

## SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product (material) name: Potassium Permanganate  
Other names: Condy's crystals  
Recommended use: Disinfectant, antiseptic  
Supplier Details: Pharmachem  
Unit 6, 70 Fison Ave West  
Eagle Farm QLD 4009  
Telephone: (07) 3868 0333  
Facsimile: (07) 3868 0344  
Contact Person: Mr Gray Boston  
Emergency Telephone: (07) 3630 1654

## SECTION 2 HAZARDS IDENTIFICATION

This product is dangerous goods under the Australian Dangerous Goods Code and is classified as hazardous according to the classification criteria of NOHSC:1008(2004), Approved Criteria For Classifying Hazardous Substances and the National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(2003)]:

Hazard Category: Xn Harmful  
Xi Irritant  
Risk phrase(s): R8 Contact with combustible material may cause fire.  
R22 Harmful if swallowed.  
R36 Irritating to eyes.  
R37 Irritating to respiratory system.  
R38 Irritating to skin.  
Safety phrase(s): S17 Keep away from combustible material.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36 Wear suitable protective clothing.  
S37 Wear suitable gloves.  
S39 Wear eye / face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

### Health Effects

#### Acute:

Swallowed Harmful if swallowed. May cause swelling and irritation of the tissues in the mouth and throat, nausea, vomiting, high-pitched noisy breathing (stridor), slow pulse, shock, fall of blood pressure and death. Liver and kidney damage may develop.

Eye: Dilute solutions may cause mild irritation. Solid material and strong solutions may cause hardened, ulcer-like, dark-brown coloured injury where the chemical touches the eye, conjunctivitis and bleeding. Prolonged contact may cause cloudiness and brown discolouration of the cornea.

Skin: May cause irritation or a burn with a thick, brownish-purple area of dead tissue.

Inhaled: May cause irritation of the nose, throat and respiratory tract, sore throat, coughing, shortness of breath and difficult breathing.

#### Chronic:

Chronic exposure may result in pulmonary oedema. Chronic intake of manganese compounds by ingestion and inhalation can result in harmful effects on the central nervous system. Symptoms could include difficulty in walking, weakness or cramps in the legs, trouble with memory and judgement and

unstable emotions. If high exposure continues, poor coordination, difficulty in speaking clearly, or shaking or tremor of the arms or legs may develop.

### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS NO.	Proportion
Potassium Permanganate	7722-64-7	100%

### SECTION 4 FIRST AID MEASURES

The following recommendations for First Aid measures appear in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) which is published by the Australian Government under the Therapeutic Goods Act 1989. The recommendations are a result of consideration of this material and its use in Australia by the Commonwealth Department of Health and Ageing.

For advice contact a Poisons Information Centre (Phone Australia 13 11 26)

If swallowed, do NOT induce vomiting.

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.

Advice to Doctor: Consult Poisons Information Centre.

### SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing media: Use water spray to blanket fire, cool fire-exposed containers, and to flush non-ignited spills or vapors away from fire. Suffocating type extinguishers are not as effective as water. Do not allow water run-off to enter sewers or waterways.

Hazards from combustion products: Not combustible but assists combustion of other substances. Will accelerate burning when involved in a fire. May explode on heating, shock, friction or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode on heating. Runoff may create fire or explosion hazard.

Special protective precautions and equipment for fire fighters: Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Do not contaminate waterways with spilled material. Keep combustibles (wood, paper, clothing, oil, etc.) away from the spilled material. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat.

Methods and materials for containment and clean up:

Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area.

## SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling:

Wear safety glasses and keep the solid or solution from contact with the skin. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Separate from incompatibles, combustibles, organic or other readily oxidizing materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Conditions for Safe Storage:

Keep in a tightly closed container, stored in a cool, dry, well-ventilated area out of direct sunlight. Avoid storage on wood floors.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Biological Limit Values

TWA:

1 mg/m<sup>3</sup> - Manganese dust, fume, and compounds (as manganese) - Worksafe Aust.

STEL:

3 mg/m<sup>3</sup> - Manganese fume

Engineering Controls:

Maintain concentration below recommended exposure limit. Local exhaust ventilation system may be required.

Personal Protective Equipment:

Eye Protection:

Use chemical safety goggles. Where dust or splashing of solutions is possible, use full face shield.

Clothing:

Wear suitable protective clothing and gloves to prevent skin contact.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Dark purple crystals with blue metallic sheen.

Taste:

Sweetish, astringent

Odour

Odourless

Form

Solid

Specific Gravity

2.7032

Solubility in Water

64 g/L @ 20 °C

Other Properties:

Oxidising Properties

Powerful oxidizing agent.

Solubility in Organic Solvents

Soluble in acetone and methanol.

Decomposition Temp.

240 °C

## SECTION 10 STABILITY AND REACTIVITY

Chemical stability:	Stable.
Conditions to avoid:	Heat, flames, ignition sources and incompatibles
Incompatible materials:	Powdered metals, alcohol, arsenites, bromides, iodides, phosphorus, sulfuric acid, organic compounds, sulphur, activated carbon, hydrides, strong hydrogen peroxide, ferrous or mercurous salts, hypophosphites, hyposulphites, sulfites, peroxides, and oxalates.
Hazardous decomposition products:	Toxic metal fumes may form when heated to decomposition.
Hazardous reactions:	Hazardous polymerization will not occur. Dangerous fire and explosion risk in contact with organic materials. Contact with reducing materials may cause fire. May react violently in contact with sulfuric acid or hydrogen peroxide. May react violently and give off toxic gases in contact with concentrated acids. May react explosively in contact with antimony, arsenic, titanium, ammonium compounds.
Hazchem code	1Y
Other information	Decomposed by alcohol.

## SECTION 11 TOXICOLOGICAL INFORMATION

Toxicology (Acute)	
Oral LD <sub>50</sub> (Rat):	1090 mg/kg
Oral LD <sub>50</sub> Mouse:	2157 mg/kg
Oral LD <sub>50</sub> Guinea pig:	1151 mg/kg
LDLO (Human):	143 mg/kg

Chronic exposure may result in mutagenic and adverse reproductive effects, as well as adverse effects on the central nervous system.

## SECTION 12 ECOLOGICAL INFORMATION

Potassium Permanganate has a low estimated lifetime in the environment, being readily converted by oxidizable materials to insoluble manganese dioxide (MnO<sub>2</sub>). Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Bioconcentration potential:	In non-reducing and non-acidic environments manganese dioxide (MnO <sub>2</sub> ) is insoluble and has a very low bioaccumulative potential.
Aquatic Toxicity:	
Rainbow trout, 96 hour LC <sub>50</sub> :	1.8 mg/L
Bluegill sunfish, 96 hour LC <sub>50</sub> :	2.3 mg/L

## SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods and containers:	Contact local authorities prior to disposal. Seek expert advice before disposing of this material or material collected as a result of cleanup of spills of this material. Store material for disposal as indicated in storage conditions.
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Special precautions for landfill  
or incineration:

Do not burn waste material or containers.

## SECTION 14 TRANSPORT INFORMATION

UN Number: 1490  
Proper Shipping Name: POTASSIUM PERMANGANATE  
DG Class: 5.1  
Packing Group: II  
Hazchem Code: 1Y  
Dangerous goods of Class 5.1  
(Oxidizing Agent) are incompatible in  
a placard load with any of the following: Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class  
7, Class 8, Fire risk substances and Combustible liquids.  
EPG Number: 5A1  
IERG Number: 31  
Packaging Method: 5.9.5.1

## SECTION 15 REGULATORY INFORMATION

Potassium permanganate has been included in Schedule 6 of the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) by the Commonwealth Department of Health and Aging. The Secretary of the Department (or delegate) has established First Aid and Safety Directions for this material based on an assessment of the use of this material in Australia and these instructions have been included in this Material Safety Data Sheet.

Potassium Permanganate is classified as dangerous goods under the Australian Dangerous Goods Code and is therefore regulated under transport legislation in Australia.

Potassium permanganate is listed in the Australian Inventory of Chemical Substances but has not been assessed by NICNAS.

## SECTION 16 OTHER INFORMATION

MSDS version:	2
Date of Revision:	March 2011
Update of sections:	2, 4, 10, 11, 12, 15, 16

### CONTACT POINT

Mr Gray Boston, General Manager  
B/Hrs Phone (07) 3868 0333 A/Hrs (07) 3630 1654

### References:

1. FAISD Handbook, Handbook of First Aid Instructions, Safety Directions, Warning Statements, and General Safety Precautions for, Agricultural and Veterinary Chemicals, (as updated)
2. Approved Criteria For Classifying Hazardous Substances, NOHSC:1008 (2004)
3. National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011 (2003)]
4. AICS (Australian Inventory of Chemical Substances), Safework Australia
5. APVMA Manual of Requirements and Guidelines for Agricultural Chemicals, Version 4.1, (as updated)
6. ADI [Acceptable Daily Intake] List, Commonwealth Department of Health & Aged Care, TGA, (as updated)

7. The Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) 7<sup>th</sup> Edition
8. The Poisons Standard (as updated), National Drugs and Poisons Schedule Committee
9. Hazardous Substances Information System, Safework Australia (as updated)

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