

Safety Data Sheet

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

Product identifier:

Product name: Mercury(II) sulfate

Product code(SDS NO): 83355jis_J_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

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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

Acute toxicity Oral: Category 3

Acute toxicity Dermal: Category 3

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 1(kidney)

Specific target organ toxicity – repeated exposure: Category 1(kidney, central nervous system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 1

Hazardous to the aquatic environment – long-term hazard: Category 1

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

Label elements



Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed

Toxic in contact with skin

May cause an allergic skin reaction

Causes damage to organs after single exposure

Causes damage to organs through prolonged or repeated exposure

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves or protective clothing.

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Do not eat, drink or smoke when using this product.

Response

Collect spillage.

Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water.

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

Take off immediately all contaminated clothing and wash it before reuse.

IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Mercuric sulfate

Ingredient name: Mercury(II) sulfate

Content(%): 98.0 <

Chemical formula: HgO₄S

Chemicals No, Japan: 1-437

CAS No.: 7783-35-9

MW: 269.65

ECNO: 231-992-5

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

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 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.

Immediately call a POISON CENTER or doctor/physician.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Sore throat. Cough. Burning sensation. Shortness of breath. Laboured breathing.

Metallic taste. Nausea. Abdominal pain. Vomiting. Diarrhoea. Shock or collapse.

(Symptoms when skin and/or eye contact)

Redness. Pain. Burning sensation. Blisters.

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.

Runoff from fire control or dilution water may cause pollution.

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**

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

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

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

Do not get water inside containers.

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 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.

Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

Wear protective gloves.

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

Control value

Japan control value (2004) $\leq 0.025 \text{ mg-Hg/m}^3$

Adopted value

JSOH(1998): 0.025 mg-Hg/m^3 (as vapor)

ACGIH(1991) TWA: $0.025 \text{ mg-inorganic Hg/m}^3$ (CNS impair; kidney dam)

Notation...Skin

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.

Wear positive pressure self-contained breathing apparatus (SCBA).

Hand protection

Wear protective gloves. Recommended material(s): nitrile

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off immediately all contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Crystals or crystalline powder

Color: White

Odor: None

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point: 450°C

Decomposition temperature: 450°C

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: 6.5g/cm³

Solubility

Solubility in water: reaction

Soluble in hydrochloric acid, hot dil sulfuric acid.

Solubility in solvent: Insoluble in alcohol, acetone.

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

10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Thermal decomposition temperature: 450°C

Possibility of hazardous reactions

Decomposes at 450°C. This produces very toxic fumes of mercury and sulfur oxides.

The solution in water is a medium strong acid.

Reacts with hydrogen halides. Attacks metal in the presence of moisture.

Conditions to avoid

Contact with incompatible materials.

Heat. Light.

Incompatible materials

Strong bases, Hydrogen halides.

Hazardous decomposition products

Sulfur oxides, Mercury oxides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD₅₀ = 57 mg/kg (HSDB, 2009)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rat LD₅₀ = 625 mg/kg (HSDB, 2009)

Labor standard law, Japan; Toxic

Mercury(II) sulfate

No Irritant properties data available

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

(Mercury(II) sulfate) cat.1; MAK/BAT No.44, 2008

No Mutagenic effects data available

Carcinogenicity

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

ACGIH-A4(1991) : Not Classifiable as a Human Carcinogen

No reproductive toxicity 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]

kidney (DFGOT vol. 15, 2001)

STOT-repeated exposure

[cat.1]

[Japan published data]

kidney; CNS (DFGOT vol. 15, 2001)

No Aspiration hazard data available

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Cyclopoid copepod) LC50=0.0097mg/L/96hr (AQUIRE, 2010)

Water solubility

reaction (ICSC, 2014)

No Persistence and degradability data available

No Bioaccumulative potential data available

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: 1645

UN proper shipping name:

MERCURY SULPHATE

Transport hazard class(es): 6.1

Packing group: II

ERG GUIDE NO.: 151

15. Regulatory Information

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

US major regulations

TSCA

Mercury(II) sulfate

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

Acute Tox. 3: H301 Toxic if swallowed

Mercury(II) sulfate, JUNSEI CHEMICAL CO., LTD., 83355jis_J_E1-1, 09/03/2018

Acute Tox. 3: H311 Toxic in contact with skin

Skin Sens. 1: H317 May cause an allergic skin reaction

STOT SE 1: H370 Causes damage to organs after single exposure

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 1: H410 Very 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 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO 6182012)

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

NITE Chemical Risk Information Platform (NITE-CHRIP) <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 is advised to make their own tests to determine 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).