

Material Safety Data Sheet

CAIROX®
Potassium Permanganate

NFPA® HAZARD SIGNAL:

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| Health Hazard (less than 1 hour exposure) | 1 |
| Flammability Hazard | 0 |
| Reactivity Hazard | 0 |
| Special Hazard | OXY |

® National Fire Protection Association

Section I Product Identification

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| MANUFACTURER'S NAME: CARUS CORPORATION | TELEPHONE NUMBER FOR INFORMATION: 815/223-1500 |
| MANUFACTURER'S ADDRESS: Carus Chemical Company 1500 Eighth Street P.O. Box 1500 LaSalle, IL 61301 | EMERGENCY TELEPHONE NOS: 815/223-1500 (8 a.m. to 5 p.m.) 815/223-1565 (5 p.m. to 8 a.m. and weekends/holidays) |
| PRODUCT NAME: CAIROX® Potassium Permanganate $KMnO_4$ | TRADE NAME: CAIROX® Potassium Permanganate |
| SYNONYMS: Permanganic acid potassium salt $HMnO_4K$ Chameleon mineral Condy's crystals Permanganate of potash | |

DEPARTMENT OF TRANSPORTATION INFORMATION:

Proper Shipping Name:

ID Number:

Hazard Class:

Multiple Labeling Requirements:

Hazardous Substance Reportable Quantity:

Chemtrec Telephone No. (800) 424-9300

Potassium Permanganate

UN 1490

Oxidizer

Corrosive

RQ-100 lb.

RCRA: Oxidizers such as potassium permanganate meet the criteria of ignitable waste.



carus
CHEMICAL COMPANY

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| st-It® Fax Note | 7671 | Date | 10/10 | # of pages | 9 |
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| Co/Dept. | Superior | Co. | Clack | | |
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Section II Hazardous Ingredients

| Material or component | CAS No.* | % | Hazard Data |
|------------------------|-----------|---------------------------|---|
| Potassium Permanganate | 7722-64-7 | 97 min. KMnO ₄ | PEL** = None established TLV*** = C 5 mg (Mn) per cubic meter of air |

TLV-C - Threshold Limit Value-Ceiling - The concentration that should not be exceeded during any part of the working exposure.

*Chemical Abstract Service Number
**OSHA Permissible Exposure Limit
***ACGIH Threshold Limit Value, 1986-1987 for manganese dust and compound expressed as manganese (Mn)

Section III Physical Data

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| BOILING POINT, 760 mm Hg | Not applicable | SPECIFIC GRAVITY | 2.7 g/cm 20°C (68°F) |
| VAPOR PRESSURE (mm Hg) | Not applicable | VAPOR DENSITY (AIR=1) | Not applicable |
| SOLUBILITY IN WATER % BY SOLUTION | Moderate - 6.0% at 20°C (68°F); and Appreciable - 20% at 65°C (149°F) | | |
| PERCENT VOLATILE BY VOLUME | Not Volatile | EVAPORATION RATE (BUTYL ACETATE=1) | Not applicable |
| MELTING POINT | Starts to decompose with evolution of oxygen (O ₂) at temperatures above 150°C (302°F) | | |
| APPEARANCE AND ODOR | Dark purple solid with a metallic luster, odorless | | |

Section IV Fire and Explosion Hazard Data

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| The material itself is noncombustible but will accelerate the burning of combustible material. | |
| FLASHPOINT | None |
| FLAMMABLE OR EXPLOSIVE LIMITS | Lower: Nonflammable Upper: Nonflammable |
| EXTINGUISHING MEDIA | Use large quantities of water |
| SPECIAL FIREFIGHTING PROCEDURES | Watch for rapid burning and be prepared to retreat to a safe distance. If yellow, white or brown fumes are present, wear self-contained 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 be explosive in contact with some other chemicals. May react violently with finely divided and readily oxidizable substance. Increases flammability of combustible materials. |

SECTION V Health Hazard Data

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| POTASSIUM PERMANGANATE: Acute oral LD ₅₀ (rat) = 780 mg/kg Male (14 days) 525 mg/kg Female (14 days) |
| ROUTES OF EXPOSURE <ol style="list-style-type: none"> 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. 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. Eye contact Potassium permanganate is corrosive to eye tissue on contact. It may cause severe burns that result in damage to the eye. Ingestion Potassium permanganate, if swallowed, may cause severe burns to mucous membranes of the mouth, throat, esophagus, and stomach. |

continued

Health Hazard Data (cont.)**EFFECTS OF OVEREXPOSURE**

1. **Acute Overexposure (instantaneous overexposure)**
Irritating or corrosive to body tissue with which it comes in contact
2. **Chronic Overexposure (long term overexposure)**
Prolonged exposure, usually many years, to heavy concentrations of dust and fumes above the TLV-value, mainly in the form of manganese oxides may lead to lung irritation and central nervous system disorder. The symptoms may simulate Parkinson's disease. No known cases of central nervous system disorders due to exposure to $KMnO_4$ have been reported.
3. **Carcinogenicity**
Potassium permanganate has not been classified as a carcinogen by OSHA, NTP, IARC.
4. **Medical Conditions Generally Aggravated by Exposure**
Potassium permanganate will cause further irritation of tissue or open wounds, burns and mucous membranes.

EMERGENCY AND FIRST AID PROCEDURES

1. **Eyes**
Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Do not attempt to neutralize chemically. Seek medical attention immediately.
2. **Skin**
Immediately wash contaminated areas with plenty of water. Remove contaminated clothing and footwear. Wash clothing and decontaminate footwear before use. Seek medical attention immediately if irritation is severe.
3. **Inhalation**
Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately.
4. **Ingestion**
Never give anything by mouth to an unconscious person. Give large quantities of water. If available, give several glasses of milk or lemon or orange juice. Seek medical attention immediately.

Section VI Reactivity Data

STABILITY Under normal conditions, the material is stable.

CONDITIONS TO AVOID Contact with incompatible materials or heat ($>150^{\circ}C/302^{\circ}F$)

INCOMPATIBLE MATERIALS 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 CONTRIBUTING TO HAZARDOUS POLYMERIZATION Material is not known to polymerize.

Section VII Spill or Leak Procedures**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Clean up spills immediately by sweeping or shoveling up the material; do not return contaminated material to original drum. Transfer to a clean metal drum and dispose in a hazardous landfill. To clean contaminated floors flush with abundant quantities of water into sewer, if permitted by Federal, State, and Local regulations. If not, collect water and treat chemically. (See below)

WASTE DISPOSAL

Reduce material in aqueous solution with sodium thiosulfate (Hypo), a bisulfite or ferrous salt. The bisulfite or ferrous salt may require some dilute sulfuric acid to promote rapid reduction. Neutralize with sodium bicarbonate to neutral pH if acid was used. Decant or filter and mix formed sludge with sodium carbonate and deposit in an approved landfill. Where permitted, the sludge can be drained into sewer with large quantities of water. Contact Carus Chemical for additional recommendations.