

Material Safety Data Sheet

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

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Product name : 1/480mol/l Potassium dichromate solution(N/80)

Composition/Information on ingredients

Substance/Mixture: Substance
Chemical name : Potassium dichromate
Ingredients and composition : Potassium dichromate approximately 0.06%
water solution

Chemical formula : $K_2Cr_2O_7$
CAS registry number : 7778-50-9
UN class : 6.1 (Toxic substance) P.G. III
UN number : 2810

Hazards Identification

Class name of hazardous chemicals for SDS in Japan :

Acute toxic substances,
Miscellaneous dangerous substances

Physical and Chemical hazards :

This solution is noncombustible, but has weak oxidizibility, may react with reducing substances.

Adverse human health hazards :

Corrosive to skin, mucous membrane. Causes dermatitis, chromium ulcer. If inhaled mist or dust, cause nose inflammation or ulcer. Chromium(VI) is suspected human carcinogenic substance.

Environmental effects : Very toxic to aquatic organisms

First-aid measures

Eye contact : Gently rinse the affected eyes with clean water at least for 15 minutes.
If necessary, get medical treatment.
Skin contact : Remove all contaminated clothing, shoes and socks from the affected areas as soon 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, try to get them to vomit by having them touch the back of their throat with a finger.
Get medical treatment.

Fire-fighting measures

The way fire-fighting :

This material 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

Evacuate non-essential personal, and wear proper protective equipment. Absorb spill with inert materials (e.g., dry sand or earth) and transfer to a chemical container, and spray reducing substance solution (Iron(II) sulfate) at the site of spillage. After that, wash thoroughly with water.

Handling and storage

Handling : Avoid contact with skin or eyes, wear appropriate protective equipment. Do not mix with organic substances or reducing substances.
Storage : Keep containers tightly closed. Keep away from organic substances or reducing substances.

Exposure control/Personal protection

Control parameters ACGIH (1998) : 0.05mg/m³ (as Cr)
Engineering measures: Use with local exhaust ventilation in dusty atmospheres.
Personal protective equipment : Wear gloves, goggles, and dust respirator.

Physical and chemical properties^②

Appearance : Colorless-light orange liquid, odorless
Boiling point : About 100 °C
Melting point : About 0 °C
Density : 1.0
Solubility in water : Freely soluble
Solubility in organic solvents : Soluble in alcohol.

Physical hazard

Flammability : Noncombustible
Oxidizibility : This solution has weak oxidizibility.
Stability and reactivity : This product is considered a stable material under normal storage.

Toxicological information^③

Irritant property: Severe corrosives and causes severe burns.
Allergenic and sensitizing effects : Not available
Acute toxicity : If swallowed, damage kidneys.
dog oral LD₅₀ =2,820mg/kg
mouse intraperitoneal LD₅₀ =100mg/kg
Sub-acute toxicity : Not available
Chronic toxicity: Dust or mist causes nose inflammation or ulcer.
Carcinogenic effects : IARC group 1
Mutagenicity : Not available
Effect on the reproductive system : Not available
Teratogenic effects : Not available

Ecological information

Biodegradability : Not applicable
Bio-accumulation : Not applicable
Fish toxicity : Very toxic to aquatic organisms.
Small fish LD₅₀=136mg/l

Disposal consideration

Mixed with diluted sulfuric acid, and add reducing substances solution in the solution. After that, add sodium carbonate solution to precipitate chromium hydroxide.
Filter the precipitate and bury it in landfill site approved for hazardous waste disposal.

Transport information

Keep away from reducing substances.
Follow all regulations in your country.

Regulatory information

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

References

- ① Handbook of dangerous materials.
Guter Hommel. Springer-Verlag Tokyo (1991)
- ② Chemical materials of 13901. The Chemical Daily Co., Ltd(2001)
- ③ Chemical dictionary. Kyoritu publishing Co., Ltd (1963)

*The information herein is given in good faith, but no warranty, express or implied, is made.