

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Potassium permanganate

Product Number : P4480

Brand : ACP

Index-No. : 025-002-00-9

CAS-No. : 7722-64-7

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

Identified uses : For Laboratory Use Only

1.3 Details of the supplier of the safety data sheet

Company : ACP Chemicals Inc
4601, boul. Des Grandes Prairies
St Leonard, Qc, H1R 1A5
CANADA

Telephone : +1 5143270323

Fax : +1 5143278474

1.4 Emergency telephone number

Emergency Phone # : +1-613-996-6666 (CANUTEC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Oxidizing solids (Category 2), H272

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H272 : May intensify fire; oxidizer.

H302 : Harmful if swallowed.

H314 : Causes severe skin burns and eye damage.

H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 : Keep away from clothing and other combustible materials.

P260	Do not breathe dust or mist.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	: KMnO_4
Molecular weight	: 158.03 g/mol
CAS-No.	: 7722-64-7
EC-No.	: 231-760-3
Index-No.	: 025-002-00-9

Hazardous components

Component	Classification	Concentration*
Potassium permanganate		
	Ox. Sol. 2; Acute Tox. 4; Skin Corr. 1C; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H302, H314, H410	90 - 100 %
* Weight percent		

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
------------	---------	-------	--------------------	-------

Potassium permanganate	7722-64-7	TWA	0.200000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		TWAEV	5.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.200000 mg/m3	Canada. British Columbia OEL
	Adverse reproductive effect			
		TWAEV	0.200000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.2 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.2 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.2 mg/m3	Canada. British Columbia OEL
	Adverse reproductive effect			
		TWA	0.200000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.100000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.020000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.02 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a) Appearance | Form: crystalline
Colour: dark violet |
| b) Odour | odourless |
| c) Odour Threshold | No data available |
| d) pH | 7.2 - 9.7 at 20 g/l at 20 °C (68 °F) |
| e) Melting point/freezing point | Melting point/range: > 240 °C (> 464 °F) - Decomposes on heating. |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | Not applicable |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | No data available |
| m) Relative density | 2.710 g/cm ³ |
| n) Water solubility | 28.3 g/l at 0 °C (32 °F) 65.1 g/l at 20 °C (68 °F) 125 g/l at 40 °C (104 °F) 224 g/l at 60 °C (140 °F) |
| o) Partition coefficient: n-octanol/water | No data available |

- | | |
|------------------------------|--|
| p) Auto-ignition temperature | No data available |
| q) Decomposition temperature | > 240 °C (> 464 °F) - |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | The substance or mixture is classified as oxidizing with the category 2. |

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong reducing agents, Powdered metals, Peroxides, Zinc, Copper, Alcohols, Hydrogen fluoride, Acids, Sulfuric acid

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Potassium oxides, Manganese/manganese oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 1,090 mg/kg

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure - 4 h

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

Maximisation Test - Guinea pig

Result: Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: SD6475000

Contact with skin can cause: Oedema, Necrosis, Effects due to ingestion may include: methemoglobinemia, psychological disturbances, Vomiting, Nausea, Diarrhoea

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.3 - 0.6 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.084 mg/l - 48 h

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Bioaccumulation	Lamellibranchia (mussel)
	Bioconcentration factor (BCF): < 10,000
	Remarks: Can accumulate in aquatic organisms.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**TDG (Canada)**

UN number: 1490 Class: 5.1 Packing group: II
Proper shipping name: POTASSIUM PERMANGANATE
yes
Poison Inhalation Hazard: No

IMDG

UN number: 1490 Class: 5.1 Packing group: II EMS-No: F-H, S-Q
Proper shipping name: POTASSIUM PERMANGANATE
Marine pollutant: yes

IATA

UN number: 1490 Class: 5.1 Packing group: II
Proper shipping name: Potassium permanganate

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further information

ACP Chemicals Inc. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. ACP Chemicals Inc and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

Revision Date: 09/14/2017