

# Potassium permanganate

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 23/09/2019 Version: 1.0

Doc No: SDS-960.172/0



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Substance name : Potassium permanganate  
Chemical name : potassium permanganate  
IUPAC name : potassium permanganate  
EC-No. : 231-760-3  
CAS-No. : 7722-64-7  
Formula :  $KMnO_4$

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

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

ISOLAB Laborgeräte GmbH  
Am Dillhof 2 - 63863 Eschau / GERMANY  
Tel: + 49 93 74 / 978 55-0  
Fax: +49 93 74 / 978 55-29  
[prodsafe@isolab.de](mailto:prodsafe@isolab.de)

#### 1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 2 H272  
Acute toxicity (oral), Category 4 H302  
Skin corrosion/irritation, Category 1C H314  
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400 (M=10)  
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410 (M=10)

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage. May intensify fire; oxidiser. Suspected of damaging fertility or the unborn child. Harmful if swallowed. Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser.  
H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P221 - Take any precaution to avoid mixing with combustibles, heavy-metal compounds, acids and alkalis.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P310 - IF exposed or concerned: Immediately dial 114 for the NATIONAL POISON CENTER or call a doctor/physician

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	Conc. (% w/w)
Potassium permanganate	(CAS-No.) 7722-64-7 (EC-No.) 231-760-3 (EC Index-No.) 025-002-00-9	>= 99

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	: Strong water jet.

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

Fire hazard	: May intensify fire; oxidiser.
Reactivity in case of fire	: At high temperature may liberate dangerous gases.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Advice for firefighters

Precautionary measures fire	: Approach from upwind. Use water spray or fog for cooling exposed containers. Keep away from combustible materials.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Cool adjacent tanks / containers / drums with water jet. Do not allow water to enter the vessels, a violent reaction may occur. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Keep upwind. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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Other information : High temperature decomposition products are harmful by inhalation. Inhalation of vapour can cause breathing difficulties.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Access forbidden to unauthorised personnel. Use protective clothing. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters. Use care in walking on spilled material. Do not inhale vapour.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment. Dust formation: dust mask. Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. No open flames, no sparks, and no smoking. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel.

Measures in case of dust release : In case of dust production: protective goggles. Dust mask. In case of vapour formation use adequate respirator.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Only qualified personnel equipped with suitable protective equipment may intervene. Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures : Avoid contact with skin and eyes. Do not touch spilled material. Evacuate unnecessary personnel. Keep away from combustible material. Keep public away from danger area. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter drains or water courses. Do not discharge into drains or waterways without neutralizing.

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

For containment : Collect spillage. Comply with the safety instructions. Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters. Clean up any spills as soon as possible, using an absorbent material to collect it. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust.

Other information : Dispose of materials or solid residues at an authorized site. Dispose of contaminated materials in accordance with current regulations.

#### 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Use adequate ventilation to keep vapour concentrations below applicable standard. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid dust formation. Avoid prolonged and repeated contact with skin. Contaminated work clothing should not be allowed out of the workplace. Do not spray on an open flame or other ignition source. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Keep valves and fittings free from oil and grease. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Take precautionary measures against static discharge.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures : Comply with applicable regulations. Containers which are opened should be properly resealed and kept upright to prevent leakage. Ensure adequate ventilation, especially in confined areas.

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Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products	: Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.
Incompatible materials	: combustible materials. Extremely high or low temperatures.
Heat and ignition sources	: Do not smoke. KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.
Information on mixed storage	: Keep away from food, drink and animal feeding stuffs.
Storage area	: Avoid : Extremely high or low temperatures. Heat and ignition sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Potassium permanganate (7722-64-7)		
EU	Local name	Potassium permanganate
EU	IOELV TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable fraction) 0.2 mg/m <sup>3</sup> (inhalable fraction)
EU	Notes	(Year of adoption 2011)
EU	Regulatory reference	SCOEL Recommendations

Potassium permanganate (7722-64-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	0.218 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.01111 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.0389 mg/m <sup>3</sup>
PNEC (Water)	
PNEC aqua (freshwater)	0.06 µg/l
PNEC aqua (intermittent, freshwater)	0.6 µg/l
PNEC (STP)	
PNEC sewage treatment plant	164 mg/l

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Consider the use of a work permit system e.g. for maintenance activities. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. In the event that dust and/or fine particles are generated with this product, it is prudent to minimize prolonged inhalation exposure to these forms not to exceed the occupational exposure limit. Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure.

#### Personal protective equipment:

Gloves. Safety glasses. Protective clothing.

#### Hand protection:

Protective gloves. EN 374

#### Eye protection:

Safety glasses. EN 166. Where excessive dust may result, wear goggles

#### Skin and body protection:

Wear suitable protective clothing. In case of dust production: dustproof clothing. In case of dust production: head/neck protection. Where contact with eyes or skin is likely, wear suitable protection

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Dust production: dust mask with filter type P1. Where excessive vapour may result, wear approved mask

#### Personal protective equipment symbol(s):



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### Environmental exposure controls:

Avoid release to the environment.

### Consumer exposure controls:

Do not eat, drink or smoke during use. Always wash hands after handling the product. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing.

### Other information:

Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 158.03 g/mol
Colour	: Purple. Black.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 7 - 9 (20 g/l, H <sub>2</sub> O, 20 °C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: > 240 °C (decomposition)
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 240 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: < 0.01 hPa (20 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.7 g/cm <sup>3</sup> Type: 'density' Temp.: 20 °C
Solubility	: Water: 64 g/l (20 °C)
Log Pow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: Oxidising solid.
Explosive limits	: Not applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May intensify fire; oxidiser.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Combustible materials. Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

Potassium permanganate (7722-64-7)	
LD50 oral rat	750 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal))

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
Serious eye damage/irritation : Serious eye damage, category 1, implicit  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Suspected of damaging the unborn child.  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

Potassium permanganate (7722-64-7)	
LOAEL (dermal, rat/rabbit, 90 days)	Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL (oral, rat, 90 days)	40 mg/kg bodyweight Animal: rat, Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.  
Acute aquatic toxicity : Very toxic to aquatic life.  
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Potassium permanganate (7722-64-7)	
LC50 fish 1	0.47 mg/l Test organisms (species): Poecilia reticulata
EC50 Daphnia 1	0.06 mg/l Test organisms (species): Daphnia magna

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations. Waste Management Regulation published in the Official Journal numbered 29314 on April 2, 2015. Regulation on Incineration of Waste Materials published in the Official Journal numbered 27721 on October 6, 2010.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Do not remove as household garbage.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Additional information : Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

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European List of Waste (LoW) code : 16 09 01\* - permanganates, e.g. potassium permanganate

### SECTION 14: Transport information

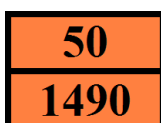
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1490	1490	1490	1490	1490
<b>14.2. UN proper shipping name</b>				
POTASSIUM PERMANGANATE	POTASSIUM PERMANGANATE	Potassium permanganate	POTASSIUM PERMANGANATE	POTASSIUM PERMANGANATE
<b>Transport document description</b>				
UN 1490 POTASSIUM PERMANGANATE, 5.1, II, (E), ENVIRONMENTALLY HAZARDOUS	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1490 Potassium permanganate, 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
5.1	5.1	5.1	5.1	5.1
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : O2  
Limited quantities (ADR) : 1kg  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P002, IBC08  
Special packing provisions (ADR) : B4  
Mixed packing provisions (ADR) : MP2  
Portable tank and bulk container instructions (ADR) : T3  
Portable tank and bulk container special provisions (ADR) : TP33  
Tank code (ADR) : SGAN  
Tank special provisions (ADR) : TU3  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Special provisions for carriage - Packages (ADR) : V11  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV24  
Hazard identification number (Kemler No.) : 50  
Orange plates :



Tunnel restriction code (ADR) : E

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### - Transport by sea

Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-H
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: D
Segregation (IMDG)	: SG38, SG49, SG60
Properties and observations (IMDG)	: Dark purple crystals or powder. Soluble in water. Reacts vigorously with sulphuric acid and hydrogen peroxide. Reacts fiercely with cyanides when heated or by friction. May form explosive mixtures with combustible material, powdered metals or ammonium compounds. These mixtures are sensitive to friction and are liable to ignite. When involved in a fire, may cause an explosion.

### - Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
ERG code (IATA)	: 5L

### - Inland waterway transport

Classification code (ADN)	: O2
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

### - Rail transport

Classification code (RID)	: O2
Limited quantities (RID)	: 1kg
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 50

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable



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### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Potassium permanganate is not on the REACH Candidate List

Potassium permanganate is not on the REACH Annex XIV List

##### 15.1.2. National regulations

###### Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV; ID No. 1936)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

Data sources : Classification according to Regulation (EC) No. 1272/2008 [CLP]. ECHA (European Chemicals Agency). Supplier's safety documents.

Other information : DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1

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Ox. Sol. 2	Oxidising Solids, Category 2
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*