



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

Number:
Issue Date

CLM-2043
01/21/11

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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Description ALLYL ALCOHOL (1-13C, 99%) 97% CHEMICAL PURITY

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 1-800-322-1174 (8:30-5:30 EST)
Phone
Transportation 1-202-483-7616 (24 hours)

2 HAZARDS IDENTIFICATION

OSHA Hazards

Flammable liquid, Target Organ Effect, Highly toxic by inhalation
Toxic by ingestion, Highly toxic by skin absorption, Irritant

Target Organs

Lungs, Liver, Kidney

GHS Label Information

Signal Word Danger

Hazards Identification

Flame
Skull & crossbones
Corrosion
Environment

Hazard Statement(s)

Highly flammable liquid and vapour.
Toxic if swallowed or if inhaled.
Fatal in contact with skin.



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Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
Very toxic to aquatic life.

Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces- No smoking.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Gently wash with soap and water.
IF IN EYES: Rinse with water for several minutes. Remove contact lenses.
Immediately call POISON CENTER or doctor/physician.

HMIS Ratings

Chronic Health	*
Physical	0
Flammability	3
Health	4

NFPA Codes

Fire	3
Health	4
Reactivity	0

Potential Health Effects

Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed.
Inhalation	May be fatal if inhaled. Causes respiratory tract irritation.
Skin	May be fatal if absorbed through skin. Causes skin irritation.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Composition / Information on Ingredients

Synonyms	2-Propen-1-ol.
Chemical Formula	H ₂ C=CH*CH ₂ OH
Molecular Weight	59.07
CAS No.	102781-45-3
EC No.	203-470-7
Index No.	603-015-00-6

4 FIRST AID MEASURES

First Aid Measures



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Eyes	Flush eye with water for 15 minutes. Get medical attention.
Ingestion	Do NOT induce vomiting. 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 off with soap and plenty of water. Take victim immediately to hospital. 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	For small fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Fire Fighting Equipment	Wear self contained breathing apparatus for fire fighting if necessary.
Fire Fighting Procedures	Use water spray to cool unopened containers.

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleanup	Contain spillage, then collect with non-combustible absorbent material. Disposal should be in accordance with applicable Federal, State and local regulations.



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7 HANDLING AND STORAGE

Precautions for Safe Handling

Handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent build up of electrostatic charge.

Conditions for Safe Storage

Storage Store at room temperature away from light and moisture.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

CHEMICAL NAME
ALLYL ALCOHOL

	OSHA PEL	ACGIH TLV
TWA	2 ppm	0.5 ppm
STEL	4 ppm	

Personal Protection

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.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties (Unlabeled Compound)

Form Liquid

Color Colourless

pH No data available

Melting Point -129 °C (-200 °F) - lit.

Boiling Point 96 - 98 °C (205 - 208 °F) - lit.



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Flashpoint	22 °C (72 °F) - closed cup
Lower Explosion Limit	2.5 %(V)
Upper Explosion Limit	18 %(V)
Vapor Pressure	183 hPa (137 mmHg) at 55 °C (131 °F)
Vapor Density	2.01 - (Air = 1.0)
Density	0.854 g/cm ³ at 25 °C (77 °F)
Solubility in Water	No data available
Auto Ignition Temperature	378 °C (712 °F)

10 STABILITY AND REACTIVITY

Stability and Reactivity

Chemical Stability	Stable if stored under recommended conditions.
Possibility of Hazardous Reactions	Vapors may form explosive mixture with air.
Conditions to Avoid	Keep away from heat, sparks and flame.
Hazardous decomposition products	Formed under fire conditions: Carbon oxides
Materials to avoid	Alkali metals, Oxidizing agents

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

LC50 Inhalation Rat	8 h - 76 ppm.
LD50 Dermal Rabbit	45 mg/kg
LD50 Oral Rat	64 mg/kg
Serious Damage/Eye Irritation	Eyes - rabbit - Severe eye irritation
Skin Corrosion/Irritation	Skin - rabbit - Open irritation test - 24 h
Inhalation	No data available



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Respiratory or Skin Sensitization	Bueler Test - guinea pig - Causes sensitization
Germ Cell Mutagenicity	Genotoxicity in vitro - Hamster - Lungs Mutation in mammalian somatic cells.
Carcinogenicity	This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
IARC	No component of the product present at levels greater than or equal to 0.1 % is identifiable as probable, possible, or confirmed human carcinogen by IARC.
NTP	No component of this product present at levels greater than or equal to 0.1 % is identified 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	Inhalation - May cause respiratory irritation.
Repeated Exposure	No data available
Signs and Symptoms of Exposure	
	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea.
Other Information	
RTECS	BA5075000

12 ECOLOGICAL INFORMATION

Toxicity

Toxicity to Fish LC50	Pimephales promelas (fathead minnow) - 0.3 mg/l - 96.0 h
Toxicity to Daphnia and Other Aquatic Invertebrates EC50	Daphnia magna (Water flea) - 1.65 mg/l - 48 h
Persistence and Degradability	Not available
Bioaccumulative Potential	Not available
Mobility in Soil	Not available



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PBT and vPvB
Assessment Not available

Other Adverse
Effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic organisms.

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

UN Number 1098
Proper Shipping Name Allyl alcohol
Hazard Class 6.1 (3)
Packing Group I
Reportable Quantity (RQ) DOT US 100 lbs
Marine Pollutant No
Poison Inhalation Hazard Hazard zone B

Special Shipping Notes IATA Passenger/Cargo: Not permitted for transport.

15 REGULATORY INFORMATION

Regulatory Information

Flammable liquid, Target Organ Effect, Highly toxic by inhalation
Toxic by ingestion, Highly toxic by skin absorption, Irritant

SARA

Sara 302 Component Yes
Sara 313 Component Yes



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SARA 311/312 Hazards

Fire (Y/N) Y

Chronic (Y/N) Y

STATE REGULATIONS

Massachusetts Yes

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.

EU

Hazard Toxic. Dangerous for environment.

Safety Statements

Keep locked up and out of the reach of children.

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation wear suitable respiratory equipment.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/safety data sheet.

Risk Statements

Flammable.

Toxic by inhalation, in contact with skin and if swallowed.

Irritating to eyes, respiratory system and skin.

Very toxic to aquatic organisms.

16 OTHER INFORMATION

Additional MSDS 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.

Approved On 01/21/11

Version Number 1