



## Safety Data Sheet

Date of Issue: 19.05.2020

Date of Expiry: 19.05.2025

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name: ECP Limited  
Address: PO Box 34125, Birkenhead, Auckland 0746  
Telephone: +64 9 480 4386  
Facsimile: +64 9 480 4385  
Emergency phone number: 0800 243 622 (24 hours)

Product name	Potassium Permanganate				
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Product code
7722-64-7	HSR001342	1490	5.1	II	4340

**Recommended use:** Laboratory Investigations

### 2. Hazards identification

#### 2.1 GHS Classification

Oxidizing liquids or solids (Category B), H272  
Acute toxicity, Oral (Category D), H302  
Aquatic toxicity (Acute or Chronic) (Category A), H400

#### 2.2 GHS Label elements, including precautionary statements

Hazard Pictograms



Signal word: **Danger**

#### Hazard statement(s)

H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H400 Very toxic to aquatic life.

#### Precautionary statement(s)

##### Prevention

P210 Keep away from heat.  
P220 Keep/store away from clothing/combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.  
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.
<b>Response</b>	
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391	Collect spillage.
<b>Disposal</b>	
P501	Dispose of contents/container to an approved waste disposal plant.

### 3. Composition/information on ingredients

Substance/mixture : substance

#### 3.1 Substances

Formula :  $\text{KMnO}_4$   
Molecular weight : 158.03 g/mol  
CAS-No. : 7722-64-7

Hazardous components

Component	Classification	Concentration
Potassium permanganate		
	5.1.1 B; 6.1 D; 9.1 A; H272, H302, H400 M-Factor - Aquatic Acute: 10	<= 100%

### 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.

##### 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.

##### If swallowed

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

### 5. Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media  
Dry powder, dry sand.

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

Potassium oxides, manganese/manganese oxides.

### 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

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### 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.

### 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 suitable, closed containers for disposal.

## 7. Handling and storage

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### 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.

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

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

## 8. Exposure controls/personal protection

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### 8.1 Control parameters

#### Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Potassium permanganate	7722-64-7	WES-TWA	1 mg/m <sup>3</sup>	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

### 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.

### **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

### **Splash contact**

Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min

### **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 or 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.

### **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**

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

a) Appearance	Form: crystalline
Colour:	dark violet
b) Odour	Odourless
c) pH	7.2 - 9.7 at 20 g/l at 20 °C
d) Melting point/freezing point	
Melting point/range	> 240 °C - Decomposes on heating.
e) Relative density	2.710 g/cm <sup>3</sup>
f) Water solubility	28.3 g/l at 0 °C 65.1 g/l at 20 °C 125 g/l at 40 °C 224 g/l at 60 °C
g) Decomposition temperature	> 240 °C –
h) Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.

## **10. Stability and reactivity**

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### **10.1 Chemical stability**

Stable under recommended storage conditions.

#### 10.2 Incompatible materials

Strong reducing agents, powdered metals, peroxides, zinc, copper, alcohols, hydrogen fluoride, acids, sulfuric acid.

#### 10.3 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions:

Potassium oxides, manganese/manganese oxides.

### 11. Toxicological information

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#### 11.1 Information on toxicological effects

##### Acute toxicity

LD50 Oral - Rat - 1,090 mg/kg

##### Skin corrosion/irritation

Skin - Rabbit

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

##### Respiratory or skin sensitisation

Maximisation Test - Guinea pig

Result: Does not cause skin sensitisation.

##### 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.

##### 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

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#### 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 Bioaccumulative potential

##### Bioaccumulation

Lamellibranchia (mussel)

Bioconcentration factor (BCF): < 10,000

Remarks: Can accumulate in aquatic organisms.

#### 12.3 Other adverse effects

Very toxic to aquatic life with long lasting effects.

### 13. Disposal considerations

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#### 13.1 Waste treatment methods

##### Product

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

##### Contaminated packaging

Dispose of as unused product.

### 14. Transport Information Table

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		<b>ADR/RID – European packaging certification</b>	<b>IMDG International Maritime Dangerous Goods Code</b>	<b>IATA – DGR International Air Travel Association – Dangerous Goods Regulations</b>
14.1	<b>UN Number</b>	1490	1490	1490
14.2	<b>UN Proper Shipping name</b>	POTASSIUM PERMANGANATE	POTASSIUM PERMANGANATE	POTASSIUM PERMANGANATE
14.3	<b>Transport Hazard Class</b>	5.1	5.1	5.1
14.4	<b>Packaging group</b>	II	II	II
14.5	<b>Environmental Hazards</b>	Yes	Yes	No
14.6	<b>Special precautions for user</b>	None		
14.7	<b>Incompatible materials</b>	Strong reducing agents, powdered metals, peroxides, zinc, copper, alcohols, hydrogen fluoride, acids, sulfuric acid.		

### 15. Regulatory information

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

National regulatory information

**HSNO Approval Code:** HSR001342

**HSNO Group Standard Approval:** HSR002693 - Laboratory Chemicals and Reagent Kits (Oxidising [5.1.1]) Group Standard 2006

**Tracking Required:** not required

**Approved Handler Cert.:** not required

## 16. Disclaimer

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The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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