residue after Evaportion	5 ppm

Code	Capacity
M2097-11-1001	1.0 L
M2097-11-4001	4.0 L

Methyl t-Butyl Ether

Pesticide Grade

- Formula: $(CH_3)_3COCH_3$
- F.W.: 88.14
- CAS: 1634-04-4

M2060-11 Methyl t-Butyl Ether, Pesticide Grade

HS-No: 2905 14 10

Extration-Concentration Suitability

ECD Detectable residue		Color (APHA)	10
(as Heptachlor epoxide)	max. 10 ppt	Water	0.05 %
Assay (by GC)	min. 99.0 %	Residue after Evaporation	5 ppm

Code	Capacity
M2060-11-1001	1.0 L
M2060-11-4001	4.0 L

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n-Pentane

Pesticide Grade

- Formula: $CH_3(CH_2)_3CH_3$
- F.W.: 72.15
- CAS: 109-66-0

N6015-11 n-Pentane, Pesticide Grade

HS-No: 2901 10 90 00

Code	Capacity
N6015-11-1001	1.0 L
N6015-11-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC, n-Pentane)	min. 98.0 %	Water	0.02 %
(total C5 Hydrocarbons)	min. 99.9 %	Residue after Evaportion	5 ppm

Petroleum Ether (35~60 °C)

Pesticide Grade

- CAS: 8032-32-4

P2049-11 Petroleum Ether (35~60 °C), Pesticide Grade

HS-No: 2710 11 25 00

Code	Capacity
P2049-11-1001	1.0 L
P2049-11-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Boiling range (Initial to dry)	35 ~ 60 °C	Water	0.05 %
		Residue after Evaportion	5 ppm

2-Propanol (Isopropyl Alcohol)

Pesticide Grade

- Formula: $(CH_3)_2CHOH$
- F.W.: 60.10
- CAS: 67-63-0

PR141-1 2-Propanol (Isopropyl Alcohol), Pesticide Grade

HS-No: 2905 12 00 00

Code	Capacity
PR141-11-1001	1.0 L
PR141-11-4001	4.0 L

Extration-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.7 %	Water	0.1 %
		Residue after Evaporation	5 ppm

Sodium Sulfate, Anhydrous

Pesticide Grade

- Formula: Na_2SO_4
- F.W.: 142.04
- CAS: 7757-82-6

S5281-11 Sodium Sulfate, Anhydrous, Pesticide Grade

HS-No: 2833 11 00 00

Code	Capacity
S5281-11-0500	500 g
S5281-11-1000	1 kg

Meets ACS Specification

Extraction-Concentration Suitability

Extraction-Concentration Suitability	To pass test	Loss on Ignition	0.5 %
Assay (Na_2SO_4)	min. 99.0 %	Magnesium (Mg)	0.001 %
Calcium (Ca)	0.01 %	Nitrogen compound (as N)	5 ppm
Chloride (Cl)	0.001 %	pH of a 5% Solution at 25 °C	5.2 ~ 9.2
Heavy Metals (Pb)	5 ppm	Phosphate (PO_4)	0.001 %
Insoluble matters	0.01 %	Potassium (K)	0.01 %
Iron (Fe)	0.001 %		

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Toluene

Pesticide Grade

- Formula: $C_6H_5CH_3$
- F.W.: 92.14
- CAS: 108-88-3

T5031-11 Toluene, Pesticide Grade

HS-No: 2902 30 00 00

Code	Capacity
T5031-11-1001	1.0 L
T5031-11-4001	4.0 L

Extraction-Concentration Suitability

ECD Detectable residue (as Heptachlor epoxide)	max. 10 ppt	Color (APHA)	10
Assay (by GC)	min. 99.8 %	Water	0.03 %
		Residue after Evaportion	5 ppm

Line @thankyou2562 Tel. 02 372 1545 - 6

SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

Line @thankyou2562 Tel. 02 372 1545 - 6

DSP HPLC

Solvents

Item	UV Cutoff (max. nm)	Assay (min. %)	Water (max. %)	Residue aft. Evaporation (max. ppm)
Acetic acid, glacial	254	99.7	0.1	5
Acetone	330	99.7	0.25	1
Acetonitrile	<190	99.9	0.01	1
Benzene	280	99.7	0.03	5
1-Butanol	215	99.5	0.1	5
n-Butyl acetate	254	99.5	0.05	5
Chlorobenzene	288	99.9	0.03	5
Chloroform w / Amylene	245	99.8	0.02	2
Chloroform w / Ethanol	245	99.8	0.02	2
Cyclohexane	202	99.7	0.01	5
o-Dichlorobenzene	296	98.0	0.02	5
1,2-Dichloroethane	226	99.5	0.02	5
Dichloromethane	233	99.9	0.02	2
N,N-Dimethylacetamide	270	99.8	0.03	5
N,N-Dimethylformamide	270	99.9	0.03	5
Dimethyl Sulfoxide	263	99.9	0.05	5
1,4-Dioxane	215	99.8	0.02	5
Ethanol	205	99.9	0.1	5
Ethyl Acetate	255	99.9	0.02	5
Ethyl Ether w / Ethanol	218	99.8	0.01	5
n-Heptane 97%	197	97.0	0.02	3
n-Heptane 99%	197	99.0	0.02	3
n-Hexane 95%	195	95.0	0.02	3
Isooctane	205	99.0	0.02	4
Methanol	205	99.9	0.05	3
Methyl t-Butyl Ether	210	99.0	0.05	5
Methyl Ethyl Ketone	329	99.6	0.03	3

Line @thankyou2562 Tel. 02 372 1545 - 6

DSP HPLC

Solvents

Item	UV Cutoff (max. nm)	Assay (min. %)	Water (max. %)	Residue aft. Evaporation (max. ppm)
Methyl Isobutyl Ketone	334	99.0	0.05	5
N-Methyl-2-Pyrrolidone	285	99.7	0.02	10
n-Pentane	190	98.0	0.02	5
Petroleum Ether (35~60˚C)	210	-	0.01	5
1-Propanol	210	99.8	0.05	3
2-Propanol	205	99.9	0.05	2
Pyridine	330	99.5	0.02	5
Tetrahydrofuran	210	99.9	0.02	5
Tetrahydrofuran w /BHT	-	99.5	0.02	-
Toluene	286	99.8	0.02	5
Water	190	-	-	10

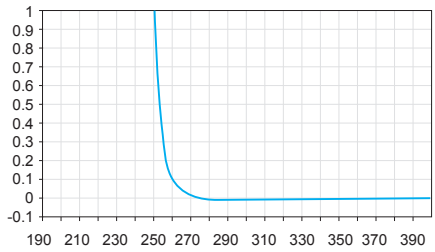
Acid & Bufters for HPLC

Item	UV Abssorbance (max., 254nm, 1.0M)	Assay (min. %)	Insoluble matter (max. %)
Ammonium acetate	0.02	99.0	0.005
Ammonium carbonate	0.02	30.0 (as NH_3)	0.005
Ammonium phosphate, monobasic	0.03	98.0	0.005
Phosphoric acid 85%	0.04	85.0	0.001
Potassium phosphate, monobasic	0.04	99.0	0.01
Sodium acetate trihydrate	0.02	99.0	0.005
Sodium bicarbonate	0.05	99.7	0.015

Line @rankyou2562 Tel. 02 372 1545 - 6

Acetic acid, glacial

HPLC Grade



- Formula: CH_3COOH
- F.W.: 60.05
- CAS: 64-19-7

Physical Data:
- Eluotropic value (E^o) (on Alumina): >0.73
- Polarity Index (P'): 6.2
- Viscosity (cP, 25 °C): 1.10
- Density (g/ml, 25 °C): 1.049
- Boilling point (°C): 117
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.370

A1020-4 Acetic acid, glacial, HPLC Grade

HS-No: 2915 21 00 00

Code	Capacity
A1020-4-1001	1.0 L
A1020-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

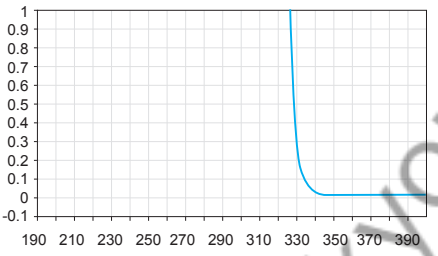
Maximum UV Absorbance

254 nm	1.00
256 nm	0.80
280 nm	0.05
350 nm	0.02
UV Cutoff	max. 254 nm
Assay (by GC)	min. 99.7 %
Color (APHA)	10
Water	0.1 %
Residue after Evaporation	5 ppm

Titrable base	0.0004 mEq/g
Dilution test	To pass test
Acetic anhydride	0.01 %
Chloride (Cl)	1 ppm
Sulfate (SO_4)	1 ppm
Heavy Metals (as Pb)	0.5 ppm
Iron (Fe)	0.2 ppm
Substances reducing dichromate	To pass test
Substances reducing permanganate	To pass test

Acetone

HPLC Grade



- Formula: $(CH_3)_2CO$
- F.W.: 58.08
- CAS: 67-64-1

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.56
- Polarity Index (P'): 5.1
- Viscosity (cP, 25 °C): 0.306
- Density (g/ml, 25 °C): 0.785
- Boilling point (°C): 56
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.357

A1084-12 Acetone, HPLC Grade

HS-No: 2914 11 00 00

Code	Capacity
A1084-4-1001	1.0 L
A1084-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

330 nm	1.00
340 nm	0.06
350 nm	0.01
UV Cutoff	max. 330 nm
Assay (by GC)	min. 99.7 %
Color (APHA)	10
Water	0.25 %
Residue after Evaporation	1 ppm

Titrable acid	0.0003 mEq/g
Titrable base	0.0006 mEq/g
Solubility in water	To pass test
Substances reducing permanganate	To pass test
Aldehyde (as HCHO)	0.002 %
Methanol (as CH_3OH)	0.05 %
Isopropyl Alcohol (as $(CH_3)_2CHOH$)	0.05 %

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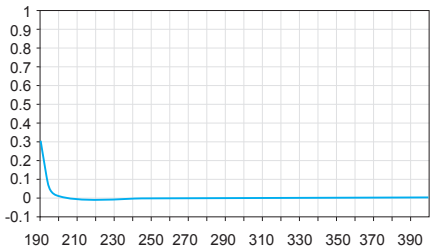
Acetonitrile

HPLC Grade



- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.66
- Polarity Index (P'): 5.8
- Viscosity (cP, 25 °C): 0.369
- Density (g/ml, 25 °C): 0.779
- Boilling point (°C): 82
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.342

A1133-4 Acetonitrile, HPLC Grade

HS-No: 2926 90 95 90

Code	Capacity
A1133-4-1001	1.0 L
A1133-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

190 nm	1.00
195 nm	0.15
200 nm	0.05
205 nm	0.04
210 nm	0.02
220 nm	0.01
254 nm	0.009
UV Cutoff	max. 190 nm

LC Gradient Suitability

Gradient Elution test	To pass test
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	1 ppm
Titrable acid	0.008 mEq/g
Titrable base	0.0006 mEq/g

Ammonium acetate

Acid & Buffers

HPLC Grade

- Formula: $CH_3CO_2NH_4$
- F.W.: 77.08
- CAS: 631-61-8

A5034-4 Ammonium acetate, HPLC Grade

HS-No: 2915 29 00 90

Code	Capacity
A5031-4-0500	500 g
A5031-4-1000	1 kg

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.02
280 nm	0.01
350 nm	0.01
Assay (by GC)	min. 97.0 %
pH of a 5% solutin (25 °C)	6.7 ~ 7.3
Insoluble matter	0.005 %
Residue after ignition	0.01 %
Chloride (Cl)	5 ppm
Nitrate (NO_3)	0.001 %
Sulfate (SO_4)	0.001 %
Heavy metals (as Pb)	5 ppm
Iron (Fe)	5 ppm

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Ammonium carbonate

Acid & Buffers

HPLC Grade

- Formula: $(NH_4)_2CO_3$
- F.W.: 96.09
- CAS: 506-87-6

A5052-4 Ammonium carbonate, HPLC Grade

HS-No: 2836 10 00 00

Code	Capacity
A5034-4-0500	500 g
A5034-4-1000	1 Kg

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.02
280 nm	0.01
350 nm	0.01
Assay (by GC)	min. 30.0 %
Insoluble matter	0.005 %
Chloride (Cl)	5 ppm
Sulfur compounds (as SO_4)	0.002 %
Heavy metals (as Pb)	5 ppm
Iron (Fe)	5 ppm

Ammonium phosphate, monobasic

Acid & Buffers

HPLC Grade

- Formula: $NH_4H_2PO_4$
- F.W.:115.03
- CAS: 7722-76-1

Ammonium phosphate, monobasic, HPLC Grade

HS-No: 3105 40 00

Code	Capacity
A5067-4-0500	500 g
A5067-4-1000	1 Kg

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.03
280 nm	0.02
350 nm	0.01
Assay (by GC)	min. 98.0 %
pH of a 5% solution (25 °C)	3.8 ~ 4.4
Insoluble matter	0.005 %
Ammonium hydroxide precipitate	0.005 %
Chloride (Cl)	5 ppm
Nitrate (NO_3)	0.001 %
Sulfate (SO_4)	0.01 %
Heavy metals (as Pb)	5 ppm
Iron (Fe)	0.001 %
Potassium (K)	0.005 %
Sodium (Na)	0.005 %

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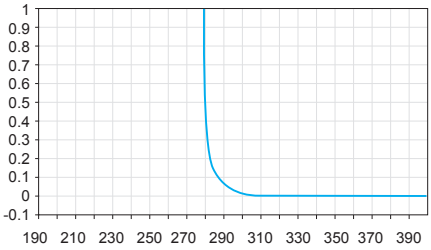
Benzene

HPLC Grade



- Formula: C_6H_6
- F.W.: 78.10
- CAS: 71-43-2

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.32
- Viscosity (cP, 25 °C): 0.604
- Density (g/ml, 25 °C): 0.872
- Boilling point (°C): 80
- Solubility of water (%, 20 °C): 0.063
- Refractive index (25 °C): 1.498

B2027-4 Benzene, HPLC Grade

HS-No: 2902 20 00 00

Code	Capacity
B2027-4-1001	1.0 L
B2027-4-4001	4.0 L

Meets ACS Specification

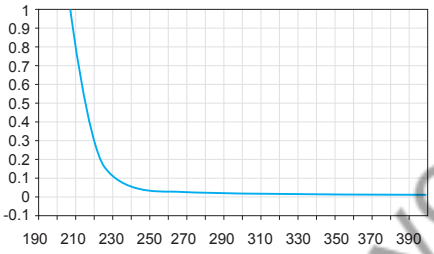
Ultraviolet Spectrophotometry

Maximum UV Absorbance

280 nm	1.00	Color (APHA)	10
290 nm	0.15	Water	0.03 %
300 nm	0.05	Residue after Evaporation	5 ppm
330 nm	0.01	Substances darkened by	
350 nm	0.005	sulfuric acid	To pass test
UV Cutoff	max. 280 nm	Thiophene (limit about 1 ppm)	To pass test
Assay (by GC)	min. 99.7 %	Sulfur compounds (as S)	0.005 %

1-Butanol (n-Butyl Alcohol)

HPLC Grade



- Formula: $CH_3(CH_2)_3OH$
- F.W.: 74.12
- CAS: 71-36-3

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.7
- Polarity index (P'): 3.9
- Viscosity (cP, 25 °C): 2.544
- Density (g/ml, 25 °C): 0.806
- Boilling point (°C): 118
- Solubility of water (%, 20 °C): 20.07
- Refractive index (25 °C): 1.397

BU103-4 1-Butanol (n-Butyl alcohol), HPLC Grade

HS-No: 2905 13 00 00

Code	Capacity
BU103-4-0500	500 g
BU103-4-1000	1 kg

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

215 nm	1.00	Water	0.1 %
220 nm	0.50	Residue after Evaporation	5 ppm
230 nm	0.20	Titrable acid	0.0008 mEq/g
254 nm	0.025	Carbonyl compounds	
UV Cutoff	max. 215 nm	(as butyraldehyde)	0.01 %
Assay (by GC)	min. 99.5 %	Butyl ether	0.2 %
Color (APHA)	10		

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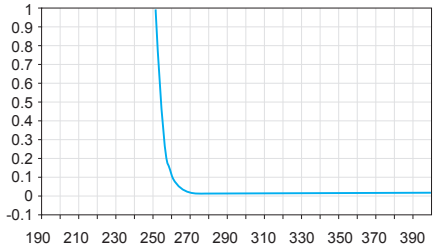
n-Butyl acetate

HPLC Grade



- Formula: $CH_3CO_2(CH_2)_3CH_3$
- F.W.: 116.16
- CAS: 123-86-4

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Viscosity (cP, 25 °C): 0.685
- Density (g/ml, 25 °C): 0.876
- Boilling point (°C): 126
- Solubility of water (%, 20 °C): 1.86
- Refractive index (25 °C): 1.392

n-Butyl acetate, HPLC Grade

HS-No: 2915 33 00

Code	Capacity
B6060-4-1001	1.0 L
B6060-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

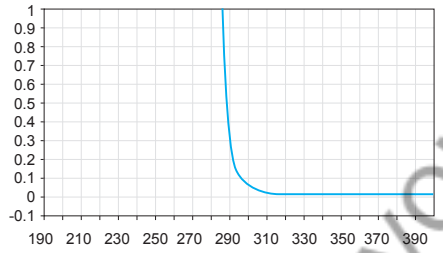
Maximum UV Absorbance

254 nm	1.00
260 nm	0.20
275 nm	0.04
300 nm	0.02
320 nm	0.01
UV Cutoff	max. 254 nm

Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	5 ppm
Titrable acid	0.0016 mEq/g
Substances darkened by sulfuric acid	To pass test

Chlorobenzene

HPLC Grade



- Formula: C_6H_5Cl
- F.W.: 112.58
- CAS: 108-90-7

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Polarity index (P'): 2.7
- Density (g/ml, 25 °C): 1.107
- Boilling point (°C): 132
- Refractive index (25 °C): 1.525

Chlorobenzene, HPLC Grade

HS-No: 2915 33 00

Code	Capacity
C6020-4-1001	1.0 L
C6020-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

288 nm	1.00
300 nm	0.05
325 nm	0.04
350 nm	0.02
400 nm	0.01
UV Cutoff	max. 288 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	30
Water	0.03 %
Residue after ignition	5 ppm
Titrable acid	0.004 mEq/g

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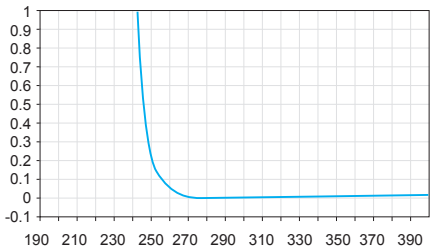
Chloroform (Stabilized with Amylene)

HPLC Grade



- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 40~200 ppm Amylene

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Viscosity (cP, 25 °C): 0.685
- Density (g/ml, 25 °C): 0.876
- Boilling point (°C): 126
- Solubility of water (%, 20 °C): 1.86
- Refractive index (25 °C): 1.392

C3059-4 Chloroform (Stabilized with Amylene), HPLC Grade

HS-No: 2903 13 00 00

Code	Capacity
C3057-4-1001	1.0 L
C3057-4-4001	4.0 L

Meets ACS Specification

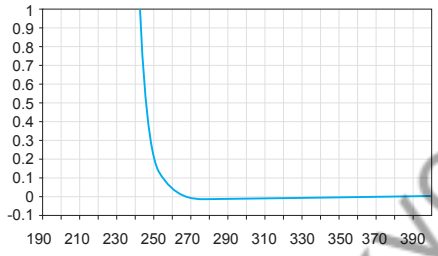
Ultraviolet Spectrophotometry

Maximum UV Absorbance

245 nm	1.00
250 nm	0.33
254 nm	0.15
270 nm	0.02
280 nm	0.01
UV Cutoff	max. 245 nm
Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	2 ppm
Preservative (Amylene)	40 ~ 200 ppm
Lead (Pb)	0.05 ppm
Acid and Chloride	To pass test
Free Chlorine	To pass test
Suitability for use in Dithizone test	To pass test
Acetone and Aldehyde	0.005 %

Chloroform (Stabilized with Ethanol)

HPLC Grade



- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with 0.5~1.0 % Ethanol

Physical Data:
- Eluotropic value (E°) (on Alumina): 4.0
- Viscosity (cP, 25 °C): 0.685
- Density (g/ml, 25 °C): 0.876
- Boilling point (°C): 126
- Solubility of water (%, 20 °C): 1.86
- Refractive index (25 °C): 1.392

C3059-4 Chloroform (Stabilized with Ethanol), HPLC Grade

HS-No: 2903 13 00 00

Code	Capacity
C3058-4-1001	1.0 L
C3058-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

245 nm	1.00
250 nm	0.33
254 nm	0.15
270 nm	0.02
280 nm	0.01
UV Cutoff	max. 245 nm
Assay (by GC, Excuding proservative)	min. 99.8 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	2 ppm
Preservative (Amylene)	0.5 ~ 1.0 %
Lead (Pb)	0.05 ppm
Acid and Chloride	To pass test
Free Chlorine	To pass test
Substance darkened by sulfuric acid	To pass test
Suitability for use in Dithizone test	To pass test
Acetone and Aldehyde	0.005 %

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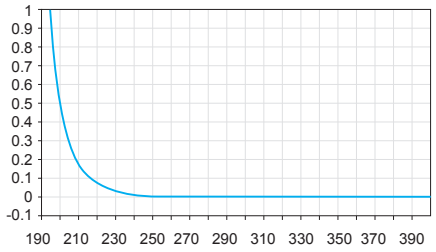
Cyclohexane

HPLC Grade



- Formula: C_6H_{12}
- F.W.: 84.16
- CAS: 110-82-7

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.04
- Polarity Index (P'): 0.2
- Viscosity (cP, 25 °C): 0.894
- Density (g/ml, 25 °C): 0.773
- Boilling point (°C): 81
- Solubility of water (%, 20 °C): 0.01
- Refractive index (25 °C): 1.424

C6033-4 Cyclohexane, HPLC Grade

HS-No: 2902 11 00 00

Code	Capacity
C6033-4-1001	1.0 L
C6033-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

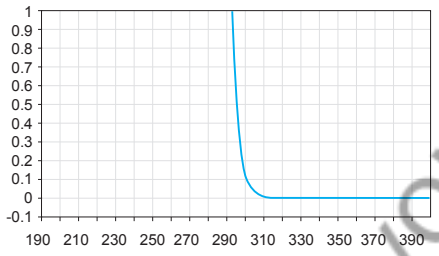
Maximum UV Absorbance

202 nm	1.00
205 nm	0.88
210 nm	0.67
254 nm	0.01
UV Cutoff	max. 202 nm

Assay (by GC)	min. 99.7 %
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	5 ppm
Substances darkened by sulfuric acid	To pass test

o-Dichlorobenzene

HPLC Grade



- Formula: $C_6H_4Cl_2$
- F.W.: 147.00
- CAS: 95-50-1

Physical Data:
- Viscosity (cP, 20 °C): 1.32
- Density (g/ml, 25 °C): 1.3058
- Boilling point (°C): 180.5
- Refractive index (20 °C): 1.5514

D3030-4 o-Dichlorobenzene, HPLC Grade

HS-No: 2903 61 00

Code	Capacity
D3030-4-1001	1.0 L
D3030-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

296 nm	1.00
300 nm	0.30
325 nm	0.10
350 nm	0.05
400 nm	0.01
UV Cutoff	max. 296

Assay (by GC)	min. 98.0 %
Color (APHA)	30
Water	0.02 %
Residue after Evaporation	5 ppm
Acidity (as HCl)	0.005 %

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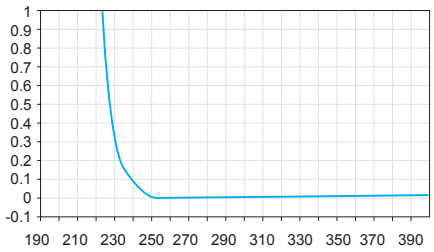
1,2-Dichloroethane

HPLC Grade



- Formula: $ClCH_2CH_2Cl$
- F.W.: 98.96
- CAS: 107-06-2

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.44
- Polarity Index (P'): 3.5
- Viscosity (cP, 25 °C): 0.779
- Density (g/ml, 25 °C): 1.245
- Boilling point (°C): 84
- Solubility of water (%, 20 °C): 0.15
- Refractive index (25 °C): 1.444

D3025-4 1,2-Dichloroethane, HPLC Grade

HS-No: 2903 15 00

Code	Capacity
D3025-4-1001	1.0 L
D3025-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

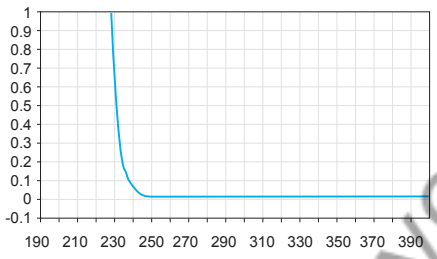
Maximum UV Absorbance

226 nm	1.00
230 nm	0.50
235 nm	0.20
240 nm	0.10
245 nm	0.05
250 nm	0.02
255 nm	0.01
400 nm	0.01

UV Cutoff	max. 226 nm
Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	5 ppm
Titrable acid	0.0003 mEq/g

Dichloromethane (Stabilized with Amylene)

HPLC Grade



- Formula: CH_2Cl_2
- F.W.: 84.93
- CAS: 75-09-2
- Stabilized with 40~200 ppm Amylene

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.42
- Polarity index (P'): 3.1
- Viscosity (cP, 25 °C): 0.413
- Density (g/ml, 25 °C): 1.318
- Boilling point (°C): 40
- Solubility of water (%,20 °C): 0.24
- Refractive index (25 °C): 1.421

D3056-4 Dichloromethane, HPLC Grade

HS-No: 2903 12 00 00

Code	Capacity
D3056-4-1001	1.0 L
D3056-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

233 nm	1.00
235 nm	0.50
240 nm	0.15
254 nm	0.01
280 nm	0.01
UV Cutoff	max. 233 nm

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	2 ppm
Preservative (Amylene)	40 ~ 200 ppm
Titrable acid	0.0003 mEq/g
Free Halogens	To pass test

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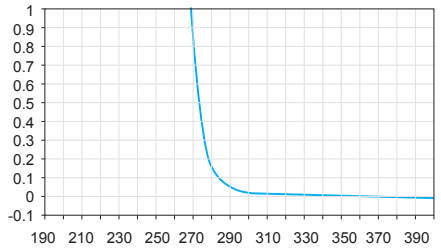
N,N-Dimethylacetamide

HPLC Grade



- Formula: $CH_3CON(CH_3)_2$
- F.W.: 87.12
- CAS: 127-19-5

Physical Data:
- Polarity Index (P'): 6.5
- Viscosity (cP, 25 °C): 2.14
- Density (g/ml, 25 °C): 0.937
- Boilling point (°C): 165~166
- Solubility of water (%, 20 °C): Miscible
- Refractive index (25 °C): 1.4384

N1040-4 N,N-Dimethylacetamide, HPLC Grade

HS-No: 2924 19 00 90

Code	Capacity
N1040-4-1001	1.0 L
N1040-4-4001	4.0 L

Ultraviolet Spectrophotometry

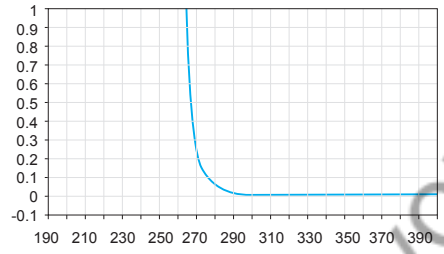
Maximum UV Absorbance (1M Solution)

270 nm	1.00
280 nm	0.30
290 nm	0.15
310 nm	0.05
320 nm	0.03
360 nm	0.01
400 nm	0.01

UV Cutoff	max. 270 nm
Assay (by GC)	min. 99.8 %
Water	0.03 %
Residue after Evaporation	5 ppm

N,N-Dimethylformamide

HPLC Grade



- Formula: $HCON(CH_3)_2$
- F.W.: 73.09
- CAS: 68-12-2

Physical Data:
- Eluotropic value (E°) (on Alumina): 7.6
- Polarity index (P'): 6.4
- Viscosity (cP, 25 °C): 0.794
- Density (g/ml, 25 °C): 0.944
- Boilling point (°C): 153
- Solubility of water (%,20 °C): Miscible
- Refractive index (25 °C): 1.427

N1042-4 N,N-Dimethylformamide, HPLC Grade

HS-No: 2924 19 00 90

Code	Capacity
N1042-4-1001	1.0 L
N1042-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

270 nm	1.00
275 nm	0.30
295 nm	0.10
310 nm	0.05
340 nm	0.01

UV Cutoff	max. 270 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.03 %
Residue after Evaporation	5 ppm
Titrable acid	0.0005 mEq/g
Titrable base	0.003 mEq/g

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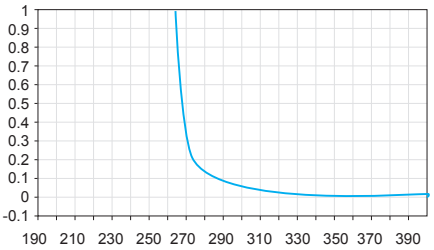
Dimethyl Sulfoxide

HPLC Grade



- Formula: $(CH_3)_2SO$
- F.W.: 78.13
- CAS: 67-68-5

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.62
- Polarity Index (P'):7.2
- Viscosity (cP, 25 °C): 1.987
- Density (g/ml, 25 °C): 1.096
- Boilling point (°C): 189
- Solubility of water (%, 20 °C): Miscible
- Refractive index (25 °C): 1.476

D3161-4 Dimethyl Sulfoxide, HPLC Grade

HS-No: 2930 90 70 90

Code	Capacity
D3161-4-1001	1.0 L
D3161-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

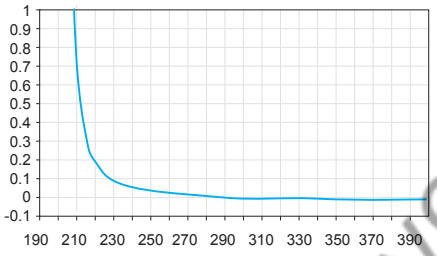
Maximum UV Absorbance

263 nm	1.00
270 nm	0.40
290 nm	0.18
310 nm	0.06
330 nm	0.02
350 nm	0.01

UV Cutoff	max. 263 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	5 ppm
Titrable acid	0.001 mEq/g

1,4-Dioxane

HPLC Grade



- Formula: $(CH_2)_4O_2$
- F.W.: 88.11
- CAS: 123-91-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.56
- Polarity index (P'): 4.8
- Viscosity (cP, 25 °C): 1.177
- Density (g/ml, 25 °C): 1.028
- Boilling point (°C): 101.0
- Solubility of water (%,20 °C): Miscible
- Refractive index (25 °C): 1.420

D3090-4 1,4-Dioxane, HPLC Grade

HS-No: 2932 99 85

Code	Capacity
D3090-4-1001	1.0 L
D3090-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

215 nm	1.00
225 nm	0.50
250 nm	0.24
270 nm	0.10
300 nm	0.01
UV Cutoff	max. 215 nm
Assay (by GC)	min. 99.8 %

Color (APHA)	10
Water	0.02 %
Residue after Evaporation	5 ppm
Titrable acid	0.0016 mEq/g
Peroxide (as H_2O_2, at time of packaging)	0.003 %
Carbonyl (as HCHO)	0.01 %
Freazind point	Not below 11.0 °C

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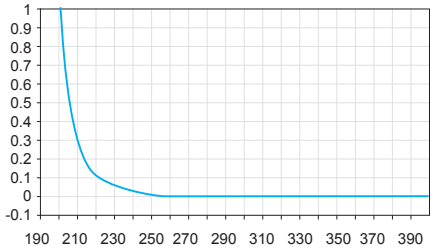
Ethanol

HPLC Grade



- Formula: C_2H_5OH
- F.W.: 46.07
- CAS: 64-17-5

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.88
- Polarity Index (P'): 4.3
- Viscosity (cP, 25 °C): 1.074
- Density (g/ml, 25 °C): 0.787
- Boilling point (°C): 78
- Solubility of water (%, 20 °C): Miscible
- Refractive index (25 °C): 1.359

E7026-4 Ethanol, HPLC Grade

HS-No: 2207 10 00 90

Code	Capacity
E7026-4-1001	1.0 L
E7026-4-4001	4.0 L

Meets ACS Specification

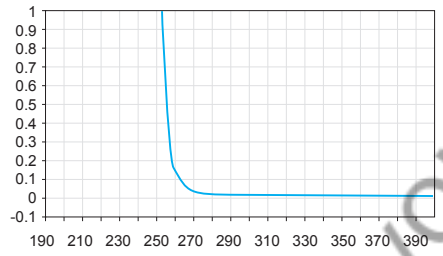
Ultraviolet Spectrophotometry

Maximum UV Absorbance

205 nm	1.00
210 nm	0.65
220 nm	0.35
254 nm	0.04
UV Cutoff	max. 205 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.1 %
Residue after Evaporation	5 ppm
Titrable acid	0.0003 mEq/g
Titrable base	0.0002 mEq/g
Acetone, isopropyl alcohol	To pass test
Methanol (CH_3OH)	0.1 %
Solubility in water	To pass test
Substances darkened by sulfuric acid	To pass test
Substances reducing permanganate	To pass test

Ethyl Acetate

HPLC Grade



- Formula: $CH_3COOC_2H_5$
- F.W.: 88.11
- CAS: 141-78-6

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.58
- Polarity index (P'): 4.4
- Viscosity (cP, 25 °C): 0.423
- Density (g/ml, 25 °C): 0.894
- Boilling point (°C): 77
- Solubility of water (%,20 °C): 3.3
- Refractive index (25 °C): 1.370

E7100-4 Ethyl Acetate, HPLC Grade

HS-No: 2915 31 00 00

Code	Capacity
E7100-4-2501	2.5 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

255 nm	1.00
260 nm	0.15
270 nm	0.025
UV Cutoff	max. 255 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	5 ppm
Titrable acid	0.0009 mEq/g
Substances darkened by sulfuric acid	To pass test

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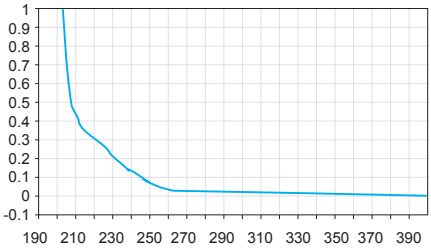
Ethyl Ether, Anhydrous (Stabilized with Ethanol)

HPLC Grade



- Formula: $C_2H_5OC_2H_5$
- F.W.: 74.12
- CAS: 60-29-7
- Stabilized with about 1.5~2.5 % Ethanol

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.38
- Polarity Index (P'): 2.8
- Viscosity (cP, 25 °C): 0.24
- Density (g/ml, 25 °C): 0.708
- Boilling point (°C): 34
- Solubility of water (%, 20 °C): 1.26
- Refractive index (25 °C): 1.352

D3103-4 Ethyl Ether, Anhydrous (Stabilized with Ethanol), HPLC Grade

HS-No: 2909 11 00 00

Code	Capacity
D3103-4-1001	1.0 L
D3103-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

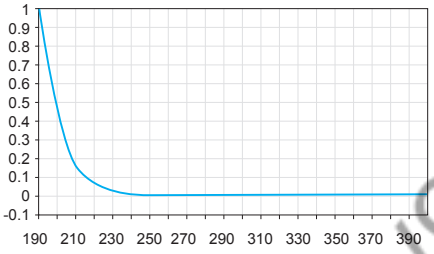
Maximum UV Absorbance

218 nm	1.00
254 nm	0.07
280 nm	0.02
350 nm	0.01
UV Cutoff	max. 218 nm
Assay (by GC, Excluding preservative)	min. 99.8 %

Color (APHA)	10
Water	0.03 %
Residue after Evaporation	5 ppm
Titrable acid	0.0002 mEq/g
Preservative (C_2H_5OH)	1.5 ~ 2.5 %
Peroxide (as H_2O, at time of packaging)	max. 1 ppm
Carbonyl compounds (as HCHO)	0.001 %

n-Heptane 97%

HPLC Grade



- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity index (P'): 0.1
- Viscosity (cP, 25 °C): 0.40
- Density (g/ml, 25 °C): 0.681
- Boilling point (°C): 98
- Solubility of water (%,20 °C): 0.01
- Refractive index (25 °C): 1.385

N3008-4 n-Heptane 97%, HPLC Grade

HS-No: 2901 10 90 00

Code	Capacity
N3008-4-1001	1.0 L
N3008-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

197 nm	1.00
200 nm	0.75
215 nm	0.020
254 nm	0.01
UV Cutoff	max. 197 nm

Assay (by GC, n-Heptane)	min. 97.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	3 ppm
Substances darkened by sulfuric acid	To pass test

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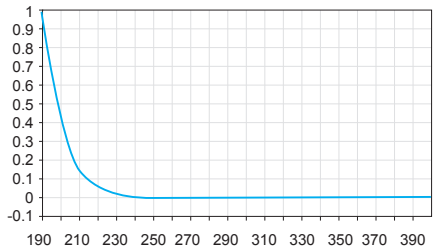
n-Heptane 99%

HPLC Grade



- Formula: $CH_3(CH_2)_5CH_3$
- F.W.: 100.21
- CAS: 142-82-5

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity index (P'): 0.1
- Viscosity (cP, 25 °C): 0.40
- Density (g/ml, 25 °C): 0.681
- Boilling point (°C): 98
- Solubility of water (%,20 °C): 0.01
- Refractive index (25 °C): 1.385

N3008-4 n-Heptane 99%, HPLC Grade

HS-No: 2901 10 90 00

Code	Capacity
N3008-4-1001	1.0 L
N3008-4-4001	4.0 L

Ultraviolet Spectrophotometry

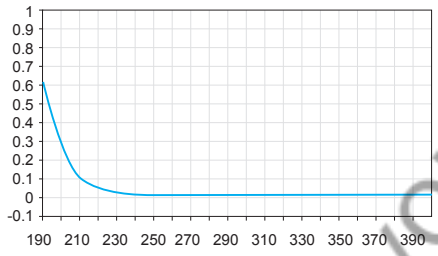
Maximum UV Absorbance

197 nm	1.00
200 nm	0.75
215 nm	0.020
254 nm	0.01
UV Cutoff	max. 197 nm

Assay (by GC, n-Heptane)	min. 99.0 %
(total C7 Hydrocarbons)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	3 ppm
Substances darkened by sulfuric acid	To pass test

n-Hexane 95%

HPLC Grade



- Formula: $CH_3(CH_2)_4CH_3$
- F.W.: 86.18
- CAS: 110-54-3

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity index (P'): 0.1
- Viscosity (cP, 25 °C): 0.300
- Density (g/ml, 25 °C): 0.656
- Boilling point (°C): 69
- Solubility of water (%,20 °C): 0.01
- Refractive index (25 °C): 1.372

N3057-4 n-Hexane 95%, HPLC Grade

HS-No: 2901 10 90 00

Code	Capacity
N3057-4-1001	1.0 L
N3057-4-4001	4.0 L

Ultraviolet Spectrophotometry

Maximum UV Absorbance

195 nm	1.00
210 nm	0.25
220 nm	0.075
254 nm	0.005
UV Cutoff	max. 195 nm
Assay (by GC, n-Hexane)	min. 95 %
(total C6 Hydrocarbone)	min. 99.8 %

Color (APHA)	10
Water	0.02 %
Residue after Evaporation	3 ppm
Water soluble titrable acid	0.0003 mEq/g
Sulfur compounds (as S)	0.005 %
Thiophene	To pass test

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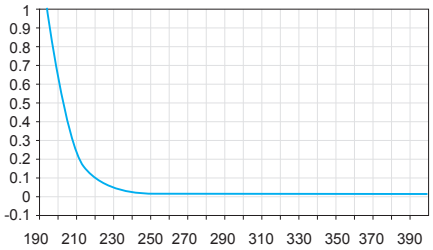
Isooctane (2,2,4-Trimethylpentane)

HPLC Grade



- Formula: $(CH_3)_2CHCH_2C(CH_3)_3$
- F.W.: 114.23
- CAS: 540-84-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.01
- Polarity index (P'): 0.1
- Viscosity (cP, 25 °C): 0.51
- Density (g/ml, 25 °C): 0.691
- Boilling point (°C): 99
- Solubility of water (%,20 °C): 0.006
- Refractive index (25 °C): 1.389

TR105-4 Isooctane (2,2,4-Trimethylpentane), HPLC Grade

HS-No: 2901 10 90 00

Code	Capacity
TR105-4-1001	1.0 L
TR105-4-4001	4.0 L

Meets ACS Specification

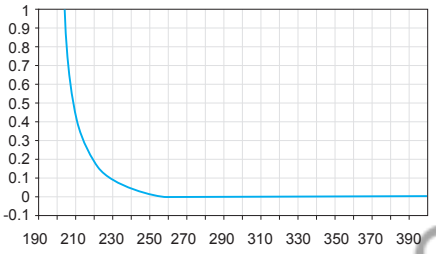
Ultraviolet Spectrophotometry

Maximum UV Absorbance

205 nm	1.00	Color (APHA)	10
225 nm	0.10	Water	0.02 %
254 nm	0.014	Residue after Evaporation	4 ppm
UV Cutoff	max. 205 nm	Water soluble titrable acid	0.0003 mEq/g
Assay (by GC)	min. 99.0 %	Sulfur compounds (as S)	To pass test

Methanol

HPLC Grade



- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.95
- Polarity index (P'): 5.1
- Viscosity (cP, 25 °C): 0.544
- Density (g/ml, 25 °C): 0.787
- Boilling point (°C): 65
- Solubility of water (%,20 °C): Miscible
- Refractive index (25 °C): 1.326

M2097-4 Methanol, HPLC Grade

HS-No: 2905 11 00 00

Code	Capacity
M2097-4-1001	1.0 L
M2097-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

205 nm	1.00	Water	0.05 %
220 nm	0.25	Residue after Evaporation	3 ppm
230 nm	0.15	Titrable acid	0.0003 mEq/g
254 nm	0.02	Titrable base	0.0002 mEq/g
280 nm	0.01	Carbonyl compounds (each of Acetone, Formaldehyde and Acetaldehyde)	0.001 %
UV Cutoff	max. 205 nm		

LC Gradient Suitability

Gradient Elution test	To pass test	Substances darkened by sulfuric acid	To pass test
Assay (by GC)	min. 99.9 %	Substances reducing permanganate	To pass test
Color (APHA)	10	Solubility in water	To pass test

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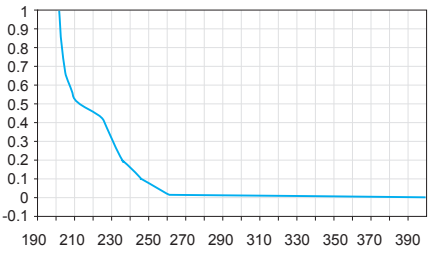
Methyl t-Butyl Ether

HPLC Grade



- Formula: $(CH_3)_3COCH_3$
- F.W.: 88.14
- CAS: 1634-04-4

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.35
- Polarity index (P'): 2.5
- Viscosity (cP, 25 °C): 0.28
- Density (g/ml, 25 °C): 0.740
- Boilling point (°C): 55
- Solubility of water (%,20 °C): 1.5
- Refractive index (25 °C): 1.366

M2060-4 Methyl t-Butyl Ether, HPLC Grade

HS-No: 2905 14 10

Code	Capacity
M2060-4-1001	1.0 L
M1060-4-4001	2.5 L

Meets ACS Specification

Ultraviolet Spectrophotometry

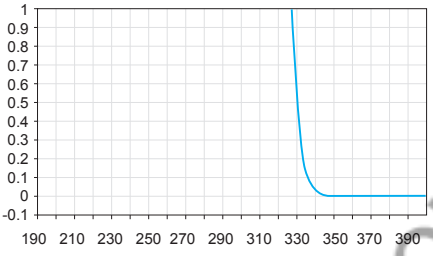
Maximum UV Absorbance

210 nm	1.00
225 nm	0.50
254 nm	0.10
300 nm	0.01
UV Cutoff	max. 210 nm

Assay (by GC)	min. 99.0 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	5 ppm
Peroxide (as H_2O_2, at time of packeging)	1 ppm

Methyl Ethyl Ketone

HPLC Grade



- Formula: C_4H_8O
- F.W.: 72.11
- CAS: 78-93-3

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.51
- Polarity index (P'): 4.7
- Viscosity (cP, 25 °C): 0.38
- Density (g/ml, 25 °C): 0.799
- Boilling point (°C): 80
- Solubility of water (%,20 °C): 10.0
- Refractive index (25 °C): 1.377

E7125-4 Methyl Ethyl Ketone, HPLC Grade

HS-No: 2914 12 00

Code	Capacity
E7125-4-1001	1.0 L
E7125-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

329 nm	1.00
335 nm	0.30
340 nm	0.08
350 nm	0.01
400 nm	0.01
UV Cutoff	max. 329 nm

Assay (by GC)	min. 99.6 %
Color (APHA)	10
Water	0.03 %
Residue after Evaporation	3 ppm
Titrable acid	0.0005 mEq/g
Substances darkened by sulfuric acid	To pass test

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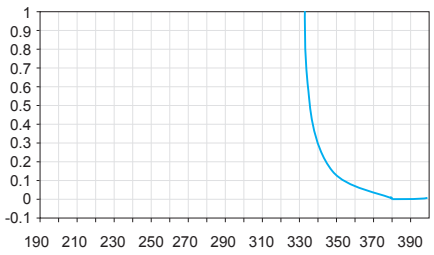
Methyl Isobutyl Ketone

HPLC Grade



- Formula: $(CH_3)_2CHCH_2COCH_3$
- F.W.: 100.16
- CAS: 108-10-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.43
- Polarity index (P'): 4.2
- Viscosity (cP, 25 °C): 0.58
- Density (g/ml, 25 °C): 0.801
- Boilling point (°C): 117 ~ 118
- Refractive index (20 °C): 1.3957

M2120-4 Methyl Isobutyl Ketone, HPLC Grade

HS-No: 2914 13 00

Code	Capacity
M2120-4-1001	1.0 L
M2120-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

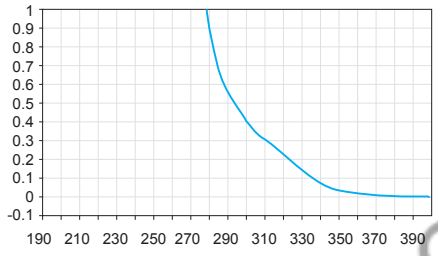
Maximum UV Absorbance

334 nm	1.00
340 nm	0.50
350 nm	0.25
360 nm	0.15
400 nm	0.01
UV Cutoff	max. 334 nm

Assay (by GC)	min. 99.0 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	5 ppm
Titrable acid	0.002 mEq/g

N-Methyl-2-Pyrrolidone

HPLC Grade



- Formula: C_5H_9NO
- F.W.: 99.13
- CAS: 872-50-4

Physical Data:
- Polarity index (P'): 6.7
- Viscosity (cP, 25 °C): 1.65
- Density (g/ml, 25 °C): 1.025
- Boilling point (°C): 202
- Solubility of water (%,20 °C): Miscible
- Refractive index (25 °C): 1.469

M2160-4 N-Methyl-2-Pyrrolidone, HPLC Grade

HS-No: 2933 79 00 00

Code	Capacity
M2160-4-1001	1.0 L
M2160-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

285 nm	1.00
300 nm	0.50
325 nm	0.10
350 nm	0.03
400 nm	0.01
UV Cutoff	max. 285 nm

Assay (by GC)	min. 99.7 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	10 ppm
Free Amines (as CH_3NH_2)	0.01 %
Chloride (Cl)	1 ppm

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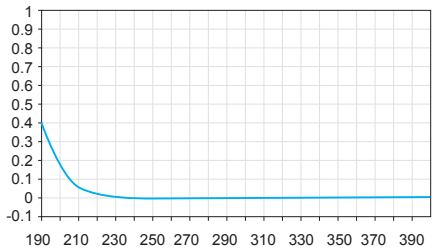
n-Pentane

HPLC Grade



- Formula: $CH_3(CH_2)_3CH_3$
- F.W.: 72.15
- CAS: 109-66-0

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.00
- Polarity index (P'): 0.00
- Viscosity (cP, 25 °C): 0.22
- Density (g/ml, 25 °C): 0.621
- Boilling point (°C): 36
- Solubility of water (%,20°C): 0.009
- Refractive index (25 °C): 1.355

N6015-4 n-Pentane, HPLC Grade

HS-No: 2901 10 90 00

Code	Capacity
N6015-4-1001	1.0 L
N6015-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

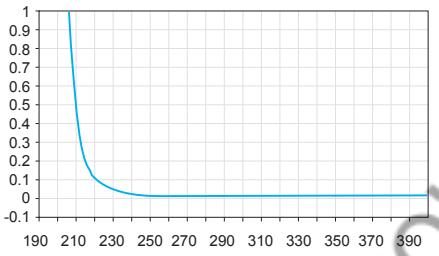
Maximum UV Absorbance

190 nm	1.00
200 nm	0.30
210 nm	0.10
254 nm	0.01
UV Cutoff	max. 190 nm

Assay (by GC, n-Pentane)	min. 98.0 %
(total C5 Hydrocarbons)	min. 99.9 %
Color (APHA)	5
Water	0.02 %
Residue after Evaporation	5 ppm
Substances darkened by sulfuric acid	To pass test

Petroleum Ether (35 ~ 60 °C)

HPLC Grade



- CAS: 8032-32-4

Physical Data:
- Polarity index (P'): 0.1
- Density (g/ml, 25 °C): 0.64
- Boilling point (°C): 35~60
- Refractive index (25 °C): 1.365

P2049-4 Petroleum Ether (35~60°C), HPLC Grade

HS-No: 2710 11 25 00

Code	Capacity
P2049-4-1001	1.0 L
P2049-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

210 nm	1.00
220 nm	0.30
230 nm	0.10
240 nm	0.05
260 nm	0.01
UV Cutoff	max. 210 nm

Boiling range (Initial to dry point)	35 ~ 60°C
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	5 ppm
Acidity	To pass test

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Phosphoric acid 85%

Acid & Buffers

HPLC Grade

- Formula: H_3PO_4
- F.W.: 98.00
- CAS: 7664-38-2

O6021-4 Phosphoric acid 85%, HPLC Grade

HS-No: 2933 99 90 90

Code	Capacity
O6021-4-1001	1.0 L
O6021-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

220 nm	0.05
254 nm	0.04
300 nm	0.02
Assay	min. 85.0 %
Color (APHA)	10
Insoluble matter	0.001 %
Chloride (Cl)	3 ppm
Nitrate (NO_3)	5 ppm
Sulfate (SO_4)	0.003 %
Volatile acids (as CH_3COOH)	0.001 %
Antimony (Sb)	0.002 %
Calcium	0.002 %
Magnesium	0.002 %
Potassium (K)	0.005 %
Sodium (Na)	0.025 %
Arsenic (As)	1 ppm
Heavy metals (as Pb)	0.001 %
Iron (Fe)	0.003 %
Manganese (Mn)	0.5 ppm
Reducing substances	To pass test

Potassium phosphate monobasic

Acid & Buffers

HPLC Grade

- Formula: KH_2PO_4
- F.W.: 136.09
- CAS: 7778-77-0

P5104-4 Potassium phosphate, monobasic, HPLC Grade

HS-No: 2835 2400

Code	Capacity
P5104-4-1001	1.0 L
P5104-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.04
Assay	min. 99.0 %
pH of a 5% solution (25 °C)	4.1 ~ 4.5
Insoluble matter	0.01 %
Loss on drying (at 105 °C)	0.2 %
Chloride (Cl)	0.001 %
Nitirgen compounds (as N)	0.001 %
Sulfate (SO_4)	0.003 %
Heavy metals (as Pb)	0.001 %
Iron (Fe)	0.002 %
Sodium (Na)	0.005 %

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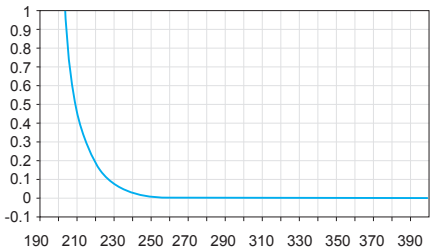
1-Propanol (n-Propyl Alcohol)

HPLC Grade



- Formula: $CH_3CH_2CH_2OH$
- F.W.: 60.10
- CAS: 71-23-8

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.82
- Polarity index (P'): 4.0
- Viscosity (cP, 25 °C): 1.95
- Density (g/ml, 25 °C): 0.802
- Boilling point (°C): 97
- Solubility of water (%,20°C): Miscible
- Refractive index (25 °C): 1.383

PR101-4 1-Propanol (n-Propyl Alcohol), HPLC Grade

HS-No: 2837 20 00 00

Code	Capacity
PR101-4-1001	1.0 L
PR101-4-4001	4.0 L

Meets ACS Specification

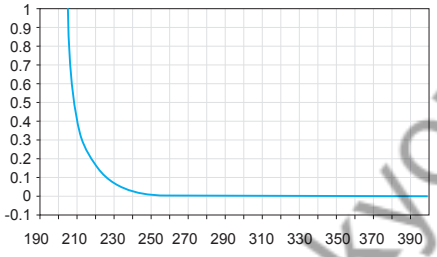
Ultraviolet Spectrophotometry

Maximum UV Absorbance

210 nm	1.00
225 nm	0.50
250 nm	0.05
300 nm	0.01
UV Cutoff	max. 210 nm
Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	3 ppm
Titrable acid	0.0003 mEq/g
Carbonyl compounds (as C_2H_5CHO)	0.03 %
Ethanol (CH_3CH_2OH)	0.01 %
Methanol (CH_3OH)	0.01 %
Isopropyl Alcohol ($CH_3CHOHCH_3$)	0.05 %
Solubility in water	To pass test

2-Propanol (Isopropyl Alcohol)

HPLC Grade



- Formula: $(CH_3)_2CHOH$
- F.W.: 60.10
- CAS: 67-63-0

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.82
- Polarity index (P'): 3.9
- Viscosity (cP, 25°C): 2.038
- Density (g/ml, 25 °C): 0.782
- Boilling point (°C): 82
- Solubility of water (%,20°C): Miscible
- Refractive index (25 °C): 1.375

PR141-4 2-Propanol (Isopropyl Alcohol), HPLC Grade

HS-No: 2905 12 00 00

Code	Capacity
PR141-4-1001	1.0 L
PR141-1-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

205 nm	1.00
220 nm	0.25
230 nm	0.13
254 nm	0.02
UV Cutoff	max. 205 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.05 %
Residue after Evaporation	2 ppm
Titrable acid or Base	0.0001 mEq/g
Carbony Compounds (as propionaldehyde or acetone)	0.002 %
Solubility in water	To pass test

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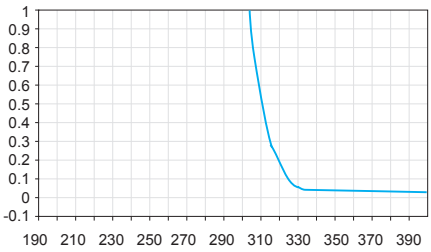
Pyridine

HPLC Grade



- Formula: C_5H_5N
- F.W.: 79.10
- CAS: 110-86-1

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.71
- Polarity index (P'): 5.3
- Viscosity (cP, 25 °C): 0.88
- Density (g/ml, 25 °C): 0.978
- Boilling point (°C): 115
- Solubility of water (%,20°C): Miscible
- Refractive index (25 °C): 1.507

P9005-4 Pyridine, HPLC Grade

HS-No: 2837 20 00 00

Code	Capacity
P9005-4-1001	1.0 L
P9005-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

330 nm	1.00
340 nm	0.10
350 nm	0.01
400 nm	0.005
UV Cutoff	max. 330 nm
Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	5 ppm
Ammonia (as NH_3)	0.002 %
Chloride (Cl)	0.0005 %
Sulfate (SO_4)	0.001 %
Copper (Cu)	5 ppm
Solubility in water	To pass test
Reducing Substances	To pass test

Sodium acetate trihydrate

Acid & Buffers

HPLC Grade

- Formula: CH_3COONa
- F.W.: 136.08
- CAS: 6131-90-4

S5022-4 Sodium acetate trihydrate, HPLC Grade

HS-No: 2915 22 00 00

Code	Capacity
S5022-4-1001	1.0 L
S5022-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.02
Assay	99.0 ~ 101.0 %
pH of a 5% solution (25°C)	7.5 ~ 9.2
Substances reducing permanganate	To pass test
Insoluble matter	0.005 %
Chloride (Cl)	0.001 %
Phosphate (PO_4)	5 ppm
Sulfate (SO_4)	0.002 %
Heavy metals (as Pb)	5 ppm
Iron (Fe)	5 ppm
Calcium (Ca)	0.005 %
Magnesium (Mg)	0.002 %
Potassium (K)	0.005 %

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Sodium bicarbonate

Acid & Buffers

HPLC Grade

- Formula: $NaHCO_3$
- F.W.: 84.01
- CAS: 144-55-8

Physical Data:
- Vapour pressure : 972 hPa(100 °)
- Density (g/ml, 22 °C): 2.22
- Melting point (°C): 270
- Solubility of water (%,20°C): 96 g/l

S5135-4 Sodium bicarbonate, HPLC Grade

HS-No: 2836 30 00

Code	Capacity
S5135-4-1001	1.0 L
S5135-4-4001	4.0 L

Meets ACS Specification

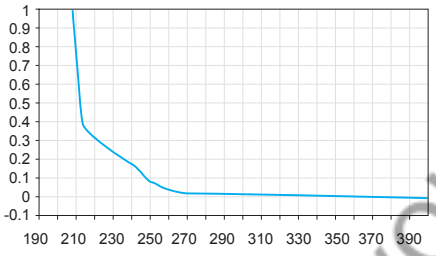
Ultraviolet Spectrophotometry

Maximum UV Absorbance (1M Solution)

254 nm	0.05
280 nm	0.02
350 nm	0.01
Assay	99.7 ~ 100.3 %
Insoluble matter	0.015 %
Chloride (Cl)	0.003 %
Phosphate (PO_4)	0.001 %
Sulfur compounds (as SO_4)	0.003 %
Ammonium (NH_4)	5 ppm
Heavy metals (as Pb)	5 ppm
Iron (Fe)	0.001 %
Calcium (Ca)	0.02 %
Magnesium (Mg)	0.005 %
Potassium (K)	0.005 %

Tetrahydrofuran

HPLC Grade



- Formula: C_4H_8O
- F.W.: 72.11
- CAS: 109-99-9

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.45
- Polarity index (P'): 4.0
- Viscosity (cP, 25 °C): 0.456
- Density (g/ml, 25 °C): 0.880
- Boilling point (°C): 65
- Solubility of water (%,20°C): Miscible
- Refractive index (25 °C): 1.404

T2061-4 Tetrahydrofuran, HPLC Grade

HS-No: 2932 11 00 90

Code	Capacity
T2061-4-1001	1.0 L
T2061-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

210 nm	1.00
215 nm	0.60
230 nm	0.30
254 nm	0.10
UV Cutoff	max. 210 nm
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.02 %
Residue after Evaporation	5 ppm
Peroxides (as H_2O_2, at time of packaging)	0.015 %

Line @thankyou2562 Tel. 02 372 1545 - 6

Tetrahydrofuran (Stabilized with BHT)

HPLC Grade

- Formula: C_4H_8O
- F.W.: 72.11
- CAS: 109-99-9
- Stabilized with 200~300 ppm BHT

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.45
- Polarity index (P'): 4.0
- Viscosity (cP, 25 °C): 0.456
- Density (g/ml, 25 °C): 0.880
- Boilling point (°C): 65
- Solubility of water (%,20°C): Miscible
- Refractive index (25 °C): 1.404

T2061-4 Tetrahydrofuran (Stabilized with BHT), HPLC Grade

HS-No: 2932 11 00 90

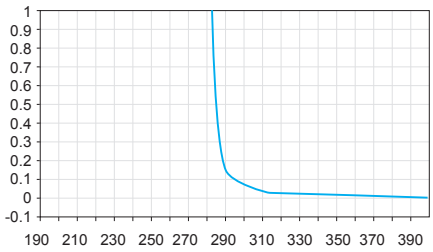
Code	Capacity
T2061-4-1001	1.0 L
T2061-4-4001	4.0 L

Meets ACS Specification

Assay (by GC)	min. 99.5 %	Peroxides (as H_2O_2, at time of packaging)	0.015 %
Color (APHA)	10		
Water	0.02 %	Stabilizer (BHT)	200 ~ 300 ppm

Toluene

HPLC Grade



- Formula: $C_6H_5CH_3$
- F.W.: 92.14
- CAS: 108-88-3

Physical Data:
- Eluotropic value (E^o) (on Alumina): 0.29
- Polarity index (P'): 2.4
- Viscosity (cP, 25 °C): 0.560
- Density (g/ml, 25 °C): 0.864
- Boilling point (°C): 111
- Solubility of water (%,20°C): 0.033
- Refractive index (25 °C): 1.494

T5031-4 Toluene, HPLC Grade

HS-No: 2902 30 00 00

Code	Capacity
T5031-4-1001	1.0 L
T5031-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance		Color (APHA)	10
286 nm	1.00	Water	0.02 %
288 nm	0.40	Residue after Evaporation	5 ppm
300 nm	0.10	Sulfur Compounds (as S)	0.003 %
350 nm	0.01	Substances darkened by sulfuric acid	To pass test
UV Cutoff	max. 286 nm		
Assay (by GC)	min. 99.8 %		

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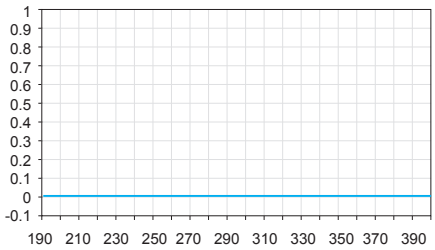
Water

HPLC Grade



- Formula: H_2O
- F.W.: 18.01
- CAS: 7732-18-5

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.99
- Polarity index (P'): 10.2
- Viscosity (cP, 25 °C): 0.89
- Density (g/ml, 25 °C): 0.998
- Boilling point (°C): 100
- Solubility of water (%,20°C): 1.333
- Refractive index (25 °C): 72.7

W1001-4 Water, HPLC Grade

HS-No: 2851 00 10 00

Code	Capacity
W1001-4-1001	1.0 L
W1001-4-4001	4.0 L

Meets ACS Specification

Ultraviolet Spectrophotometry

Maximum UV Absorbance

190 nm	0.01
200 nm	0.01
250 ~ 400 nm	0.005
UV Cutoff	max. 190 nm

LC Gradient Suitability

Gradient Elution test	To pass test
Color (APHA)	5
Residue after Evaporation (at time of packaging)	10 ppm
Conductance (µS/cm)	2

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SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

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DSP BIO

Item	UV Cutoff (max. nm)	Water (max. %)	Other
Acetonitrile	<190	10	
Dichloromethane w /Amylene	233	30	Chloride < 10 ppm
			Acidity < 0.0003 mEq/g
N,N-dimethylformamide	270	300	Amines < 5 ppm
Dimethyl Sulfoxide	263	250	Acetone < 0.001 %
Methanol	205	300	Amines < 5 ppm
N-Methyl-2-Pyrrolidone	285	200	Amines < 10 ppm
Pyridine	330	100	
Tetrahydrofuran	210	50	
Triethyl Amine	-	0.1%	

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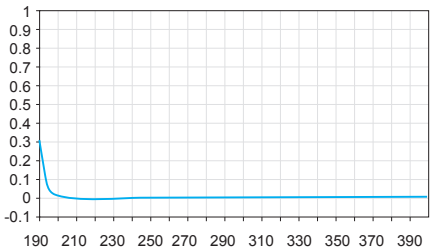
Acetonitrile

BIO Grade



- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

Physical Data:
- Eluotropic value (E°) (on Alumina): 0.65
- Polarity Index (P'): 5.8
- Viscosity (cP, 25 °C): 0.369
- Density (g/ml, 25 °C): 0.779
- Boilling point (°C): 82
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.342

A1133-14 Acetonitrile, Bio Grade

HS-No: 2926 90 95 90

Ultraviolet Spectrophotometry

Maximum UV Absorbance

190 nm	1.00
195 nm	0.15
200 nm	0.07
205 nm	0.05
210 nm	0.04
220 nm	0.02
254 nm	0.01
UV Cutoff	max. 190 nm

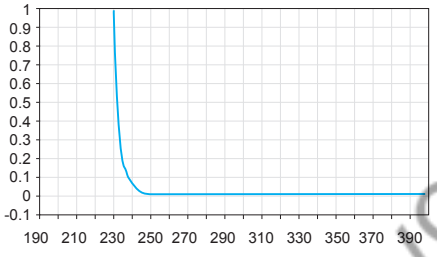
LC Gradient Suitability

Gradient Elution test	passes test
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	10 ppm
Residue after Evaporation	1 ppm
Titrable acid	0.008 mEq/g
Titrable base	0.0006 mEq/g

Code	Capacity
A1133-14-1001	1.0 L
A1133-14-4001	4.0 L

Dichloromethane (Stabilized with Amylene)

BIO Grade



- Formula: CH_2Cl_2
- F.W.: 84.93
- CAS: 75-09-2
- Stabilized with 40 ~ 200ppm Amylene

Physical data:
- Eluotropic value (E°) (on Alumina: 0.42
- Polarity index (P'): 3.1
- Viscosity (cP, 25 °C): 0.413
- Density (g/ml, 25 °C): 1.318
- Boiling point (°C): 40
- Solubility of water (%, 20 °C): 0.24
- Refractive index (25 °C): 1.421

D3056-14 Dichloromethane, Bio Grade

HS-No: 2903 12 00 00

Ultraviolet Spectrophotometry

Maximum UV Absorbance

233 nm	1.00
240 nm	0.12
254 nm	0.01
UV Cutoff	max. 233 nm

Chloride (Cl)	10 ppm
Titrable acid	0.0003 mEq/g
Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	30 ppm
Residue after Evaporatijon	3 ppm

Code	Capacity
D3056-14-1001	1.0 L
D3056-14-4001	4.0 L

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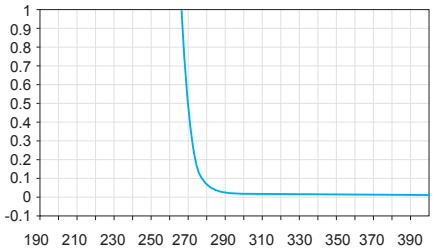
N,N-Dimethylformamide

BIO Grade



- Formula: $HCON(CH_3)_2$
- F.W.: 73.09
- CAS: 68-12-2

Physical Data:
- Eluotropic value (E^o) (on Alumina):7.6
- Polarity Index (P'): 6.4
- Viscosity (cP, 25 °C): 0.794
- Density (g/ml, 25 °C): 0.944
- Boilling point (°C): 153
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.427

N1042-14 N,N-Dimethylformamide, Bio Grade

HS-No: 2924 19 00 90

Code	Capacity
N1042-14-1001	1.0 L
N1042-14-4001	4.0 L

Ultraviolet Spectrophotometry

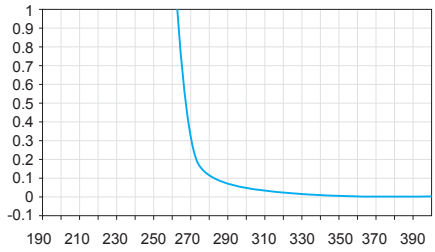
Maximum UV Absorbance

270 nm	1.00
275 nm	0.30
295 nm	0.10
310 nm	0.05
340 nm	0.01
UV Cutoff	max. 270 nm

Amines (as Dimethylamine)	5 ppm
Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	0.03 %
Residue after Evaporation	5 ppm

Dimethyl sulfoxide

BIO Grade



- Formula: $(CH_3)_2HO$
- F.W.: 78.13
- CAS: 65-68-5

Physical data:
- Eluotropic value (E^o) (on Alumina): 0.62
- Polarity index (P'): 7.2
- Viscosity (cP, 25 °C): 1.987
- Density (g/ml, 25 °C): 1.096
- Boiling point (°C): 189
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.476

D3161-14 Dimethyl sulfoxide, Bio Grade

HS-No: 2930 90 70 90

Code	Capacity
D3161-14-1001	1.0 L
D3161-14-4001	4.0 L

Ultraviolet Spectrophotometry

Maximum UV Absorbance

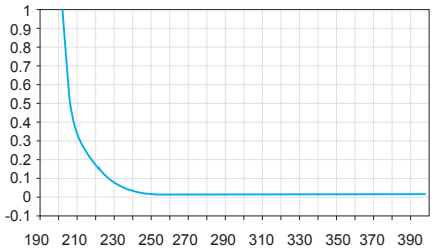
263 nm	1.00
270 nm	0.40
275 nm	0.20
280 nm	0.15
335 nm	0.02
400 nm	0.01
UV Cutoff	max. 263 nm

Assay (by GC)	min. 99.7 %
Color (APHA)	10
Water	0.025 %
Residue after Evaporatijon	5 ppm

Line @thankyou2562 Tel. 02372 1545 - 6

Methanol

BIO Grade



- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

Physical Data:
- Eluotropic value (E°) (on Alumina):0.95
- Polarity Index (P'): 5.1
- Viscosity (cP, 25 °C): 0.544
- Density (g/ml, 25 °C): 0.787
- Boilling point (°C): 65
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.326

M2097-14 Methanol, Bio Grade

HS-No: 2905 11 00 00

Code	Capacity
M2097-14-1001	1.0 L
M2097-14-4001	4.0 L

Ultraviolet Spectrophotometry

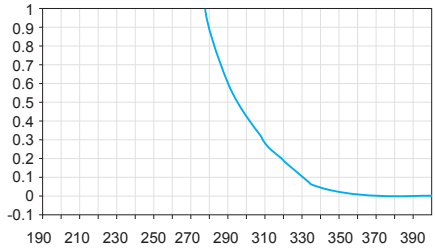
Maximum UV Absorbance

205 nm	1.00
220 nm	0.25
230 nm	0.15
254 nm	0.02
280 nm	0.01
UV Cutoff	max. 205 nm
Acetone	To pass test (about 0.001%)

Assay (by GC)	min. 99.9 %
Color (APHA)	10
Water	0.03 %
Residue after Evaporation	3 ppm
Titrable acid	0.0003 mEq/g
Titrable base	0.0002 mEq/g
Substances reducing permanganate	To pass test
Solubility in water	To pass test

N-Methyl-2-Pyrrolidone

BIO Grade



- Formula: C_5H_9NO
- F.W.:99.13
- CAS: 872-50-4

Physical data:
- Polarity index (P'): 6.7
- Viscosity (cP, 25 °C): 1.65
- Density (g/ml, 25 °C): 1.025
- Boiling point (°C): 202
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.469

M2160-14 N-Methyl-2-Pyrrolidone, Bio Grade

HS-No: 2933 79 00 00

Code	Capacity
M2160-14-1001	1.0 L
M2160-14-1001	4.0 L

Ultraviolet Spectrophotometry

Maximum UV Absorbance

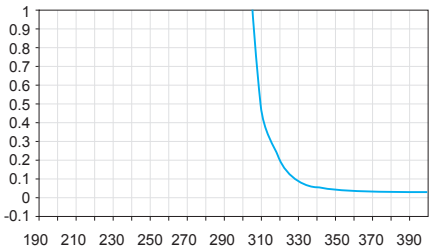
285 nm	1.00
300 nm	0.50
325 nm	0.10
350 nm	0.03
400 nm	0.01
UV Cutoff	max. 285 nm

Amines (as Dimethylamine)	5 ppm
Assay (by GC)	min. 99.5 %
Color (APHA)	20
Water	200 ppm
Residue after Evaporation	10 ppm

Line @thankyou2562 Tel. 02372 1545 - 6

Pyridine

BIO Grade



- Formula: C_5H_5N
- F.W.: 79.10
- CAS: 110-86-1

Physical Data:
- Eluotropic value (E^o) (on Alumina):0.71
- Polarity Index (P'): 5.3
- Viscosity (cP, 25 °C): 0.88
- Density (g/ml, 25 °C): 0.978
- Boilling point (°C): 115
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.507

P9005-14 Pyridine, Bio Grade

HS-No: 2837 20 00 00

Ultraviolet Spectrophotometry

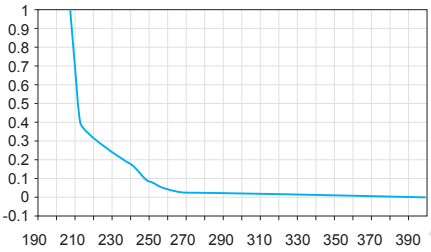
Maximum UV Absorbance	
330 nm	1.00
340 nm	0.10
350 nm	0.01
400 nm	0.005
UV Cutoff	max. 330 nm
Amines (by Ninhydrin test)	10 ppm

Assay (by GC)	min. 99.0 %
Color (APHA)	10
Water	0.01 %
Residue after Evaporation	5 ppm
Chloride (Cl)	0.001 %
Sulfate (SO_4)	0.001 %
Copper (Cu)	5 ppm
Solubility in water	To pass test
Reducing Substances	To pass test

Code	Capacity
P9005-14-1001	1.0 L
P9005-14-4001	4.0 L

Tetrahydrofuran

BIO Grade



- Formula: C_4H_8O
- F.W.: 72.11
- CAS: 109-99-9

Physical data:
- Eluotropic value (E^o) (on Alumina): 0.45
- Polarity index (P'): 4.0
- Viscosity (cP, 25 °C): 0.456
- Density (g/ml, 25 °C): 0.880
- Boiling point (°C): 65
- Solubility of water (%, 20 °C): miscible
- Refractive index (25 °C): 1.404

T2061-14 Tetrahydrofuran, Bio Grade

HS-No: 2932 11 00 90

Ultraviolet Spectrophotometry

Maximum UV Absorbance	
210 nm	1.00
215 nm	0.60
230 nm	0.30
254 nm	0.10
UV Cutoff	max. 210 nm

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	5 ppm
Peroxides (as H_2O_2, at the time of packing	0.015 %

Code	Capacity
T2061-14-1001	1.0 L
T2061-14-4001	4.0 L

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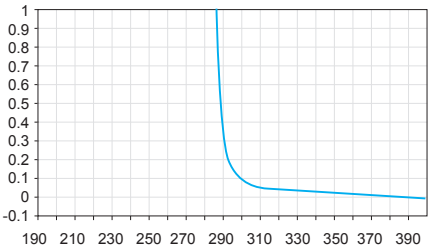
Triethylamine

BIO Grade



- Formula: $(C_2H_5)_3N$
- F.W.: 101.19
- CAS: 121-44-8

Physical Data:
- Density (g/ml, 25 °C): 0.73
- Boilling point (°C): 88.8
- Refractive index (25 °C): 1.4

T6035-14 Triethylamine, Bio Grade

Assay (by GC)	min. 99.5 %
Color (APHA)	10
Water	0.1 %

HS-No: 2921 19 10

Code	Capacity
T6035-14-1001	1.0 L
T6045-14-4001	4.0 L

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SOLVENT SPECIFICATIONS

SOLVENT NAME SYNONYMS

LC - MS

ULTIMATE

PESTICIDE

HPLC

BIO

ULTRA DRY

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DSP Ultra Dry

Item	Water (max. ppm)	Assay (min. %)	Residue aft. Evaporation (max. ppm)
Acetonitrile (water 10)	10	99.8	5
Acetonitrile (water 30)	30	99.8	5
Chloroform w/Ethanol	50	99.8	3
1,4-Dioxane	30	99.8	3
Ethyl Acetate	50	99.8	5
Ethyl Ether w/Ethanol	50	99.8	5
n-Hexane 95%	20	95.0	5
Methanol	50	99.8	3
Pyridine	50	99.8	5
Toluene	50	99.8	5

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Acetonitrile (water 10)

Ultra Dry Grade

- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

A1133-15 Acetonitrile (water 10), Ultra Dry Grade

HS-No: 2926 90 95 90

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	10 ppm
Residue after Evaporation	5 ppm

Code	Capacity
A1133-15-1001	1.0 L
A1133-15-4001	4.0 L

Acetonitrile (water 30)

Ultra Dry Grade

- Formula: CH_3CN
- F.W.: 41.05
- CAS: 75-05-8

A1133-15 Acetonitrile (water 30), Ultra Dry Grade

HS-No: 2926 90 95 90

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	30 ppm
Residue after Evaporation	5 ppm

Code	Capacity
A1133-15-1001	1.0 L
A1133-15-4001	4.0 L

Chloroform (Stabilized with Ethanol)

Ultra Dry Grade

- Formula: $CHCl_3$
- F.W.: 119.38
- CAS: 67-66-3
- Stabilized with about 0.5 ~ 1.0 Ethanol

C3059-15 Chloroform (Stabilized with Ethanol), Ultra Dry Grade

HS-No: 2903 13 00 00

Assay (by GC, Excluding preservative) ..	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	3 ppm

Code	Capacity
C3058-15-1001	1.0 L
C3058-15-4001	4.0 L

1,4-Dioxane

Ultra Dry Grade

- Formula: $(CH_2)_4O_2$
- F.W.: 88.11
- CAS: 123-91-1

1,4-Dioxane, Ultra Dry Grade

HS-No: 2932 99 85

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	30 ppm
Residue after Evaporation	3 ppm
Peroxide (as H_2O_2, at the time of packaging	0.003 %

Code	Capacity
D3090-14-1001	1.0 L
D3090-14-4001	4.0 L

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Ethyl Acetate

Ultra Dry Grade

- Formula: $CH_3COOC_2H_5$
- F.W.: 88.11
- CAS: 141-78-6

E7100-15 Ethyl acetate, Ultra Dry Grade

HS-No: 2915 31 00 00

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	5 ppm

Code	Capacity
E7100-15-1001	1.0 L
E7100-15-4001	4.0 L

Ethyl Ether, Anhydrous (Stabilized with Ethanol)

Ultra Dry Grade

- Formula: $C_2H_5OC_2H_5$
- F.W.: 74.12
- CAS: 60-29-7
- Stabilized with about 1.5 ~ 2.5 Ethanol

D3103-15 Ethyl Ether, Anhydrous (Stabilized with Ethanol), Ultra Dry Grade

HS-No: 2909 11 00 00

Assay (by GC, Excluding preservative) ..	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	5 ppm
Peroxide (as H_2O_2, at the time of packaging	max. 1 %

Code	Capacity
D3103-15-1001	1.0 L
D3103-15-4001	4.0 L

n-Hexane 95%

Ultra Dry Grade

- Formula: $CH_3(CH_2)_4CH_2$
- F.W.: 86.18
- CAS: 110-54-3

N3057-15 n-Hexane, Ultra Dry Grade

HS-No: 2901 10 90 00

Assay (by GC, n-Hexane)	min. 95.0 %
Total C6 Hydrocarbons	min. 99.5 %
Color (APHA)	10
Water	20 ppm
Residue after Evaporation	5 ppm

Code	Capacity
N3057-15-1001	1.0 L
N3057-15-4001	4.0 L

Methanol

Ultra Dry Grade

- Formula: CH_3OH
- F.W.: 32.04
- CAS: 67-56-1

M2097-15 Methanol, Ultra Dry Grade

HS-No: 2905 11 00 00

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	3 ppm

Code	Capacity
M2097-15-1001	1.0 L
M2097-15-4001	4.0 L

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Pyridine

Ultra Dry Grade

- Formula: C_5H_5N
- F.W.: 79.10
- CAS: 110-86-1

P9005-15 Pyridine, Ultra Dry Grade

HS-No: 2837 20 00 00

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	5 ppm

Code	Capacity
P9005-15-1001	1.0 L
P9005-15-4001	4.0 L

Toluene

Ultra Dry Grade

- Formula: $C_6H_5CH_3$
- F.W.: 92.14
- CAS: 108-88-3

T5031-15 Toluene, Ultra Dry Grade

HS-No: 2902 30 00 00

Assay (by GC)	min. 99.8 %
Color (APHA)	10
Water	50 ppm
Residue after Evaporation	5 ppm

Code	Capacity
T5031-15-1001	1.0 L
T5031-15-4001	4.0 L

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Supplementary reference information

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SUPPLEMENTARY REFERENCE INFORMATION

PHYSICAL PROPERTIES

SOLVENT MISCIBILITY CHART

TRANSPORT INFORMATION

UNITS CONVERSION TABLES

Line @thankyou2562 Tel. 02 372 1545 - 6

Pysical properties

Eluotropic Strength of Solvents on Various Sorbents

Solvent	ε° (Alumina)	ε° (SiO_2)	ε° (C_{18})
n-Pentane	0.00 [1)]	0.00 [1)]	-
n-Hexane	0.00 - 0.01	0.00 - 0.01	-
Isooctane	0.01	0.01	-
Cyclohexane	0.04	0.03	-
Toluene	0.20 - 0.30	0.22	-
Chlorobenzene	0.30 - 0.31	0.23	-
Benzene	0.32	0.25	-
Ethyl ether	0.38	0.38 - 0.43	-
Dichloromethane	0.36 - 0.42	0.30 - 0.42	-
Chloroform	0.36 - 0.40	0.26	-
1,2-Dichloroethane	0.44 - 0.49	-	-
Methyl ethyl ketone	0.51	-	-
acetone	0.56 - 0.58	0.47 - 0.53	8.8
1,4-Dioxane	0.56 - 0.61	0.49 - 0.51	11.7
Tetrahydrofuran	0.45 - 0.62	0.53	3.7
Methyl t-butyl ether	0.3 - 0.62	0.48	-
Ethyl acetate	0.58 - 0.62	0.38 - 0.48	-
Dimethyl sulfoxide	0.62 - 0.75	-	-
Acetonitrile	0.52 - 0.65	0.50 - 0.52	3.1
1-Butanol	0.70	-	-
Pyridine	0.71	-	-
1-Propanol	0.78 - 0.82	-	10.1
2-Propanol	0.78 - 0.82	0.60	8.3
Ethanol	0.88	-	3.1
Methanol	0.95	0.70 - 0.73	1.0 [1)]
Dimethylformamide	-	-	7.6

1) Defined value

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Pysical properties

Polarity Index (P°)

Solvent	P°	Solvent	P°
n-Pentane	0.0	Acetic acid	6.2
n-Heptane	0.1	N,N-Dimethylformamide	6.4
n-Hexane	0.1	N,N-Dimethylacetamide	6.5
Isooctane	0.1	N-Methyl-2-Pyrrolidone	6.7
Petroleum Ether	0.1	Dimethyl Sulfoxide	7.2
Cyclohexane	0.2	Water	10.2
Toluene	2.4		
Methyl t-Butyl Ether	2.5		
Chlorobenzene	2.7		
Ethyl Ether	2.8		
Dichloromethane	3.1		
1,2-Dichloroethane	3.5		
1-Butanol	3.9		
2-Propanol	3.9		
n-Butyl acetate	4.0		
1-Propanol	4.0		
Tetrahydrofuran	4.0		
Chloroform	4.1		
Methyl Isobutyl Ketone	4.2		
Ethyl Acetate	4.4		
Methyl Ethyl Ketone	4.7		
1,4-Dioxane	4.8		
Acetone	5.1		
Methanol	5.1		
Pyridine	5.3		
Acetonitrile	5.8		

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Pysical properties
Viscosity (cP)

Solvent	cP (25 °C)	Solvent	cP (25 °C)
n-Pentane	0.22	o-Dichlorobenzene	1.32
Ethyl ether	0.24	N-Methyl-2-Pyrrolidone	1.65
Methyl t-butyl ether	0.28	1-Propanol	1.95
n-Hexane	0.3	N,N-Dimethylacetamide	1.956
Acetone	0.306	Dimethyl sulfoxide	1.987
Acetonitrile	0.369	2-Propanol	2.038
Methyl ethyl ketone	0.38	1-Butanol	2.544
n-Heptane	0.4		
Dichloromethane	0.413		
Ethyl acetate	0.423		
Tetrahydrofuran	0.456		
Isooctane	0.51 [1)]		
Chloroform	0.537		
Methanol	0.544		
Toluene	0.56		
Methyl Isobutyl ketone	0.58		
Benzene	0.604		
n-Butyl acetate	0.685		
1,2-Dichloroethane	0.779		
Dimethylformamide	0.794		
Pyridine	0.88		
Water	0.89		
Cyclohexane	0.894		
Ethanol	1.074		
Acetic acid	1.10		
1,4-Dioxane	1.177		

1) measured at 22 °C

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Pysical properties
Density

Solvent	Density (g/ml, 25˚C)	Solvent	Density (g/ml, 25˚C)
n-Pentane	0.621	Water	0.998 [1)]
n-Heptane	0.681	N-Methyl-2-Pyrrolidone	1.025
Petroleum Ether (35~36 ˚C)	0.64 [1)]	1,4-Dioxane	1.028
n-Hexane	0.656	Acetic acid, glacial	1.049
Isooctane	0.691 [1)]	Dimethyl Sulfoxide	1.096
Ethyl Ether	0.708	Chlorobenzene	1.107
Triethylamine	0.73 [1)]	1,2-Dichloroethane	1.245
Methyl t-butyl Ether	0.740 [1)]	o-Dichlorobenzene	1.3058 [1)]
Cyclohexane	0.773	Dichloromethane	1.318
Acetonitrile	0.779	Chloroform	1.480
2-Propanol	0.782		
Acetone	0.785		
Methanol	0.787		
Ethanol	0.787		
Methyl Ethyl Ketone	0.799		
Methyl Isobutyl Ketone	0.801 [1)]		
1-Propanol	0.802		
1-Butanol	0.806		
Toluene	0.864		
Benzene	0.872		
n-Butyl acetate	0.876		
Tetrahydrofuran	0.880		
Ethyl Acetate	0.894		
N,N-Dimethylacetamide	0.937		
N,N-dimethylformamide	0.944		
Pyridine	0.978		

1) measured at 20 ˚C

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Pysical properties

Solubility of water in solvent

Solvent	Solubility (%, 20˚C)	Solvent	Solubility (%, 20˚C)
Isooctane	0.006	1-Propanol	Miscible
n-Pentane	0.009	2-Propanol	Miscible
Cyclohexane	0.01	Pyridine	Miscible
n-Heptane	0.01 1)	Tetrahydrofuran	Miscible
n-Hexane	0.01		
Toluene	0.033 1)		
Chloroform	0.056		
Benzene	0.063 1)		
1,2-Dichloroethane	0.15		
Dichloromethane	0.24		
Ethyl Ether	1.26		
Methyl t-Butyl Ether	1.5		
n-Butyl acetate	1.86		
Ethyl Acetate	3.3		
Methyl Ethyl Ketone	10		
1-Butanol	20.07		
Acetic acid, glacial	Miscible 2)		
Acetone	Miscible		
Acetonitrile	Miscible		
N,N-Dimethylacetamide	Miscible		
N,N-Dimethylformamide	Miscible		
Dimethyl Sulfoxide	Miscible		
1,4-Dioxane	Miscible		
Ethanol	Miscible		
Methanol	Miscible		
N-Methyl-2-Pyrrolidone	Miscible		

1) measured at 20 °C

2) Miscible : two components can be mixed together in all proportions without forming two separate phases

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Pysical properties

Refractive Index

Solvent	Refractive Index (25˚C)	Solvent	Refractive Index (25˚C)
Methanol	1.326	Chloroform	1.444
Water	1.333 [1)]	1,2-Dichloroethane	1.444
Acetonitrile	1.342	N-Methyl-2-Pyrrolidone	1.469
Ethyl Ether	1.352	Dimethyl Sulfoxide	1.476
n-Pentane	1.355	Toluene	1.494
Acetone	1.357	Benzene	1.498
Ethanol	1.359	Pyridine	1.507
Petroleum Ether (35~60 ˚C)	1.365	Chlorobenzene	1.525 [1)]
Methyl t-Butyl Ether	1.366	o-Dichlorobenzene	1.5514 [1)]
Acetic acid, glacial	1.370 [1)]		
Ethyl Acetate	1.370		
n-Hexane	1.372		
2-Propanol	1.375		
Methyl Ethyl Ketone	1.377		
1-Propanol	1.383		
n-Heptane	1.385		
Isooctane	1.389		
n-Butyl acetate	1.392		
Methyl Isobutyl Ketone	1.3957 [1)]		
1-Butanol	1.397		
Tetrahydrofuran	1.404		
1,4-Dioxane	1.420		
Dichloromethane	1.421		
Cyclohexane	1.424		
N,N-Dimethylformamide	1.427		
N,N-Dimethylacetamide	1.4384 [1)]		

1) measured at 20 ˚C

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Pysical properties
Boiling point

Solvent	Boiling point (˚C)	Solvent	Boiling point (˚C)
Ethyl Ether	34	Methyl Isobutyl Ketone	117~118
n-Pentane	36	1-Butanol	118
Dichloromethane	40	n-Butyl acetate	126
Methyl t-Butyl Ether	55	Chlorobenzene	132
Acetone	56	N,N-Dimethylformamide	153
Petroleum Ether (35~60 ˚C)	35~60	N,N-Dimethylacetamide	165~166
Chloroform	61	o-Dichlorobenzene	180.5
Methanol	65	Dimethyl Sulfoxide	189
Tetrahydrofuran	65	N-Methyl-2-Pyrrolidone	202
n-Hexane	69		
Ethyl Acetate	77		
Ethanol	78		
Benzene	80		
Methyl Ethyl Ketone	80		
Cyclohexane	81		
Acetonitrile	82		
2-Propanol	82		
1,2-Dichloroethane	84		
1-Propanol	97		
n-Heptane	98		
Isooctane	99		
Water	100		
1,4-Dioxane	101		
Toluene	111		
Pyridine	115		
Acetic acid, glacial	117		

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Pysical properties

Freezing point

Solvent	Freezing point (°C)	Solvent	Freezing point (°C)
n-Pentane	-129.7	o-Dichlorobenzene	-17.0
1-Propanol	-126.2	Water	0
Ethyl Ether	-117.4	Cyclohexane	6.5
Ethanol	-114.1	1,4-Dioxane	11.8
Methyl t-Butyl Ether	-108.6	Dimethyl Sulfoxide	18.5
Tetrahydrofuran	-108.5		
Isooctane	-107.4		
Methanol	-97.7		
n-Hexane	-95.3		
Dichloromethane	-95.1		
Toluene	-95.0		
Acetone	-94.7		
n-Heptane	-90.6		
1-Butanol	-88.6		
2-Propanol	-88.0		
Methyl Ethyl Ketone	-86.7		
Methyl Isobutyl Ketone	-84		
Ethyl Acetate	-84.0		
n-Butyl acetate	-73.5		
Chloroform	-63.5		
N,N-Dimethylformamide	-60.4		
Chlorobenzene	-45.6		
Acetonitrile	-43.8		
Pyridine	-41.5		
N-Methyl-2-Pyrrolidone	-24.4		
N,N-Dimethylacetamide	-20		

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Pysical properties
UV Cutoff

Solvent	UV Cutoff (nm)	Solvent	UV Cutoff (nm)
Acetonitrile	<190	Benzene	280
n-Pentane	190	N-Methyl-2-Pyrrolidone	285
Water	190	Toluene	286
n-Hexane	195	Chlorobenzene	288
n-Heptane	197	o-Dichlorobenzene	296
Cyclohexane	202	Methyl Ethyl Ketone	329
Ethanol	205	Acetone	330
Isooctane	205	Pyridine	330
Methanol	205	Methyl Isobutyl Ketone	334
2-Propanol	205		
Methyl t-Butyl Ether	210		
Petroleum Ether	210		
1-Propanol	210		
Tetrahydrofuran	210		
1-Butanol	215		
1,4-Dioxane	215		
Ethyl Ether	218		
1,2-Dichloroethane	226		
Dichloromethane	233		
Chloroform	245		
Acetic acid, glacial	254		
n-Butyl acetate	254		
Ethyl Acetate	255		
Dimethyl Sulfoxide	263		
N,N-Dimethylacetamide	270		
N,N-Dimethylformamide	270		

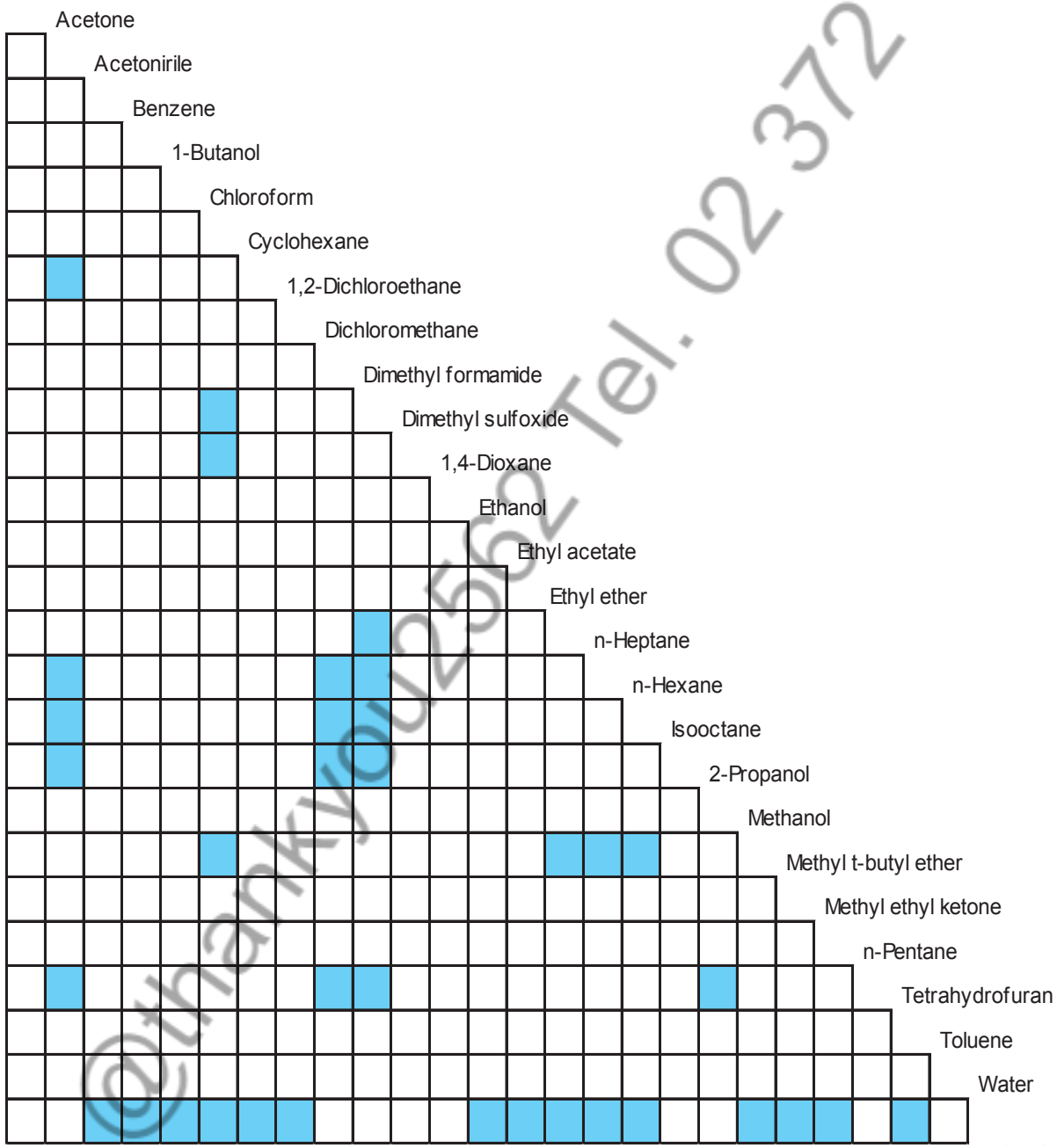
Line @thankyou2562 Tel 02 372 1545 - 6

Solvent Miscibility chart

Miscible

Immiscible

Miscible : two components can be mixed together in all proportions without forming two separate phases



Line @thankyou2562 Tel. 02 372 1545 - 6

Units Conversion Tables

Units of Measure Conversion Factors

Percent	Parts per Million	Parts per Billion	Parts per Trillion
.001%=	10 ppm	-	-
.0001%=	1 ppm=	1,000 ppb=	1,000,000 ppt
.00001%=	0.1 ppm=	100 ppb=	100,000 ppt
.000001%=	0.01 ppm=	10 ppb=	10,000 ppt
-	0.001 ppm=	1 ppb=	1,000 ppt
-	0.0001 ppm=	0.1 ppb=	100 ppt
-	-	0.01 ppb=	10 ppt
-	-	0.001 ppb=	1 ppt

Temperature Conversion Formulas

℃ to ℉	℉ to ℃
(℃x9/5)+32=℉	(℉-32)x5/9=℃

Perfix	Factor	Fraction
centi	10^{-2}	1/100 (part per hundred)
milli	10^{-3}	1/1,000 (part per thousane)
micro	10^{-6}	1/1,000,000 (ppm, part per million)
nano	10^{-9}	1/1,000,000,000 (ppb, part per billion)
pico	10^{-12}	1/1,000,000,000,000 (ppt, part per trillion)
femto	10^{-15}	1/1,000,000,000,000,000 (ppq, part per quadrillion)
atto	10^{-18}	1/1,000,000,000,000,000,000 (part per quintillion)

Weight Conversion Table[1]

From/To	g	kg	metiric ton	grain	oz	lb
g	1	0.001	$1x10^{-6}$	15.43	0.03527	0.0022
kg	1000	1	0.001	$1.54x10^{4}$	35.27	2.205
metric ton	$1x10^{6}$	1000	1	$1.54x10^{7}$	$3.53x10^{4}$	2205
grain	$6.48x10^{-2}$	$6.48x10^{-5}$	$6.48x10^{-3}$	1	$2.29x10^{-3}$	$1.43x10^{-4}$
oz	28.35	0.02835	$2.83x10^{-5}$	437.5	1	0.0625
lb	453.6	0.4536	$4.54x10^{4}$	7000	16	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

Weight Conversion Table[1] (metric and U.S.liquid measures)

From/To	cm^3	liter	m^3	in^3	ft^3	yd^3	fl oz	fl pt	fl qt	gal
cm^3	1	0.001	$1x10^{-6}$	0.06102	$3.53x10^{-4}$	$1.31x10^{-6}$	0.03381	0.00211	0.00106	$2.64x10^{-4}$
liter	1000	1	0.001	61.02	0.03532	0.00131	33.81	2.113	1.057	0.2642
m^3	$1x10^{6}$	1000	1	$6.10x10^{4}$	35.31	1.308	$3.38x10^{4}$	2113	1057	264.2
in^3	16.39	0.01639	$1.64x10^{-5}$	1	$5.79x10^{-4}$	$2.14x10^{-5}$	0.5541	0.03463	0.01732	0.00433
ft^3	$2.83x10^{4}$	28.32	0.02832	1728	1	0.03704	957.5	69.84	29.92	7.481
yd^3	$7.65x10^{5}$	764.5	0.7646	$4.67x10^{4}$	27	1	$2.59x10^{4}$	1616	807.9	202
fl oz	29.57	0.02957	$2.96x10^{-5}$	1.805	0.00104	$3.87x10^{-5}$	1	0.0625	0.03125	0.00781
fl pt	473.2	0.4732	$473x10^{-4}$	28.88	0.01671	$619x10^{-4}$	16	1	0.6	0.125
fl qt	946.4	0.9463	$9.46x10^{-4}$	57.75	0.03342	0.00124	32	2	1	0.25
gal	3785	3.786	0.00379	231	0.1337	0.00495	128	8	4	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

Length Conversion Table[1]

From/To	cm	m	km	in	ft	mile
cm	1	0.01	$1x10^{-5}$	0.3937	0.03281	$6.214x10^{-6}$
m	100	1	0.001	39.37	3.281	$6.214x10^{-4}$
km	$1x10^{5}$	1000	1	$3.94x10^{4}$	3281	0.6214
in	2.54	0.02540	$2.540x10^{-5}$	1	0.08333	$1.578x10^{-5}$
ft	30.48	0.3048	$3.048x10^{-4}$	12	1	$18.94x10^{-4}$
mile	$1.609x10^{5}$	1609	1.609	$6.336x10^{4}$	5280	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

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