

Material Safety Data Sheet

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Name of manufacturer: KANTO CHEMICAL CO., INC.
Name of section : Reagent division
Catalog and products information section
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MSDS No.

Date: 1998. 6. 3

Product name: A solution for COD determination

Composition/Information on ingredients

Substance/Mixture: Substance
Chemical name : Potassium permanganate
Ingredients and composition : Potassium permanganate
about 0.08% water solution
Chemical formula : $KMnO_4$
CAS registry number : 7722-64-7
UN class : Not applicable

Hazards Identification

Class name of hazardous chemicals for SDS in Japan : Not applicable

Physical and Chemical hazards :

This solution is noncombustible, and does not have particular physical and chemical hazards.

Adverse human health hazards :

A large dose of swallow irritates to throat, stomach and causes nausea, vomiting.

Environmental effects : This substance may affect aquatic organisms.

First-aid measures

Eye contact : Gently rinse the affected eyes with clean water at least 15 minutes.
If necessary, get medical treatment.
Skin contact : Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible. Wash the affected areas under tepid running water.
Inhalation : Remove the victim from the contamination immediately to fresh air. Keep them warm and quiet, and make them blow their nose and gargle.
Ingestion : Rinse mouth with water. Give the victim one or two glasses of water to dilute the chemical.
If necessary, get medical treatment.

Fire-fighting measures

The way fire-fighting :

This solution is noncombustible.
In case of fire, move container from fire areas if it can be done without risk. If it cannot be, apply water from a safe distance to cool and protect surrounding area.
Firefighters should wear proper protective equipment.

Accidental release measures

Absorb spill with paper or cloths, then place in a chemical waste container.
Flush residual spill(area) with copious amounts of water.

Handling and storage

Handling : Avoid contact with skin or eyes.
If necessary, wear appropriate protective equipment.
Storage : Keep containers tightly closed, and store at a cool place.

Exposure control/Personal protection

Control parameters ACGIH (1996): 5mg/m³ (as Manganese compounds)
Engineering measures : Use with local exhaust ventilation in vapor atmospheres.

Personal protective equipment : If necessary, wear gloves, goggles.

Physical and chemical properties

Appearance : Violescent red liquid, odorless
Boiling point : About 100 °C
Melting point : About 0 °C
Density : About 1
Solubility in water: Miscible in all proport

Physical hazard

Oxidizibility : This solution is noncombustible.
Potassium permangante itself has oxidizibility. however, 0.08% water solution dose not have dangerous oxidizibility.

Stability and reactivity : Stable under normal usage.

Toxicological information

Corrosive property: If contact with skin, may cause irritation.
Acute toxicity : A large dose swallow irritates to throat, stomach and causes nausea, vomiting.
(as potassium permanganate)
rat oral LD₅₀=1,090mg/kg
rabbit oral LD₅₀=70mg/kg
Sub-chronic toxicity : Not available
Chronic toxicity : Not available
Carcinogenic effects : Not available
Mutagenic effects : Not available
Effects on the reproductive system : Not available
Teratogenic effects : Not available

Ecological information

Biodegradability : Not available
Bioaccumulation : Not available
Fish toxicity : LD₅₀/96H=100-1mg/l(as Potassium permanganate)

Disposal consideration

Add reducing agent such as sodium sulfite solution in this product to reduce.
After that, manganese oxide is deposited.
Filter the deposit and bury in the landfill site approved for chemical and hazardous wastes.

Transport information

Follow all regulations in your country.

Regulatory information

Ensure this material in compliace with federal requirements and ensure conformity to local regulations.

References

- ① Handbook of dangerous materials,
Giter Hommel. Springer-Verlag Tokyo (1991)
- ② Chemical products of 13398. The Chemical Daily Co., Ltd(1998)
- ③ Chemical dictionary, Kyoritu publishing Co., Ltd (1963)
- ④ Dangerous Properties of Industrial Materials, 6th ed N.I. Sax
Van Nostrand Reinhold Company(1984)

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