VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B.C. V6X 1L

SALES ORDER:

VAN WATERS & ROGERS PRODUCT: 52617

MSDS NUMBER: L1227 VERSION: 2

DATE PRINTED: 11/02/93

#3411 Aerial Ignition Device

604 382-3023

PREMO PLASTICS ENGINEERING
863 VIEWFIELD ROAD
VICTORIA B.C. V9A 4V2

WHMIS CODES: C E

EMERGENCY ASSISTANCE

For Emergency Assistance Involving Chemicals
Call CHEMTREC (800) 424-9300

PRODUCT INFORMATION

Product Name: **POTASSIUM PERMANGANATE** VW&R Code: L1227

Common Name/Synonym: Permanganic acid potassium salt, Chameleon mineral, Condy's crystals, Permanganate of potash
CAS Registry Number: 7722-64-7
Chemical Name: N/D
Chemical Family: N/D
Formula: $KMnO_4$
Molecular Weight: N/D
Product Use: Oxidizer, disinfectant, deodorizer, bleach, dye, tanning, radioactive decontamination of skin, reagent in analytical chemistry, medicine (antiseptic), manufacture of organic chemicals, air and water purification.

PREPARATION INFORMATION

Date Issued: 01/93
Supercedes: 07/92
Prepared By: MSDS Coordinator. Contact during business hours, Eastern Time (416) 736-9299.

HAZARDOUS INGREDIENTS

Component(s)/CAS No.	% wt.	Exposure Limits, mg/m3 OSHA PEL	ACGIH TLV
Potassium Permanganate (7722-64-7)	97-100	5 Ceiling* 1**	5* 1**

*Manganese Dust & compounds, as Mn (7439-96-5)
**Manganese Fume, as Mn (7439-96-5)

Local regulated limits may vary.

PHYSICAL PROPERTIES

Boiling Point: N/AP
Freezing Point/Melting Point: Starts to decompose with evolution of oxyge at temperatures above 150 C (302 F)
Specific Gravity (Water=1): 2.7 g/cm3 20 C (68 F)
Vapour Pressure: N/AP
Vapour Density: N/AP
pH: N/D
Solubility in Water % by Solution: 6.0% at 20 C (68 F) and 20% at 65 C (149 F)
% Volatile: Not volatile

Evaporation Rate (Butyl Acetate=1): N/AP
Odour Threshold: N/AP
Coefficient of Water/Oil Distribution: N/D
Appearance and Odour: Dark purple solid with a metallic lustre, odour
Physical State: Solid

----------FIRE AND EXPLOSION INFORMATION----------

Flash Point/Method: None.
Lower Flammable Limit: Nonflammable.
Upper Flammable Limit: Nonflammable.
Autoignition Temperature: N/AP

Extinguishing Media: Use large quantities of water. Water will turn to purple if in contact with potassium permanganate. Dike to contain.

Special Fire Fighting Procedures: Watch for rapid burning and be prepa to retreat to a safe distance. If yellow, white or brown fumes are present, wear positive pressure breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: Powerful oxidizing material. May decompose spontaneously if exposed to intense heat (150 C/302 F). May explosive in contact with some other chemicals. May react violently wi finely divided and readily oxidizable substance. Increases flammability of combustible materials.

Hazardous Combustion Products: Refer to hazardous decomposition product in Reactivity Data section, below.

Explosion Data
Sensitivity to Mechanical Impact: N/AP
Sensitivity to Static Discharge: N/AP

Conditions of Flammability: The material itself is noncombustible but w accelerate the burning of combustible material.

----------HAZARDOUS REACTIVITY----------

Stability: Under normal conditions the material is stable.
Hazardous Polymerization: Material is not known to polymerize.
Conditions to Avoid: Heat ()150 C/302 F); contact with incompatible materials. Do not mix with formaldehyde.

Materials to Avoid: Contact with acids, peroxides, and all combustible organic or readily oxidizable materials including inorganic oxidizable materials and metal powders. With hydrochloric acid, chlorine gas is liberated.

Hazardous Decomposition Products: When involved in fire, corrosive fumes or smoke may be formed.

Conditions of Reactivity: Contact with incompatible materials or heat () 150 C/302 F). Do not mix with formaldehyde.

----------FIRST AID MEASURES----------

If Inhaled: Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately.

In Case of Eye Contact: Immediately flush eyes with large amounts of wat for at least 15 minutes holding lids apart to ensure flushing of entire surface. Do not attempt to use a chemical antidote. Seek medical attention immediately.

In Case of Skin Contact: Immediately wash contaminated area with plenty of water. Remove contaminated clothing and footwear. Wash clothing and decontaminate footwear before use. Seek medical attention immediately if irritation is severe.

If Ingested: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. If conscious, give large quantities of water. Seek medical

contaminated material to original drum. Transfer to a clean metal drum To clear contaminated floors, flush with abundant quantities of water i sewer, if permitted by federal, provincial and local regulations. If n collect water and treat chemically.

Deactivation of D001 Ignitable Waste Oxidizers by Chemical Reduction: Reduce material in aqueous solution with sodium thiosulphate (Hypo), a bisulphite or ferrous salt solution. The bisulphite or ferrous salt ma require some dilute sulphuric acid to promote rapid reduction. Neutral with sodium bicarbonate to neutral pH if acid was used. Decant or filt and mix formed sludge with sodium carbonate and deposit in an approved landfill. Where permitted, the sludge can be drained into sewer with l quantities of water.

Waste Disposal Method: Consult with local, provincial and federal agen prior to disposal.

Storage and Handling Precautions and Equipment: Store in a cool, dry a in closed containers. Segregate from acids, peroxides and all combusti organic or easily oxidizable materials. Avoid contact with skin, eyes clothing. Keep away from combustible materials. Wash thoroughly after handling.

Special Shipping Information: N/D
Other Precautions: N/D

REGULATORY INFORMATION

TDG Classification

Shipping Name: Potassium Permanganate
UN: 1490
Class: 5.1 (9.2)
PKG: II

WHMIS Classification: C; E

Listed on the Domestic Substances List (DSL): Yes

FOR PRODUCT AND SALES INFORMATION

Contact Your Local Van Waters & Rogers Ltd. Branch Office.

NOTICE

VAN WATERS & ROGERS LTD. EXPRESSLY DISCLAIMS ALL EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE PRODUCT PROVIDED.

REVISION INFORMATION

08/92: Reconstruction of P1436.

01/93: Update: synonyms; extinguishing media; LD50 values; medical conditions aggravated by exposure; notes to physician; action to take fo spills or leaks; deactivation process; storage and handling precautions.

Legend: N/AP - Not Applicable. N/D - No Data Available.

END OF MSDS

attention immediately.

Notes to Physician: Decomposition products are alkaline.

HEALTH HAZARD INFORMATION

Primary Routes of Exposure: Inhalation, skin and eye contact, ingestion
Irritating or corrosive to body tissue on contact.

Signs, Symptoms and Effects of Exposure
Inhalation: Acute inhalation toxicity data are not available, however, airborne concentrations of potassium permanganate in the form of dust, mist, or spray may irritate and cause damage to the respiratory tract.

Eye Contact: Potassium permanganate is corrosive to eye tissue on contact. It may cause severe burns that result in damage to eye.

Skin Contact: Prolonged contact of solutions at room temperature may be irritating to the skin, leaving brown stains on the skin. Concentrated solutions at elevated temperature and crystals are corrosive to the skin.

Ingestion: Potassium permanganate, if swallowed, may cause severe burns to mucous membranes of the mouth, throat, esophagus and stomach.

Chronic Effects of Exposure: Prolonged exposure, usually many years, to heavy concentrations of dust and fumes above TLV-value, mainly in the form of manganese oxides may lead to lung irritation and central nervous system disorders. The symptoms may simulate Parkinson's disease. No known cases of central nervous disorders due to exposure to KMnO4 have been reported.

Medical Conditions Aggravated by Exposure: Will cause further irritation of tissue or open wounds, burns, and mucous membranes.

Additional Information: N/D

TOXICITY DATA

LD50 Oral (rat): 780 mg/kg Male (14 days); 525 mg/kg Female (14 days)
The fatal dose by ingestion is estimated to be 10 grams or 0.35 ounces.
LD50 Dermal (rabbit): N/D
LC50 (species): N/D

Carcinogenicity: Not classified as a carcinogen by OSHA, NTP, IARC.
Sensitization: Not known.
Irritancy: N/D
Reproductive Effects: N/D
Teratogenicity: Not known.
Mutagenicity: Not known.
Toxicologically Synergistic Products: Not known.
Other Data: N/D
Environmental Effects: N/D

PREVENTATIVE MEASURES

Ventilation (Engineering Controls): Engineering or administrative control should be implemented to control dust. Provide sufficient mechanical and/or local exhaust to maintain exposure below the Permissible Exposure Limit.

Personal Protective Equipment
Respiratory: In the case where overexposure may exist, the use of NIOSH dust and mist respirator or an air supplied respirator is advised.
Eye: Face shield and/or goggles should be worn.
Clothing: Normal working clothing covering arms and legs and rubber apron should be worn.
Footwear: N/D
Hands: Rubber or plastic gloves should be worn.
Other Protective Measures: Wash thoroughly with soap and water after handling and before eating or smoking.

Action to Take for Spills or Leaks: First responders wear protective gloves, boots, goggles, and respirator. In case of fire, wear positive pressure breathing apparatus. Approach incident with caution. Clean up spills immediately by sweeping or shovelling up the material; do not retur