Potassium Permanganate (KMnO₄)

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
Required under USDL Safety and Health Regulations for Ship Repairing,

Material Safety Data Sheet

Section I
MANUFACTURER'S NAME: HUMCO LABORATORY, INC.
ADDRESS: P.O. BOX 2550
TEXARKANA, TEXAS 75501
CHEMICAL NAME AND SYNONYMS: Potassium Permanganate
CHEMICAL FAMILY: Oxidizer
CAS Registry No. 7722-64-7
EMERGENCY TELEPHONE NO.: (903) 793-3174
FORMULA: KMnO₄

Section II Hazardous Ingredients
Section II is not applicable since product is a single compound - Potassium Permanganate.

Section III Physical Data
BOILING POINT (°F): 302°F
Decomposes with evolution of O₂
SOLUBILITY IN WATER: 6.5 g/100mL water at 20°C (68°F)
SPECIFIC GRAVITY (H₂O = 1): 2.7

Section IV Fire and Explosion Hazard Data
FLASH POINT (Method used): Not Flammable
EXTINGUISHING MEDIA: Water
SPECIAL FIRE FIGHTING PROCEDURES:
Use plenty of water. Watch for rapid burning and be prepared to retreat to a safe distance. If yellow-brown fumes are present, wear a positive pressure, self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
May decompose spontaneously if exposed to intense heat, concentrated acids, hydrogen peroxide, reducing agents, or organic substances generally. In confined areas, this decomposition may become explosive.

Section V Health Hazard Data
THRESHOLD LIMIT VALUE
Manganese and its inorganic compounds as Mn C 5 mg/m³ (C = ceiling value).
EFFECTS OF OVEREXPOSURE
Prolonged inhalation of manganese in the form of its inorganic compounds may cause manganese.
EMERGENCY AND FIRST AID PROCEDURES
BODY: Wash contaminated areas with copious amounts of water.
EYES: Flood with water for 15 minutes, holding the eyelids open. Consult physician immediately. Do NOT attempt to neutralize chemically.
INTERNAL: Give lemon or orange juice to drink; in addition, a milk or sugar solution may be given. If none of these are available, give large quantities of water to drink. Consult physician.
Section VI  Reactivity Data

STABILITY  Stable  CONDITIONS TO AVOID  Exposure to incompatible materials or heat.

INCOMPATIBILITY (Materials to avoid)
Including but not limited to alcohols, arsenites, iodides, acids, charcoal, organic substances generally, ferrous or mercur-ous salts, hypophosphites, hyposulfites, sulfites, peroxides, oxalates.

HAZARDOUS DECOMPOSITION PRODUCTS
With hydrochloric acid, chlorine is liberated.

HAZARDOUS POLYMERIZATION
Will not occur.

Section VII  Spill or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Sweep up and remove as much as KMnO₄ as possible. Do not return contaminated material to original drum; transfer to clean metal drum and dispose in hazardous landfill. Flush floor with abundant quantities of water into sewer, if permitted by Federal, State and Local regulations; if not, treat chemically (see below).

WASTE DISPOSAL METHOD
Reduce KMnO₄ solution with sodium thiosulfate solution, mix the sludge with soda ash (Na₂CO₃) and deposit in an approved landfill. Where permitted, the sludge can be drained into a sewer with large quantities of water.

Section VIII  Special Protection Information

RESPIRATORY PROTECTION (Specify type)
Mechanical (General)

PROTECTIVE GLOVES  Rubber or Plastic Gloves

VENTILATION
For dust, use a NIOSH approved dust mask.

EYE PROTECTION  Goggles/Face Shield

Section IX  Special Precautions

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in a cool, dry area in closed containers separate from organics, concentrated acids, peroxides, ammonium compounds, metallic powders, elemental sulfur, phosphorous, carbon, metal hydrides, hydrazine, hydroxylamines.

OTHER PRECAUTIONS

DOT class: oxidizer, reportable quantity = 100 lb.

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

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