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Department of Transportation information:

Proper shipping Name: 49CFR172.101 Potassium Permanganate  
ID Number: 49CFR172.101 UN 1490  
Hazard Class: 49CFR172.101 Oxidizer  
Hazardous Substance  
Reportable Quantity: 40CFR302.4 RQ-100 lb

Chemtrec Telephone No: (800)-424-9300

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

CFR261.21

Registry of Toxic Effects of Chemical Substances

RTTECS # SD6475000

Potassium Permanganate contains 33 – 35% manganese as part of the Chemical infrastructure (manganese compounds CAS Reg. No. N/A) and is subject to the reporting requirements of section 313 of Title III, Superfund Amendments And Reauthorization Act of 1986 and 40 CFR372.

FIRST RESPONDERS:

Wear protective gloves, boots, goggles, and respirator. In case of fire, wear Positive pressure breathing apparatus. Approach incident with caution. Use Emergency Response Guide 35 (DOT P5800.4).

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Section II Hazardous Ingredients

<u>Material or component</u>	<u>CAS No.*</u>	<u>%</u>
Potassium Permanganate	7722-64-7	97%min, KmnO4

Hazard Data

PEL\*\* C\*\*\*\* 5mg Mn per cubic meter of air

TLV-TWA\*\*\* 5mg Mn per cubit meter of air

5 mg Mn per cubit meter of air is equivalent to 0.0046 ounces per 1000 cubit feet of air.

\* Chemical Abstract Service Number

\*\* OSHA Permissible Exposure Limit. Manganese compounds ( expressed as Mn) 29CFR1910.1000 Table ZA1

\*\*\* American Conference of Governmental Hygienists 1988/1989, for manganese dust and compounds, expressed as Mn, TLV-TWA = The time weighted average concentration of a normal 8 hour workday and a 40 hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

\*\*\*\* Ceiling Exposure Limit or maximum exposure concentration not to be exceeded under any circumstances.

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### Section III Physical Data

Boiling Point, 760 mm Hg – Not applicable

Specific Gravity – 2.7 g/cm<sup>3</sup> 20°C (68°F)

Vapor Density (Air = 1) – Not applicable

Solubility IN Water % By Solution – 6.0% at 20°C (68°F), and 20% at 65°C (149°F)

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Percent Volatile By Volume – Not Volatile

Evaporation Rate (BUTYL Acetate = 1) – Not applicable

Melting Point – Starts to decompose with evolution of  
Temperatures above 150°C (302°F)

Appearance And Odor – dark purple solid with a metallic lust

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### Section IV Fire and Explosion Hazard Data

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 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 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

Potassium Permanganate. Acute oral LD50(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.

### Routes of Exposure

#### 1. Inhalation

Acute inhalation toxicity data are not available, however airborne concentration of Potassium permanganate in the form of dust, mist, or spray may irritate and cause damage to the respiratory tract.

#### 2. 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.

#### 3. Eye Contact

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

#### 4. Ingestion

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

### Effects Of Overexposure

1. Acute Overexposure (instantaneous overexposure) Irritating or corrosive to body tissue on 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

CHONGQING CHANGYUAN CHEMICAL CORPORATION LTD.  
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