



Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: 0.005mol/L(N/40)-Potassium permanganate solution F=0.97

Product code(SDS NO): A0306E-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku,Osaka 540-0029,JAPAN

Division: Safety Management Dept. of Chemicals

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e-mail address: kagakuhinanzankenri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture**

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

3. Composition/information on ingredients

Mixture/Substance selection:**Mixture**

Ingredient name:Potassium permanganate

Content(%):0.078

Chemical formula:KMnO4

Chemicals No, Japan:1-446

CAS No.:7722-64-7

MW:158.03

ECNO:231-760-3

Ingredient name:Water

Content(%):99

Chemical formula:H2O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.



8. Exposure controls/personal protection

Control parameters

Adopted value

(Potassium permanganate)

ACGIH(2012) TWA: 0.02mg-Mn/m³(R); 0.1mg-Mn/m³(I) (CNS impair)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Purple

Odor data N.A.

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density: 1.00g/cm³

Solubility

Solubility in water: Miscible

n-Octanol /water partition coefficient data N.A.

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Potassium permanganate)

Decomposes on heating. This produces toxic gases and irritating fumes. The substance is a strong oxidant. It reacts with combustible and reducing materials. This generates fire and explosion hazard. Reacts violently with powdered metals. This generates fire hazard. (ICSC 0672)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

**Incompatible materials**

Reducing agents, Combustible materials, Powdered metals

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Potassium permanganate)

rat LD50=379 mg/kg (NITE risk assessment, 2008)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Potassium permanganate)

highly corrosive (HSDB, 2014)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Potassium permanganate)

highly corrosive (HSDB, 2014)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

Carcinogenicity

(Potassium permanganate)

ACGIH-A4(2012) : Not Classifiable as a Human Carcinogen (Inorganic Mn)

No Teratogenic effects data available

No reproductive toxicity data available

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.3(resp. irrit.)]

[Japan published data]

(Potassium permanganate) Respiratory tract irritation (PATTY 6th, 2012)

No Aspiration hazard data available

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Potassium permanganate)

Crustacea(Calanoida) LC50=0.185 mg/L/96hr (0.0765 mg Mn/L) (EPA_Japan, 2008)

Water solubility

(Potassium permanganate)

6.4 g/100 ml (20 C) (ICSC, 2003)

No Persistence and degradability data available

Bioaccumulative potential

(Potassium permanganate)

BCF < 81 (Check & Review, Japan)

No Mobility in soil data available

Ozone depleting chemical data not available

**13. Disposal considerations**

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

Not applicable to UN NO.

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Non Noxious Liquid ; Cat. OS

Water

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US major regulations

TSCA

Potassium permanganate; Water

Other regulatory information

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

16. Other information

The product is not applicable to GHS classifications.

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2017 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

Hazard Communication Standard – 2012

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2016).