

MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material Name: Potassium permanganate.
Catalogue Number: C364.
Other Names: Permanganic acid, potassium salt; Condy's crystals.
Recommended Use: Fixative and Stain in microscopy.

Supplier Name: ProSciTech
Street Address: 1/11 Carlton Street, Kirwan, Qld. 4817 Australia
Telephone Number: (07) 4773 9444 **Fax Number:** (07) 4773 2244
Emergency Contact: (07) 4773 9444 8:30am – 5:00pm, Monday to Friday

SECTION 2 - HAZARDS IDENTIFICATION

Hazard Classification: Hazardous according to criteria of NOHSC.
Hazardous and/or Dangerous Nature: HAZARDOUS SUBSTANCE. DANGEROUS GOODS.
Risk Phrases: R5 Heating may cause an explosion.
R8 Contact with combustible material may cause fire.
R20/22 Harmful by inhalation and if swallowed.
R35 Causes severe burns.
Safety Phrases: S1/2 Keep locked up and out of reach of children.
S17 Keep away from combustible material.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE: **Chemical Identity:** Potassium permanganate.
Common Name(s): Permanganic acid, potassium salt; Condy's crystals.
CAS Number(s): 7722-64-7

MIXTURE:

Ingredients	Cas Number(s)	Proportion (%)
Potassium permanganate	7722-64-7	90-100

SECTION 4 - FIRST AID MEASURES

Swallowed: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Eye: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Inhaled: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
First Aid Facilities: Eyebath/eyewash & Safety shower.
Medical Attention & Special Treatment:

ADDITIONAL INFORMATION:

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 runoff to enter sewers or waterways.

Hazards from Combustion Products:

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizing substances may cause extremely violent combustion.

Strong oxidants may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapor explosions. Contact with oxidizing substances may cause extremely violent combustion. Sealed containers may rupture when heated. Sensitive to mechanical impact.

Precautions for Fire Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Hazchem Code: 2Y

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Containment and clean up:

Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

SECTION 7 - HANDLING & STORAGE

Precautions for Safe Handling:

Conditions for Safe Storage:

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. 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.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards: No exposure standard allocated.

Biological Limit Values: No biological limit allocated.

Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protective Equipment:

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Purple-bronze crystals.
Odour:	Odourless.
pH:	Not available.
Vapour pressure (mm of Hg at 25°C):	Not available.
Vapour density:	(air=1) 5.4
Boiling point/range (°C):	Not available.
Freezing/melting point (°C):	Melting point – 240°C.
Solubility:	7g in 100g of water.
Specific gravity or density:	2.7
Flash Point:	Not available.

Flammable (explosive) limits: Not available.
Ignition temperature: Not available.
Additional Information:

SECTION 10 - STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.
Conditions to avoid: Heat, flames, ignition sources and incompatibles.
Incompatible Materials: Powdered metals, alcohol, arsenites, bromides, iodides, phosphorous, 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: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Exposure and Health Effects:

Ingestion:

Ingestion of solid or high concentrations causes severe distress of gastro-intestinal system with possible burns and edema; slow pulse; shock with fall of blood pressure. May be fatal. Ingestion of concentrations up to 1% causes burning of the throat, nausea, vomiting, and abdominal pain; 2-3% causes anemia and swelling of the throat with possible suffocation; 4-5% may cause kidney damage.

Inhalation:

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. High concentrations can cause pulmonary edema. Chronic manganese poisoning can result from excessive inhalation exposure to manganese dust and involves impairment of the central nervous system. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Advanced cases have shown symptoms of fixed facial expression, emotional disturbances, spastic gait, and falling.

Skin Contact:

Dry crystals and concentrated solutions are caustic causing redness, pain, severe burns, brown stains in the contact area and possible hardening of outer skin layer. Diluted solutions are only mildly irritating to the skin. Prolonged skin contact may cause irritation, defatting, and dermatitis.

Eye Contact:

Eye contact with crystals (dusts) and concentrated solutions causes severe irritation, redness, blurred vision and can cause severe damage, possibly permanent.

Human/Animal data: Investigated as a mutagen, reproductive effector. Oral rat LD50: 750 mg/kg.

Carcinogenicity: Not available.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Dangerous to the environment. Very toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment.
Persistence and degradability: Not available.
Mobility: Not available.
Additional Information:

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Methods:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Special Precautions:

SECTION 14 - TRANSPORT INFORMATION

UN Number: Potassium Permanganate
UN Proper Shipping Name: UN1490
Class and Subsidiary risk: 5.1
Packing Group: II
Special Precautions for User: Information reported for product/size – 12kg

Hazchem Code: 2Y

SECTION 15 - REGULATORY INFORMATION

Poison Schedule Number: S6

SECTION 16 - OTHER INFORMATION

Date of preparation of MSDS: November 09

Comments:

The information published in this Material Safety Data Sheet has been compiled from data in various technical publications. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. We reserve the right to revise material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.