

Safety Data Sheet

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

Product identifier:

Product name: N-Acetyl-L-cysteine

Reference number(SDS): 11046jis_E-2

Product type:

Quasi-drug raw materials for Japan only

※This product conform to JSQI (Japanese Standards of Quasi-drug Ingredients).

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

Relevant identified uses of the product: Antioxidant

Uses advised against: Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

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e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture****Label elements**

No GHS label element

No Signal word

Section 3. Composition/information on ingredients

Mixture/Substance selection:**Substance****Common name, synonyms: Acetylcysteine**

Ingredient name: N-Acetyl-L-cysteine

Content (%): (Dried) 98.0 <

Chemical formula: C₅H₉NO₃S

Chemicals No, Japan: 2-2757

CAS No.: 616-91-1

MW: 163.19

ECNO: 210-498-3

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 (or hair)

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.

Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

Indication of any immediate medical attention and special treatment needed

Information on indication of any immediate medical attention and special treatment needed is not available.

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 a full facepiece operated in the 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

Avoid release to headsprings, 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.

Section 7. Handling and storage**Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Avoid breathing 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.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities

Strong oxidizing agents should not be mixed with the chemicals.

Storage

Conditions for safe storage

Store in a well-ventilated place.

Keep container tightly closed.

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Storage temperature upper limit: 10°C

Storage temperature lower limit: 2°C

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Control parameters

Control value and concentration standard value are not available in ISHA.

Adopted value

Adopted value in JSOH is not available.

Adopted value in ACGIH is not available.

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.

Recommended respiratory protection: Dust mask (e.g. JIS T8151)

Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystalline powder

Color: White

Odor: Slight characteristic odor

Odor threshold data is not available.

Melting point/Freezing point: 109~110°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.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH data is not available.

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble 179.5g/liter(20°C)

Solubility in solvent: Soluble in alcohol and ethyl acetat ; Practically insoluble in chloroform and ether.

n-Octanol/water partition coefficient: log Pow-0.6(23°C)

Vapor pressure data is not available.

Density and/or relative density: 1.48g/cm³(20°C)

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

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Particle characteristics data is not available.

Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

Section 10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heating.

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]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

rat LD50 >6000mg/kg (HSDB; REACH Registration dossier)

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

Crustaceans(Daphnia magna) EC50 >100mg/L/48hr(REACH Registration dossier)

Water solubility

[Data for components of the product]

179.5g/L(20°C)(REACH Registration dossier)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

[Data for components of the product]

log Pow=-0.6(23°C)(REACH Registration dossier)

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 in accordance with local/national regulation.

Section 14. Transport Information

UN No., UN CLASS

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

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Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

Packing group : Not regulated

IATA (Dangerous Goods Regulations)

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

Packing group : Not regulated

Environmental hazards

Marine pollutants (yes/no) : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

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

616-91-1

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with 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.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

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, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial

Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.26 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

(https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)
LD50 (Lethal Dose, 50%)
LC50 (Lethal Concentration, 50%)
IARC (International Agency for Research on Cancer)
ACGIH (American Conference of Governmental Industrial Hygienists)
EPA (US Environmental Protection Agency)
NTP (US National Toxicology Program)
JSOH (Japan Society for Occupational Health)
EU (European Union)
EC50 (Effective Concentration, 50%)
NOEC (No Observed Effect Concentration)
BOD (Biochemical Oxygen Demand)
COD (Chemical Oxygen Demand)
BCF (Bioconcentration Factor)
anh (anhydride)

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 2022).