



# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 28-Jun-2005

Revision Date 14-Feb-2023

Version 2.1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** 2351749  
**Product Name** Potassium Standard Solution 100 mg/L as K

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Standard solution. Water Analysis.

**Uses advised against** Consumer use

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

HACH UK  
Laser House  
Ground Floor, Suite B  
Waterfront Quay, Salford Quays  
GB - Manchester, M50 3XW  
Tel. +44 (0) 161 872 1487  
info-uk@hach.com

HACH Ireland  
Unit 34 GB Business Park  
Little Island  
IRL-Co. Cork  
T45 H681  
Tel. +353 (0)146 02 522  
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service  
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**Hazard statements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]  
EUH208 - Contains Formaldehyde May produce an allergic reaction.

**2.3. Other hazards**

No information available.

**PBT & vPvB**

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable

**3.2 Mixtures**

**Full text of H- and EUH-phrases: see section 16**

Acute Toxicity Estimate

No information available

**Section 4: FIRST AID MEASURES****4.1. Description of first aid measures**

<b>General advice</b>	Take off contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a doctor.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a doctor.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a doctor.
<b>Ingestion</b>	Rinse mouth. Call a doctor.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Treat symptomatically.

**Section 5: FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself does not burn.

**Unsuitable extinguishing media** No information available.

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Additional information** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**6.3. Methods and material for containment and cleaning up**

**Methods for containment** Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapours/spray.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)**

**Specific use(s)** Analytical reagent.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Additional information** No information available.

**8.2. Exposure controls**

**Engineering controls** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Personal protective equipment  
Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

**Skin and body protection** Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse.

**Respiratory protection** Ensure adequate ventilation.

**Recommended filter type:** ABEK-P3.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

**Physical state** Liquid

Colour colourless

Odour Odourless

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	6.4	@ 20 °C
Melting point / freezing point	0 °C / 32 °F	
Initial boiling point and boiling range	100 °C / 212 °F	
Evaporation rate	1 (water = 1)	
Vapour pressure	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific Gravity	1.00	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	1 cP (mPa s) at 20 °C / 68 °F	
Kinematic viscosity	1 cSt (mm <sup>2</sup> /s) at 20 °C / 68 °F	
Relative density	1.00 g/mL	@ 20 °C

**Solubility(ies)****Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Most Polar Organic Solvents	Soluble	> 1000 mg/L	25 °C / 77 °F

**Metal Corrosivity**

Steel Corrosion Rate  
Aluminum Corrosion Rate

0.23 mm/yr / 0.01 in/yr  
0 mm/yr / 0 in/yr

**Explosive properties**

Upper explosion limit  
Lower explosion limit

No data available  
No data available

**Flammable properties**

Flash point

No data available

Flammability

Upper flammability limit:

No data available

Lower flammability limit

No data available

Oxidising properties

No data available.

Bulk density

No data available

**9.2. Other information**

No information available.

**Section 10: STABILITY AND REACTIVITY****10.1. Reactivity**

Reactivity

No information available.

**10.2. Chemical stability**

Stability

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Possibility of hazardous reactions None under normal processing.

**10.4. Conditions to avoid**

Conditions to avoid

Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

Incompatible materials

None known based on information supplied.

**10.6. Hazardous decomposition products**

Hazardous Decomposition Products None known based on information supplied.

**Section 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met

Mixture

No data available.

Substance

Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rat LD <sub>50</sub>	100 mg/kg	None reported	None reported	GESTIS

Potassium chloride	Rat LD <sub>50</sub>	2600 mg/kg	None reported	None reported	IUCLID
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**Dermal Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rabbit LD <sub>50</sub>	270 mg/kg	None reported	None reported	GESTIS

**Inhalation (Dust/Mist) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rat LC <sub>50</sub>	0.578 mg/L	4 hours	None reported	LOLI

**Inhalation (Vapor) Exposure Route:****Acute Toxicity Estimate (ATE)****Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

Mixture

No data available.

Substance

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde	Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
Methanol	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Rabbit	None reported	20 hours	Not corrosive or irritating to skin	ECHA

**Serious eye damage/eye irritation**

Based on available data, the classification criteria are not met.

Mixture

No data available.

Substance

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Methanol	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Rabbit	0.05 mL	24 hours	Not corrosive or irritating to eyes	ECHA

**Respiratory or skin sensitisation**

Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

**Skin Sensitization Exposure Route:**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Formaldehyde	Patch test	Human	Confirmed to be a skin sensitizer	ERMA
Methanol	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	ECHA

**Respiratory Sensitization Exposure Route:**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Formaldehyde	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

**STOT - single exposure**

Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Human LD <sub>Lo</sub>	70 mg/kg	None reported	Gastrointestinal Kidney, Ureter, or Bladder Liver Other changes Ulcerated stomach Other changes	RTECS
Potassium chloride	Man LD <sub>Lo</sub>	20 mg/kg	None reported	None reported	RTECS
Methanol	Human LD <sub>Lo</sub>	143 mg/kg	None reported	Lungs, Thorax, or Respiration Dyspnea	RTECS

**Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Methanol	Human TC <sub>Lo</sub>	300 mg/L	None reported	Lungs, Thorax, or Respiration Other changes	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.



Mixture No data available.

Substance Test data reported below.

#### Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium chloride	Rat TD <sub>Lo</sub>	75600 mg/kg	42 days	Kidney, Ureter, or Bladder Urine volume increased	RTECS
Methanol	Monkey	2340 mg/kg	3 days	None reported	ECHA

#### Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Human TC <sub>Lo</sub>	0.017 mg/L	0.5 days	Eye Lungs, Thorax, or Respiration Lacrimation Other changes	RTECS

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Mixture invitro Data No data available.

Substance invitro Data Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium chloride	Mutation in microorganisms	Mouse lymphocyte	2048 mmol/L	None reported	Positive test result for mutagenicity	RTECS
Methanol	DNA inhibition	Human lymphocyte	300 mmol/L	None reported	Positive test result for mutagenicity	RTECS

Mixture invivo Data No data available.

Substance invivo Data Test data reported below.

#### Oral Exposure Route:

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium chloride	Unscheduled DNA synthesis	Rat	1.5 mg/kg	None reported	Positive test result for mutagenicity	RTECS
Methanol	DNA damage	Rat	0.405 mg/kg	None reported	Positive test result for mutagenicity	RTECS

#### Inhalation (Vapor) Exposure Route:

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

**Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rat	15 mg/L	78 weeks	Olfaction Tumors	RTECS

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Methanol	Rat TD <sub>Lo</sub>	4118 mg/kg	10 days	Effects on Embryo or Fetus Specific Developmental Abnormalities Ear Eye Fetotoxicity (except death e.g. stunted fetus) Urogenital System	RTECS

**Inhalation (Dust/Mist) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Methanol	Rat TC <sub>Lo</sub>	0.0026 mg/L	22 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus)	RTECS

**Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rat TC <sub>Lo</sub>	40 mg/L	14 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus)	RTECS

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**11.2.1. Endocrine disrupting properties**

Endocrine disrupting properties No information available.

**11.2.2. Other information**

Other adverse effects No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

### Mixture

**Acute aquatic toxicity:** No data available.

**Aquatic Chronic Toxicity:** No data available.

### Substance

**Acute aquatic toxicity:** Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Formaldehyde	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	6.7 mg/L	PEEN
Potassium chloride	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	880 mg/L	IUCLID

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Formaldehyde	48 Hours	<i>Daphnia pulex</i>	EC <sub>50</sub>	5.8 mg/L	PEEN

**Aquatic Chronic Toxicity:** No data available.

### 12.2. Persistence and degradability

**Mixture** No data available.

### 12.3. Bioaccumulative potential

**Mixture:** No data available.

Partition coefficient Not applicable

### 12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient Not applicable

### 12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### 12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

### 12.7. Other adverse effects

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

##### Advice on Disposal

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Contaminated packaging** Dispose of contents/containers in accordance with local regulations.

**Other Information** Do not reuse empty containers.

### Section 14: TRANSPORT INFORMATION

#### IMDG

14.1 UN number or ID number Not regulated  
 14.2 Proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing Group Not regulated  
 14.5 Marine pollutant Not applicable  
 14.6 Special precautions for user See section 6-8 for more information  
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

#### ADR

14.1 UN number or ID number Not regulated  
 14.2 Proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing Group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user See section 6-8 for more information

#### IATA

14.1 UN number or ID number Not regulated  
 14.2 Proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user See section 6-8 for more information

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

**Section 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants** Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

- Non-controlled

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

**International Inventories**

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECL - Existing substances	Complies
PICCS	Complies
AICS	Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

## 15.2. Chemical safety assessment

**Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.

## Section 16: OTHER INFORMATION

**Issue Date** 28-Jun-2005  
**Revision Date** 14-Feb-2023  
**Revision Note** New SDS, SDS sections updated, 3, 9, 11, 12.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]
RID	Règlement international concernant le transport des marchandises dangereuses par chemin

RTECS	de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
TWA	RTECS (Registry of Toxic Effects of Chemical Substances)
SKN*	TWA (time-weighted average)
SKN+	Skin designation
STEL	Skin sensitisation
STOT	STEL (Short Term Exposure Limit)
STOT RE	Specific Target Organ Toxicity
STOT SE	Specific target organ toxicity — repeated exposure
SVHC	Specific target organ toxicity — single exposure
TLV	Substances of Very High Concern
TRGS	Threshold Limit Value
TSCA	Technical rules for hazardous substances, Germany
UN	Toxic Substances Control Act
vPvB	United Nations
VOC	very persistent and very bioaccumulative
AwSV	Volatile organic compounds
	Administrative regulation of water polluting substances, Germany

**Key literature references and sources for data**

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

**Classification procedure**

<b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>	<b>Method Used</b>
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

**Training Advice**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Restrictions on use**

For Laboratory Use Only.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****End of Safety Data Sheet**