



Safety Data Sheet

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

Product identifier:

Product name: 1,3-Propane sultone

SDS No. : 6052E-3

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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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

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2A

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1B

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

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

Label elements

Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed

Toxic in contact with skin

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

Suspected of causing genetic defects

May cause cancer

Causes damage to organs(systemic toxicity)

Harmful 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.
Wear eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

IF exposed or concerned: Get medical advice/attention.
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 occurs: Get medical advice/attention.
Take off immediately all 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.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:1,3-Propane sultone

Content (%):99(min)

Chemical formula:C3H6O3S

Chemicals No, Japan:5-530

CAS No.:1120-71-4

MW:122.14

ECNO:214-317-9

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

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor/physician 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.



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.

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.

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.

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

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 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.
- Take off immediately all 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.

Container and packaging materials for safe handling

- Glass
- Polyethylene

8. Exposure controls/personal protection**Control parameters****Adopted value**

- (1,3-Propane sultone)
- ACGIH(2006) TWA: as low as possible(L) (Cancer)

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 state: Liquid or solid

Color: Colorless, white to light yellow

Odor: Characteristic odor

Melting point/Freezing point: 31°C

Boiling point or initial boiling point: (decomposes)

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: >110°C

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: 10 g/100 ml (moderate)

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.39 g/cm³ (25°C)

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.



10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on heating. This produces toxic fumes including sulfur oxides. Reacts with moist air. This produces toxic 3-propane sulfonic acid. (ICSC 1524)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong acids, Strong bases, Oxidizing agents

Hazardous decomposition products

Carbon oxides, Sulfur oxides, 3-Propane sulfonic acid

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

rat LD50=100 – 157mg/kg (MHLW Risk Assessment Report, 2010)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

rabbit LD50=660mg/kg (MAK (DFG) vol.4, 1992)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

dust: rat LC50=1.3–2.14mg/L/6hr (cal. 1.95–3.21mg/L/4hr) (AICIS IMAP, 2015)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

human irritation (MAK (DFG) vol.4, 1992) et al.

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

rabbit conjunctivitis and corneal opacity observed 24–72 hours later, chemosis recovered but conjunctival redness and corneal opacity did not recover by 14 days after application (AICIS IMAP, 2015; REACH Registration dossier, Access on August 2020 et al.)

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

cat. 2; IARC 110, 2017 et al.

Carcinogenicity

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

cat.1B; IARC Gr. 2A (IARC 110, 2017), JSOH 2A (OEL Documentations, JSOH, 2017)

[IARC]



(1,3-Propane sultone)

Group 2A : Probably carcinogenic to humans

[ACGIH]

(1,3-Propane sultone)

A3(2006) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

[EU]

(1,3-Propane sultone)

Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity data is not available.

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

systemic toxicity (MHLW Risk Assessment Report, 2010)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

Crustacea (Daphnia magna) EC50=16mg/L/48hr (REACH Registration dossier, 2020)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(1,3-Propane sultone)

Algae (Desmodesmus subspicatus) EC10:>320mg/L/72hr (REACH Registration dossier, 2020)

Water solubility

(1,3-Propane sultone)

10 g/100 ml (ICSC, 2004)

Persistence and degradability

(1,3-Propane sultone)

Degrade rapidly (BOD_Degradation: 95%/4 weeks (METI Existing Chemical Substances Safety Inspections Data, 2002))

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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.



14. Transport Information

UN No. or ID No.: 2811
UN Proper Shipping Name :
TOXIC SOLID, ORGANIC, N.O.S.
Class or division (Transport hazard class) : 6.1
Packing group : III
ERG GUIDE No.: 154
Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2811
Proper Shipping Name :
TOXIC SOLID, ORGANIC, N.O.S.
Class or division : 6.1
Packing group : III
Special provisions No.: 223; 274

IATA Dangerous Goods Regulations

UN No.: 2811
Proper Shipping Name :
TOXIC SOLID, ORGANIC, 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) : no
MARPOL Annex V – Prevention of pollution by garbage discharge
Carcinogenicity: cat.1, 1A, 1B
1,3-Propane sultone

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

1,3-Propane sultone

Other regulatory information

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
Acute Tox. 3: H311 Toxic in contact with skin
Acute Tox. 4: H332 Harmful if inhaled
Skin Irrit. 2: H315 Causes skin irritation
Eye Irrit. 2A: H319 Causes serious eye irritation
Muta. 2: H341 Suspected of causing genetic defects
Carc. 1B: H350 May cause cancer
STOT SE 1: H370 Causes damage to organs
Aquatic Acute 3: H402 Harmful to aquatic life
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book



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)
2021 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 2020).