

Date of issue: 2018/04/03 Date of revision: 2024/11/14

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking Product identifier: Product name: L-Cysteine SDS No. : 1964E-2
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 Telephone number: +81-6-6946-8061 FAX: +81-6-6946-1607

Section 2. Hazards identification

GHS classification and label elements of the product Classification of the substance or mixture HEALTH HAZARDS Acute toxicity (Oral): Category 4 (Note) GHS classification without description: Not classified/Classification not possible Label elements



Signal word: Warning HAZARD STATEMENT H302 Harmful if swallowed PRECAUTIONARY STATEMENT Prevention P264 Wash contaminated parts thoroughly after handling. P270 Do not eat, drink or smoke when using this product. Response P330 IF SWALLOWED: Rinse mouth. P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell. Disposal P501 Dispose of contents/container in accordance with local/national regulation. Specific adverse human health effects

See "11. Toxicological Information".



Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS No.	ENCS	Chemical formula
L-Cysteine	≧98	52-90-4	9-1590	C3H7NO2S

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

Section 4. First-aid measures

Descriptions of first-aid measures

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

Take off immediately all contaminated clothing. Rinse skin with water or shower.

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.

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

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 Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. See "10.Stability and Reactivity". 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 a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures



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Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

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

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands et al thoroughly after handling.

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.

Storage

Conditions for safe storage

Keep container tightly closed.

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

Storage in accordance with local/national regulation.

Container and packaging materials for safe handling

Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters Control value and concentration standard value are not available in ISHA. Adopted value (Other inorganic and organic dust (third class dust)) JSOH Respirable dust 2mg/m3, Total dust 8mg/m3 Exposure controls



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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 Recommend to use protective equipment in conformity with the standards. Use appropriate protective equipment in accordance with local/national regulation. Respiratory protection Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask. Hand protection Wear impervious protective glove. Eye protection Skin and body protection Wear protective clothing. Physical state: Crystalline powder Color: Colorless to white

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties Odor: Slightly characteristic odor Melting point/Freezing point: 216~220°C 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: Soluble Solubility in solvent data is not available. n-Octanol/water partition coefficient data is not available. Vapor pressure data is not available. Density and/or relative density data is not available. Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity Not available. Chemical stability

Stable under normal storage/handling conditions.



Possibility of hazardous reactions Not available. Conditions to avoid Contact with incompatible materials. Contact with fire source. Incompatible materials Strong oxidizing agents Hazardous decomposition products Carbon oxides, Nitrogen oxides, Sulfur oxides

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity Acute toxicity (Oral) [Product] Category 4, Harmful if swallowed [Data for components of the product] [GHS Cat. Japan, base data] rat LD50=1890mg/kg (HSDB, 2002) Irritant properties Skin corrosion/irritation data is not available. Serious eye damage/irritation data is not available. Allergenic and sensitizing effects data is not available. Mutagenic effects data is not available. Carcinogenic effects data is not available. Reproductive toxicity data is not available. Specific target organ toxicity (STOT) STOT-single exposure data is not available. STOT-repeated exposure data is not available. 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

Toxicity data is not available. Persistence and degradability Persistence and degradability data is not available. 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.



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 Dispose of contents/container as industrial waste. Accordance with local/national

regulation.

Section 14. Transport Information

UN Number or ID Number : Not regulated IMDG Code (International Maritime Dangerous Goods Regulations) UN Number or ID Number : Not regulated IATA (Dangerous Goods Regulations) UN Number or ID Number : Not regulated Environmental hazards Marine pollutants (yes/no) : no

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

Applicable

Other regulatory information

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

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN IMDG Code, 2022 Edition (Incorporating Amendment 41–22) IATA Dangerous Goods Regulations (65th Edition) 2024 2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT) 2024 TLVs and BEIs. (ACGIH) JIS Z 7252 : 2019 JIS Z 7253 : 2019 2023 Recommendation on TLVs (JSOH) Supplier's data/information

General Disclaimer

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Unauthorized translation or modification is prohibited.

Please provide SDS to customers for selling or transferring.

All chemicals have unknown hazard. Handle the product with care.

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 2022).