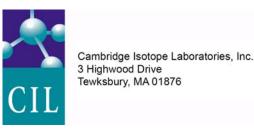
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MATERIAL SAFETY DATA SHEET

CHEMICAL PRODUCT AND COMPANY INFORMATION

L-GLUCOSE (2-13C, 99%) **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

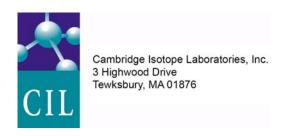
NFPA Codes

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

Chemical Formula *CC5H12O6 Molecular Weight 181.15

CAS No. 921-60-8 (unlabeled)

EC No. 213-068-3

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

n

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

Decomposition

Fire Fighting Equipment

Wear self contained breathing apparatus for fire fighting if necessary.

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

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MATERIAL SAFETY DATA SHEET

Personal Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Precautions Ensure adequate ventilation.

Avoid breathing dust. For personal protection see section 8.

Environmental

Precautions

Do not empty into drains.

Methods and materials for containment and cleanup

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

HANDLING AND STORAGE

Precautions for Safe Handling

Handling 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 8

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.

When appropriate, use NIOSH/CEN approved respirator. Respiratory

Protective Clothing Wear suitable protective clothing and gloves.

Work Hygienic

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

Practices and at the end of workday.

PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties (Unlabeled Compound)

Form Powder

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Color White

No data available Odor Odor Threshold No data available

рΗ No data available

Melting Point 153 - 156 °C (307 - 313 °F)

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

Limit

Upper Explosion No data available

Limit

Solubility in Water No data available Partition Coefficient No data available Auto Ignition No data available

Temperature

10 STABILITY AND REACTIVITY

Stability and Reactivity

Chemical Stability Stable if stored under recommended conditions.

Possibility of Hazardous Reactions

Not available

Conditions to Avoid Not available

Hazardous decomposition products

Formed under fire conditions - carbon oxides

Materials to avoid Strong oxiding agents

11 **TOXICOLOGICAL INFORMATION**

Acute Toxicity

No data available Serious

Damage/Eye Irritation

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MATERIAL SAFETY DATA SHEET

Skin

No data available

Corrosion/Irritation

Inhalation No data available

Respiratory or Skin 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

The chemical, physical, and toxicological properties have not been thoroughly investigated.

Other Information

RTECS Not available

General Comments Developmental Toxicity - Hamster - Multiple

Specific Developmental Abnormalities: Endocrine system

Developmental Toxicity - Hamster - Multiple

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental

Abnormalities: Eye, ear. Specific Developmental Abnormalities: Musculoskeletal system.

ECOLOGICAL INFORMATION 12

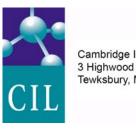
Toxicity

Persistance and

Not available

Degradability

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Bioaccumulative

Not available

Potential

Not available

PBT and vPvB

Mobility in Soil

Not available

Assessment

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

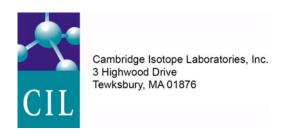
STATE REGULATIONS

Massachusetts

No

Right to Know

Pennsylvania Right Yes



MATERIAL SAFETY DATA SHEET

to Know

New Jersey Right

to Know

Yes

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.

16 OTHER INFORMATION

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 12/04/14

Version Number