



# L-CYSTEINE (13C3, 99%; 15N, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 3.1

CNLM-3871-H

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

|                |  |
|----------------|--|
| Product form   | : Substance                            |
| Substance name | : L-CYSTEINE (13C3, 99%; 15N, 99%)     |
| EC-No.         | : 200-158-2 (Unlabeled)                |
| CAS-No.        | : 202406-97-1                          |
| Product code   | : CNLM-3871-H                          |
| Formula        | : HS*CH2*CH(*NH2)*COOH                 |
| Synonyms       | : (R)-2-Amino-3-mercaptopropionic acid |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

|                                  |                             |
|----------------------------------|-----------------------------|
| Main use category                | : Professional use          |
| Industrial/Professional use spec | : For professional use only |

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### GHS-US classification

Not classified

#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

#### GHS-US labeling

No labeling applicable

### 2.3. Other hazards

No additional information available

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

| Name                             | Product identifier                                      | %   | Classification according to Directive 67/548/EEC |
|----------------------------------|---|-----|--|
| L-CYSTEINE (13C3, 99%; 15N, 99%) | (CAS-No.) 202406-97-1<br>(EC-No.) 200-158-2 (Unlabeled) | 100 | Not classified                                   |

| Name                             | Product identifier                                      | %   | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------------------------|---|-----|---|
| L-CYSTEINE (13C3, 99%; 15N, 99%) | (CAS-No.) 202406-97-1<br>(EC-No.) 200-158-2 (Unlabeled) | 100 | Not classified  |

Full text of R- and H- phrases: see section 16

| Name   | Product identifier    | %   | GHS-US classification |
|--|-----------------------|-----|-----------------------|
| L-CYSTEINE (13C3, 99%; 15N, 99%)<br>(Main constituent) | (CAS-No.) 202406-97-1 | 100 | Not classified        |

Full text of H-phrases: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.     |
| First-aid measures after inhalation   | : If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician. |
| First-aid measures after skin contact | : Wash with soap and plenty of water. Consult a physician.  |
| First-aid measures after eye contact  | : Flush eyes with water as a precaution.  |
| First-aid measures after ingestion    | : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.           |

#### 4.2. Most important symptoms and effects, both acute and delayed

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects after inhalation   | : May be harmful if inhaled. May cause respiratory tract irritation.  |
| Symptoms/effects after skin contact | : May be harmful if absorbed through skin. May cause skin irritation. |
| Symptoms/effects after eye contact  | : May cause eye irritation.   |
| Symptoms/effects after ingestion    | : May be harmful if swallowed.  |

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Wear self contained breathing apparatus for fire fighting if necessary.                       |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust.

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

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### 6.3. Methods and material for containment and cleaning up

For containment : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store refrigerated (-5 C to 5 C). Protect from light.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline

Molecular mass : 125.13 g/mol (Labeled)

Color : White

Odor : No data available.

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 240 °C (464 °F) - dec

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : 292 °C (558 °F)

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : No data available

Relative vapor density at 20 °C : No data available

Relative density : 1.496 g/cm<sup>3</sup> at 20°C (68 °F)

Solubility : No data available

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

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|                      |                     |
|----------------------|---------------------|
| Viscosity, dynamic   | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits     | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Five years after receipt if stored as stated in "Storage" section. Re-QC after 5 years.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizing agent.

### 10.6. Hazardous decomposition products

carbon oxides. Nitrogen oxides. Sulphur oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| L-CYSTEINE (13C3, 99%; 15N, 99%) (202406-97-1) |                              |
|--|------------------------------|
| LD50 oral rat                                  | 5850 mg/kg female            |
| LD50 dermal rat                                | > 2000 mg/kg male and female |

|   |   |
|---|---|
| Skin corrosion/irritation                           | : Not classified  |
| Serious eye damage/irritation                       | : Not classified  |
| Respiratory or skin sensitization                   | : Not classified  |
| Germ cell mutagenicity                              | : Not classified  |
| Carcinogenicity                                     | : Not classified  |
| Reproductive toxicity                               | : Not classified  |
| Specific target organ toxicity – single exposure    | : Not classified  |
| Specific target organ toxicity – repeated exposure  | : Not classified  |
| Aspiration hazard                                   | : Not classified  |
| Potential Adverse human health effects and symptoms | : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |
| Symptoms/effects after inhalation                   | : May be harmful if inhaled. May cause respiratory tract irritation.  |
| Symptoms/effects after skin contact                 | : May be harmful if absorbed through skin. May cause skin irritation.   |
| Symptoms/effects after eye contact                  | : May cause eye irritation.   |
| Symptoms/effects after ingestion                    | : May be harmful if swallowed.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

| L-CYSTEINE (13C3, 99%; 15N, 99%) (202406-97-1) |  |
|--|--|
| LC50 fish 1                                    | > 100 mg/l Danio Rerio (Zebra fish) - 96 h   |
| EC50 Daphnia 1                                 | > 100 mg/l Daphnia magna (Water flea) - 48 h |

### 12.2. Persistence and degradability

| L-CYSTEINE (13C3, 99%; 15N, 99%) (202406-97-1) |                                |
|--|--------------------------------|
| Persistence and degradability                  | Aerobic - exposure time: 28 d. |
| Biodegradation                                 | 98 % Readily biodegradable     |

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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.

Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

#### Overland transport

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### L-CYSTEINE (13C3, 99%; 15N, 99%) (202406-97-1)

|                                     |                                 |
|-------------------------------------|---------------------------------|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |
|-------------------------------------|---------------------------------|

### 15.2. International regulations

#### CANADA

#### L-CYSTEINE (13C3, 99%; 15N, 99%) (202406-97-1)

|   |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |
|---|

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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

| L-CYSTEINE (13C3, 99%; 15N, 99%)(202406-97-1)                       |  |
|---|--|
| U.S. - California - Proposition 65 - Carcinogens List               | No   |
| U.S. - California - Proposition 65 - Developmental Toxicity         | No   |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No   |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male   | No   |
| State or local regulations  | U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. |

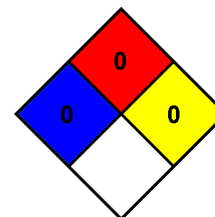
## SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



### Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

### CIL Substance SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*