



## Safety Data Sheet

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

**Product identifier:**

Product name: Mercaptoacetic acid

SDS No. : 7771E-2

**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

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

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

### 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 1

Serious eye damage/eye irritation: Category 1

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 1 (central nervous system; respiratory system; systemic toxicity)

Specific target organ toxicity – repeated exposure: Category 2 (blood system; liver; kidney)

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment (Acute): Category 3

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

Toxic if swallowed

Toxic in contact with skin

Harmful if inhaled

Causes severe skin burns and eye damage

May cause an allergic skin reaction

Causes damage to organs (central nervous system; respiratory system; systemic toxicity)

May cause damage to organs through prolonged or repeated exposure (blood system; liver; kidney)

Harmful to aquatic life

**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.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves, protective clothing or face protection.  
Wear eye protection/face protection.  
Do not eat, drink or smoke when using this product.

**Response**

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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
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 SWALLOWED: Immediately call a POISON CENTER/doctor/physician.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Disposal**

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

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

Ingredient name:Mercaptoacetic acid  
Content (%):90(min)  
Chemical formula:HSCH<sub>2</sub>COOH  
Chemicals No, Japan:2-1355  
CAS No.:68-11-1  
MW:92.12  
ECNO:200-677-4

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

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**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. Do NOT induce vomiting.



Immediately call a POISON CENTER/doctor/physician.

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## 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO2 to extinguish.

#### Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.

Bucket of water or tank of water

### 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.

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## 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.

### Preventive measures for secondary accident

Collect spillage.

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## 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 immediately all contaminated clothing and wash it before reuse.

#### Storage

##### Conditions for safe storage

Keep container tightly closed.

Keep under lock and key.

Chilled storage.

##### Container and packaging materials for safe handling

Glass

Polyethylene

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## 8. Exposure controls/personal protection

### Control parameters

#### Adopted value

(Mercaptoacetic acid)

ACGIH(2018) TWA: 1ppm (Eye & skin irr)

#### Notation

(Mercaptoacetic acid)

Skin; DSEN

### 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.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless to nearly colorless, clear

Odor: Characteristic odor

Melting point/Freezing point: -16.5°C

Boiling point or initial boiling point: (Mercaptoacetic acid)120°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.



Lower and upper explosion limit/flammability limit:

Lower explosion limit: 5.9 vol %

Flash point: (Mercaptoacetic acid)(O.C.) 126°C

Auto-ignition temperature: (Mercaptoacetic acid)350°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Miscible

n-Octanol/water partition coefficient: log Pow0.05

Vapor pressure: 1.3 kPa (18°C)

Density and/or relative density: 1.3

Relative vapor density (Air=1): 3.2

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1

Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

May vary on exposure to air.

### Possibility of hazardous reactions

Decomposes on burning. This produces toxic fumes of sulfur oxides and hydrogen sulfide. The substance is a medium strong acid. Reacts with strong oxidants, alkalis and organic compounds. Attacks steel, stainless steel and aluminium. (ICSC 0915)

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Bases, Strong oxidizing agents, Organic compounds

### Hazardous decomposition products

Sulfur oxides, Hydrogen sulfide

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Mercaptoacetic acid)

rat LD50=73mg/kg (SIDS, 2010)

##### Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Mercaptoacetic acid)

rabbit LD50=848mg/kg (SIDS, 2010)

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Mercaptoacetic acid)

mist: female rat LC50=1.098mg/L/4hr (SIDS, 2010)

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Mercaptoacetic acid)



rabbit corrosive (SIDS, 2010)  
Serious eye damage/irritation  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
rabbit not recover within 14 days (ACGIH 7th, 2001)

Sensitization  
Skin sensitization  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
cat. 1; NITE Initial Risk Assessment Report, 2008

Mutagenic effects data is not available.  
Carcinogenic effects data is not available.  
Reproductive toxicity data is not available.

STOT  
STOT-single exposure  
[cat.1]  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
central nervous system; respiratory system; systemic toxicity (NITE primary risk assessment, 2008)

STOT-repeated exposure  
[cat.2]  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
blood system; liver; kidney (SIDS, 2010)

Aspiration hazard data is not available.

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## 12. Ecological Information

Ecotoxicity  
Aquatic toxicity  
Harmful to aquatic life  
Hazardous to the aquatic environment (Acute)  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
Crustacea (*Daphnia magna*) EC50=35.8mg/L/48hr (MOE Japan, 2013)

Hazardous to the aquatic environment (Long-term)  
[GHS Cat. Japan, base data]  
(Mercaptoacetic acid)  
Algae (*Pseudokirchneriella subcapitata*) NOEC=2.2mg/L/72hr (NITE Initial Risk Assessment Report, 2008)

Water solubility  
(Mercaptoacetic acid)  
miscible (ICSC, 1998)

Persistence and degradability  
(Mercaptoacetic acid)  
Degrade rapidly (Degradation : 67%/28 days (SIDS, 2010))

Bioaccumulative potential  
(Mercaptoacetic acid)  
log Pow=0.09 (PHYSPROP DB, 2009)

Mobility in soil  
Mobility in soil data is not available.

Other adverse effects  
Ozone depleting chemical data is not available.



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**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.

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**14. Transport Information**

UN No. or ID No.: 1940

UN Proper Shipping Name :

THIOGLYCOLIC ACID

Class or division (Transport hazard class) : 8

Packing group : II

ERG GUIDE No.: 153

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN No.: 1940

Proper Shipping Name :

THIOGLYCOLIC ACID

Class or division : 8

Packing group : II

**IATA Dangerous Goods Regulations**

UN No.: 1940

Proper Shipping Name :

THIOGLYCOLIC ACID

Class or division : 8

Hazard labels : Corrosive

Packing group : II

**Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

**Maritime transport in bulk according to IMO instruments**

Noxious Liquid ; Cat. Y equiv.

Mercaptoacetic acid

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**15. Regulatory Information**

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

Chemicals listed in TSCA Inventory

Mercaptoacetic acid

**Other regulatory information**

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

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**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 Corr. 1: H314 Causes severe skin burns and eye damage

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

STOT SE 1: H370 Causes damage to organs



STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure  
Aquatic Acute 3: H402 Harmful to aquatic life

**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).