Page 1 of 7



Cambridge Isotope Laboratories, Inc. 3 Highwood Drive Tewksbury, MA 01876

MATERIAL SAFETY DATA SHEET

CHEMICAL PRODUCT AND COMPANY INFORMATION

L-THREONINE UNLABELED **Product Description**

Cambridge Isotope Laboratories, Inc. 50 Frontage Rd ANDOVER, MA 01810 USA

E-mail cilsales@isotope.com Web Site www.isotope.com

Phone Numbers

Emergency Contact Chemtrec

Emergency Phone 1-800-424-9300 (24 hours)

Customer Service

Phone

1-800-322-1174 (8:30-5:30 EST)

Transportation 1-202-483-7616 (24 hours)

2 **HAZARDS IDENTIFICATION**

OSHA Hazards

No known OSHA hazards

HMIS Ratings

Physical 0 Flammability 0 Health 0

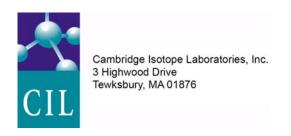
NFPA Codes

0 Fire Health 0 Reactivity 0

Potential Health Effects

Eyes May cause eye irritation. Ingestion May be harmful if swallowed.

Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Skin May be harmful if absorbed through skin. May cause skin irritation.



MATERIAL SAFETY DATA SHEET

3 COMPOSITION / INFORMATION ON INGREDIENTS

Composition / Information on Ingredients

Synonyms (2S,3R)-2-Amino-3-hydroxybutyric acid

Chemical Formula CH3CH(OH)CH(NH2)CO2H

Molecular Weight 119.12 CAS No. 72-19-5 EC No. 200-774-1

4 FIRST AID MEASURES

First Aid Measures

Eyes Flush eyes with water as a precaution.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a

physician.

Inhalation If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a

physician.

Skin Wash with soap and plenty of water. Consult a physician.

Additional Information

Move out of dangerous area. Consult a physician and show this safety data sheet.

5 FIRE FIGHTING MEASURE

Fire Fighting Measures

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Hazardous Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides

Decomposition (NOx)

Fire Fighting Equipment

Wear self contained breathing apparatus for fire fighting if necessary.

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

Page 3 of 7



Cambridge Isotope Laboratories, Inc. 3 Highwood Drive Tewksbury, MA 01876

MATERIAL SAFETY DATA SHEET

Personal

Avoid dust formation. Avoid breathing vapors, mist or gas.

Precautions

Environmental Do not empty into drains.

Precautions

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Methods and materials for containment and

cleanup

7 HANDLING AND STORAGE

Precautions for Safe Handling

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. Normal measures for preventive fire protection.

Conditions for Safe Storage

Storage Store at room temperature away from light and moisture.

EXPOSURE CONTROL / PERSONAL PROTECTION

Personal Protecton

Eyes - Face Wear safety glasses with side shields (or goggles) and a face shield.

Skin Choose body protection according to the amount and concentration of the dangerous substance at

the work place.

Respiratory When appropriate, use NIOSH/CEN approved respirator.

Protective Clothing Wear suitable protective clothing and gloves.

Work Hygienic **Practices**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks

and at the end of workday.

PHYSICAL AND CHEMICAL PROPERTIES 9

Physical and Chemical Properties (Unlabeled Compound)

Form Crystalline Powder

Page 4 of 7

Cambridge Isotope Laboratories, Inc. Tewksbury, MA 01876

MATERIAL SAFETY DATA SHEET

Color White

Odor No data available Odor Threshold No data available

рΗ 5.0 - 6 at 59.6 g/l at 25 °C (77 °F)

Melting Point 256 °C (493 °F)

Boiling Point 260 °C

Flashpoint No data available **Evaporation Rate** No data available Fammability No data available No data available Lower Explosion

Limit

Upper Explosion No data available

Limit

Vapor Pressure No data available Vapor Density No data available Density 1.464 g/cm3

59.6 g/l at 20 °C (68 °F) - completely soluble Solubility in Water

Partition Coefficient -1.43

Auto Ignition No data available

Temperature

Decomposition No data available

Temperature

Viscosity No data available

STABILITY AND REACTIVITY 10

Stability and Reactivity

Chemical Stability Stable if stored under recommended conditions.

Possibility of Hazardous

Reactions

Not available

Conditions to Avoid Not available

Hazardous

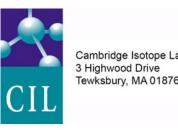
Not available

Decomposition **Products**

Hazardous decomposition products

Formed under fire conditions: Carbon oxides, nitrogen oxides

Page 5 of 7



Cambridge Isotope Laboratories, Inc. Tewksbury, MA 01876

MATERIAL SAFETY DATA SHEET

Materials to avoid Strong oxidizing agents

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

No data available Serious

Damage/Eye Irritation

Skin No data available

Corrosion/Irritation

Inhalation No data available

Respiratory or Skin Not available Sensitization Not available

Germ Cell Not available Mutagenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identifiable as

probable, possible, or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identifiable as a

carcinogen or potential carcinogen by ACGIH.

NTP No component of this product present at levels greater than or equal to 0.1% is identifiable as a

known or anticipated carcinogen by NTP.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

Reproductive **Toxicity**

Not available

Specific Target Organ Toxicity

Single Exposure No data available Repeated Exposure No data available

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other Information

RTECS XO8590000

General Comments LD50 Intraperitoneal - rat - 3,098 mg/kg

Remarks: Behavioral: Muscle contraction or spasticity. Lungs, Thorax, or Respiration: Dyspnea.

Nutritional and Gross

Metabolic: Changes in: Body temperature decrease.



MATERIAL SAFETY DATA SHEET

12 ECOLOGICAL INFORMATION

Toxicity

Persistance and Degradability Not available

Bioaccumulative

Potential

Not available

Mobility in Soil

Not available

PBT and vPvB

Assessment

Not available

Other Adverse

Effects

Not available

13 DISPOSAL CONSIDERATIONS

Disposal Considerations

Product Disposal Waste materials should be disposed of under conditions which meet Federal, State, and Local

environmental control regulations.

14 TRANSPORT INFORMATION

Transportation Information-DOT/IATA/IMDG

Special Shipping

Not dangerous goods.

Notes

15 REGULATORY INFORMATION

Regulatory Information

No known OSHA hazards.

SARA

Sara 302

No chemicals in this material are subject to the reporting requirements.

Component

Sara 313

No chemicals in this material are subject to the reporting requirements.

Component



MATERIAL SAFETY DATA SHEET

STATE REGULATIONS

Massachusetts

No

Right to Know

Pennsylvania Right

Yes

to Know

New Jersey Right

Yes

to Know

California Proposition 65 This product does not contain any chemicals known to State of California to cause cancer, birth

defects, or any other reproductive harm.

Canada

DSL Status All components are on the Canadian DSL list.

OTHER INFORMATION 16

Manufacturer Disclaimer

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.

Approved On 03/20/15

3

Version Number