

Safety Data Sheet

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

Product identifier:

Product name: 0.2mol/L Potassium permanganate solution

Product code(SDS NO): 95270jis_J_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan

Division: Quality Assurance Department

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 1

Germ cell mutagenicity: Category 2

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 2(respiratory system)

Specific target organ toxicity – repeated exposure: Category 2(respiratory system, nervous system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 2

Hazardous to the aquatic environment – long-term hazard: Category 2

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

Label elements



Signal word: Danger

HAZARD STATEMENT

Causes skin irritation

Causes serious eye damage

Suspected of causing genetic defects

Suspected of damaging fertility or the unborn child

May cause damage to organs after single exposure

May cause damage to organs through prolonged or repeated exposure

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Do not handle until all safety precautions have been read and understood.

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

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- Wash contaminated parts thoroughly after handling.
- Wear protective gloves.
- Wear eye protection/face protection.
- Use personal protective equipment as required.
- Do not eat, drink or smoke when using this product.

Response

- Collect spillage.
- Get medical advice/attention if you feel unwell.
- Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

- Store locked up.

Disposal

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

3. Composition/information on ingredients

Substance/Mixture:

Mixture

Ingredient name:Potassium permanganate

Content(%):ca. 3.2

Chemical formula:KMnO₄

Chemicals No, Japan:1-446

CAS No.:7722-64-7

MW:158.03

ECNO:231-760-3

Ingredient name:Water

Content(%):Residual quantity of the ingredient mentioned above

Chemical formula:H₂O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

4. First-aid measures

Descriptions of first-aid measures

General measures

- Get medical attention/advice if you feel unwell.
- Immediately call a POISON CENTER or doctor/physician.

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.
- Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- If skin irritation occurs: Get medical advice/attention.

IF IN EYES

- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

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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.

The product is non-flammable.

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.

Environmental precautions

Avoid release to the rivers, lakes, ocean, groundwater.

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

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire & 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.

Avoid breathing dust, vapor, mist, or gas.

Safety Measures/Incompatibility

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing or face protection.

Wear protective gloves.

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- Wear eye protection/face protection.
- Use personal protective equipment as required.
- When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

- Store in a well-ventilated place. Keep container tightly closed.
- Keep cool. Protect from sunlight.
- Store locked up.

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.

Safety and Health measures

- Wash ... thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Take off contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Dark violet

Odor data N.A.

pH 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 data N.A.

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.

Conditions to avoid

Contact with incompatible materials.

Heat.

Incompatible materials

Strong reducing agents

Hazardous decomposition products

Manganese oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Potassium permanganate) rat LD50 =750 mg/kg (EHC 17, 1981)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Potassium permanganate) human : skin corrosive (CICAD 12, 1999)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Potassium permanganate) human : eye irritating (ICSC, 2003 et al.)

No Allergenic and sensitizing effects data available

Germ cell mutagenicity

[GHS Cat. Japan, base data]

(Potassium permanganate) cat.2; CICAD 12, 1999

Carcinogenicity

(Potassium permanganate)

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

Reproductive toxicity

[GHS Cat. Japan, base data]

(Potassium permanganate) cat.2; EHC 17, 1981

No Teratogenic effects data available

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

STOT

STOT-single exposure

[cat.1]

[Japan published data]

(Potassium permanganate) respiratory apparatus/system (CICAD 12, 1999)

STOT-repeated exposure

[cat.1]

[Japan published data]

(Potassium permanganate) respiratory apparatus/system; nerve/nervous system (CICAD 12, 1999)

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

12. Ecological Information

Toxicity

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Aquatic toxicity

- Toxic to aquatic life
- Toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Potassium permanganate)

Crustacea (Daphnia magna) EC50=0.084mg/L/48hr(Potassium Permanganate_Equivalent: 0.242mg/L)

(CERI Hazard Data, 2002)

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 (Registered chemicals data check & review, Japan)

Additional information

There are no data available on the preparation itself.

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

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

14. Transport Information

UN No, UN CLASS

UN number: 3082

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es): 9

Packing group: III

ERG GUIDE NO.: 171

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

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

16. Other information

GHS classification and labelling

Skin Irrit. 2: H315 Causes skin irritation

Eye Dam. 1: H318 Causes serious eye damage

Muta. 2: H341 Suspected of causing genetic defects

Repr. 2: H361 Suspected of damaging fertility or the unborn child

STOT SE 2: H371 May cause damage to organs after single exposure

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

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Aquatic Acute 2: H401 Toxic to aquatic life

Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2015 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013,METI)

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.