



Safety Data Sheet

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

Product identifier:

Product name: Mercury(I)chloride

SDS No. : 4800E-3

Relevant identified uses of the substance or mixture and uses advised against

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

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

Division: Chemical Safety Management Department

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Section 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 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2A

Skin sensitization: Category 1

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

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – repeated exposure: Category 1(gastrointestinal tract, nervous system, kidneys)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 1

Label elements



Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed

Harmful in contact with skin

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Causes damage to organs(kidneys)

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure(gastrointestinal tract, nervous system, kidneys)

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.
- Use only outdoors or in a well-ventilated area.
- Wash contaminated parts thoroughly after handling.
- Wear protective gloves or protective clothing.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear eye protection/face protection.
- Do not eat, drink or smoke when using this product.

Response

- Collect spillage.
- Get medical advice/attention if you feel unwell.
- Call a POISON CENTER/doctor/physician if you feel unwell.
- IF exposed or concerned: Call a POISON CENTER/doctor/physician.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash 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.
- If eye irritation persists: Get medical advice/attention.
- IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
- IF SWALLOWED: Rinse mouth.

Storage

- Store in a well-ventilated place. Keep container tightly closed.

Disposal

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

Section 3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name:Mercury(I)chloride

Content (%):99(min)

Chemical formula:HgCl

Chemicals No, Japan:1-226

CAS No.:10112-91-1

MW:236.04

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

Section 4. First-aid measures**Descriptions of first-aid measures****General measures**

- Get medical advice/attention if you feel unwell.

IF INHALED

- Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

- Take off immediately all contaminated clothing. Rinse skin with water or 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/doctor/physician.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

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 resistant or flame 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.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

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.

Section 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.



Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts 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 contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

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

Keep under lock and key.

Container and packaging materials for safe handling

Glass

Polyethylene

Section 8. Exposure controls/personal protection

Control parameters

Adopted value

(Mercury(I)chloride)

ACGIH(1994) TWA: 0.025mg-Hg/m³ (CNS impair; kidney dam)

Notation

(Mercury(I)chloride)

Skin

OSHA-PEL

(Mercury(I)chloride)

STEL: C 0.1mg-Hg/m³(elemental and inorganic compounds)

TWA: 0.01mg-Hg/m³; STEL: C 0.04mg-Hg/m³(Organo(alkyl mercury))

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.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystalline powder

Color: White

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.



Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:
 Solubility in water: Insoluble
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density: 7.15 g/cm³
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Turn color by the light.

Possibility of hazardous reactions

Decomposes slowly under the influence of light. This produces mercuric chloride and mercury. (ICSC 0984)

Conditions to avoid

Contact with fire source.

Incompatible materials

Not available.

Hazardous decomposition products

Mercuric chloride, Mercury

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Mercury(I)chloride)

rat LD50=210mg/kg (RTECS, 2005)

Acute toxicity (Dermal)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Mercury(I)chloride)

rabbit LD50=1500mg/kg (RTECS, 2005)

Irritant properties

Skin corrosion/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Mercury(I)chloride)

irritation (ICSC(J), 2000)

Serious eye damage/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]



(Mercury(I)chloride)
irritation (ICSC(J), 2000)

Sensitization

Skin sensitization

[Data for components of the product]
[GHS Cat. Japan, base data]
(Mercury(I)chloride)
cat. 1; Occupational/Environmental Allergy Society

Mutagenic effects data is not available.

Carcinogenicity

[IARC]
(Mercury(I)chloride)
Group 3 : Not classifiable as to its carcinogenicity to humans
[ACGIH]
(Mercury(I)chloride)
A4(as Hg)(1994) : Not Classifiable as a Human Carcinogen

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Mercury(I)chloride)
kidneys (DFGOT vol.16, 2001)
[cat.3 (resp. irrit.)]
[GHS Cat. Japan, base data]
(Mercury(I)chloride)
respiratory tract irritation (ICSC, 2000)

STOT-repeated exposure

[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Mercury(I)chloride)
gastrointestinal tract, nervous system, kidneys (ACGIH, 2004)

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Data for components of the product]
Hazardous to the aquatic environment (Acute)
[GHS Cat. Japan, base data]
(Mercury(I)chloride)
Crustacea (Daphnia magna) LC50=0.002mg/L/48hr (Aquire, 2003)

Water solubility

(Mercury(I)chloride)
none (ICSC, 2000)

Persistence and degradability

Persistence and degradability data is not available.

**Bioaccumulative potential**

[Data for components of the product]

(Mercury(I)chloride)

BCF=1300 (Check & Review, Japan)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment.

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

Section 14. Transport Information

UN No. or ID No.: 3288

UN Proper Shipping Name :

TOXIC SOLID, INORGANIC, N.O.S.

Class or division (Transport hazard class) : 6.1

Packing group : III

ERG GUIDE No.: 151

Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3288

Proper Shipping Name :

TOXIC SOLID, INORGANIC, N.O.S.

Class or division : 6.1

Packing group : III

Special provisions No.: 223; 274

IATA Dangerous Goods Regulations

UN No.: 3288

Proper Shipping Name :

TOXIC SOLID, INORGANIC, N.O.S.

Class or division : 6.1

Hazard labels : Toxic

Packing group : III

Special provisions No.: A3; A5

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Mercury(I)chloride

Hazardous to the aquatic environment – acute hazard: cat.1

Mercury(I)chloride

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Mercury(I)chloride



Section 15. Regulatory Information

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

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Mercury(I)chloride

Other regulatory information

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

Section 16. Other information

GHS classification and labelling

Acute toxicity, Category 3: H301 Toxic if swallowed

Acute toxicity, Category 4: H312 Harmful in contact with skin

Skin corrosion/irritation, Category 2: H315 Causes skin irritation

Serious eye damage/eye irritation, Category 2A: H319 Causes serious eye irritation

Skin sensitization, Category 1: H317 May cause an allergic skin reaction

STOT – single exposure, Category 1: H370 Causes damage to organs

STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life

Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

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 2021).