



**Potassium permanganate concentrate**

38130-1EA

Version 4.1


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Skin irritation Category 2  
H315 Causes skin irritation.  
Serious eye damage Category 1  
H318 Causes serious eye damage.  
Reproductive toxicity Category 2  
H361d Suspected of damaging the unborn child.  
Short-term (acute) aquatic hazard Category 1  
H400 Very toxic to aquatic life.  
Long-term (chronic) aquatic hazard Category 1  
H410 Very toxic to aquatic life with long lasting effects.

**2.2. Label elements**

**REGULATION (EC) No 1272/2008**

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation. H318 Causes serious eye damage. H361d Suspected of damaging the unborn child. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P201 Obtain special instructions before use. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. 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 + P313 IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the	:	potassium permanganate

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label

### 2.3. Other hazards

The product is oxidizing when dried. Results of PBT and vPvB assessment, see chapter 12.5.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
potassium permanganate	7722-64-7 025-002-00-9 231-760-3	Ox. Sol. 2; H272 Acute Tox. 4; H302; Oral Skin Corr. 1C; H314 Repr. 2; H361d STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 3 % - < 5 %	M(Aquatic Acute) = 10 M(Aquatic Chronic) = 10

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### *General advice:*

First aider needs to protect himself. Move out of dangerous area. Take off immediately all contaminated clothing.

#### *Inhalation:*

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

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### *Skin contact:*

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician immediately.

### *Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Protect unharmed eye. Call a physician immediately.

### *Ingestion:*

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Drink 1 or 2 glasses of water. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### *Suitable extinguishing media:*

Foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)  
Water spray

#### *Extinguishing media which shall not be used for safety reasons:*

Do not use a solid water stream as it may scatter and spread fire.

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

In case of fire hazardous decomposition products may be produced such as:

Potassium oxide  
Manganese oxide fumes

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### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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## SECTION 6: Accidental release measures

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

Wear personal protective equipment. Unprotected persons must be kept away. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

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

Soak up with inert absorbent material.  
Sweep up and shovel into suitable containers for disposal.  
Dispose of in accordance with local regulations.  
Ventilate the area.

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

*Advice on protection against fire and explosion:*

Normal measures for preventive fire protection.

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### *Hygiene measures:*

Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Usual hygienic precautions must be taken when working with dangerous cancer causing substances.

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

#### *Requirements for storage areas and containers:*

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

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

no additional data available

## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

#### ***Occupational exposure limits:***

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
potassium permanganate	EH40 WEL	as Mn		Listed
potassium permanganate	EU ELV TWA	0,05 mg/m <sup>3</sup> as Mn Respirable fraction.		Indicative
potassium permanganate	EU ELV TWA	0,2 mg/m <sup>3</sup> as Mn Inhalable fraction.		Indicative
potassium permanganate	EH40 WEL TWA	0,05 mg/m <sup>3</sup> as Mn Respirable fraction.		

TWA - Time weighted average

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**DNEL/ PNEC-Values**

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
potassium permanganate	Workers / Long-term systemic effects		0,218 mg/m <sup>3</sup>	Inhalation	
potassium permanganate	Consumers / Long-term systemic effects		0,0389 mg/m <sup>3</sup>	Inhalation	
potassium permanganate	Consumers / Long-term systemic effects		0,01111mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
potassium permanganate	Fresh water: 0,00006 mg/l	Assessment factor: 1000
potassium permanganate	Marine water: 0,00006 mg/l	Assessment factor: 100
potassium permanganate	Sewage treatment plant: 1,64 mg/l	Assessment factor: 100

**8.2. Exposure controls**

**Occupational exposure controls**

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

**Personal protective equipment**

*Respiratory protection:*

In case of insufficient ventilation, wear suitable respiratory equipment.

*Hand protection:*

Glove material: Natural Latex

Break through time: 480 min

Glove thickness: 0,6 mm

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Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

*Eye protection:*

Safety goggles

*Skin and body protection:*

Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

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

Physical state	: liquid
Colour	: dark violet
Odour	: No data available
molecular weight	: 158,03 g/mol
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Upper explosion limit	: No data available



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Lower explosion limit	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	Stable under recommended storage conditions.
pH	:	No data available
Viscosity, kinematic	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Density	:	No data available
Relative vapour density	:	No data available

**9.2 Other Information**

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Stable under recommended storage conditions.

**10.2. Chemical stability**

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Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

The product is oxidizing when dried.

### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Strong reducing agents  
Powdered metals  
Copper  
Zinc  
Peroxides  
Organic materials  
Combustible material

### 10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:

Potassium oxide  
Manganese oxide fumes

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*

Acute toxicity estimate

Value: > 5.000 mg/kg

Method: Calculation method

Acute toxicity estimate

Value: > 2.000 mg/kg

Method: Calculation method

*Acute dermal toxicity:*

LD50

Species: Rat

Sex: male and female

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Value: > 2.000 mg/kg

*Acute inhalation toxicity:*  
No data available

*Skin irritation:*  
Classification based on Annex VI of regulation 1272/2008/EC.

*Eye irritation:*  
Classification based on Annex VI of regulation 1272/2008/EC.

*Respiratory or skin sensitisation:*  
No data available

*Carcinogenicity:*  
Species: not specified  
Note: No data available  
*Germ cell mutagenicity:*  
Test Method: reverse mutation assay  
Cell type: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Result: negative  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)

*Reproductive toxicity:*  
Species: not specified  
Remarks: Classification based on Annex VI of regulation 1272/2008/EC.

*Aspiration hazard:*  
No data available

**11.2. Information on other hazards**

Endocrine disrupting properties  
No data available

*Other information:*  
No data available

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**SECTION 12: Ecological information**

**12.1. Toxicity**

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*Toxicity to fish:*

Classification based on Annex VI of regulation 1272/2008/EC.

*Toxicity to aquatic plants:*

Classification based on Annex VI of regulation 1272/2008/EC.

*Toxicity to aquatic invertebrates:*

Classification based on Annex VI of regulation 1272/2008/EC.

### 12.2. Persistence and degradability

*Biodegradability:*

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

Very toxic to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

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*Further information:*

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID:3082

IMDG:3082

IATA:3082

**14.2 UN proper shipping name**

ADR/RID:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(POTASSIUM PERMANGANATE, SOLUTION)

IMDG:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(POTASSIUM PERMANGANATE,SOLUTION)

IATA:Environmentally hazardous substance, liquid, n.o.s.(Potassium permanganate, Solution)

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazards**

ADR/RID: yes

Marine pollutant: yes

**14.6 Special precautions for user**

Not regulated for transport when single and combination packagings are <5L for liquids or <5kg for solids per ADR 2.2.9.2.10, IMDG 2.10.3 and IATA SP A197).

**14.7 Maritime transport in bulk according to IMO instruments**

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No data available

**SECTION 15: Regulatory information**

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

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : E1: Hazardous to the aquatic environment	<b>Quantity:</b> 100.000 kg <b>Quantity:</b> 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär

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			Giftinformation);+46104566786
Ireland	+353(1)8092166	Switzerland	145
Italy	0382 24444	United Kingdom	(+44) 844 892 0111
Germany	Berlin : 030/19240		
	Bonn : 0228/19240		
	Erfurt : 0361/730730		
	Freiburg : 0761/19240		
	Göttingen : 0551/19240		
	Homburg : 06841/19240		
	Mainz : 06131/19240		
	Munich : 089/19240		
Latvia	+37167042473		

**Other inventory information**

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

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On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### Text of H-statements referred to under heading 3

potassium permanganate : H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

### Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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