



# ETHYL BROMOACETATE (1,2-13C2, 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

Date of issue: 10/01/2011

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Version: 4.1

CLM-1011

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

### 1.1. Product identifier

Product form	: Substance
Substance name	: ETHYL BROMOACETATE (1,2-13C2, 99%)
EC Index-No.	: 607-069-00-1 (Unlabeled)
EC-No.	: 203-290-9 (Unlabeled)
CAS-No.	: 61898-49-5
Product code	: CLM-1011
Formula	: Br*CH2*COOCH2CH3
Other means of identification	: Also applicable to: CLM-1011-0-ET (1,2-13C2, 99%) CLM-1011-10-ET (1,2-13C2, 99%) CLM-1011-NAT (1,2-13C2, 99%)

### 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]

Flam. Liq. 3 H226

Acute Tox. 2 (Oral) H300

Acute Tox. 1 (Dermal) H310

Acute Tox. 2 (Inhalation) H330

Full text of hazard classes and H-statements : see section 16

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

T+; R26/27/28

Full text of R-phrases: see section 16

#### GHS-US classification

Flam. Liq. 3 H226

Acute Tox. 2 (Oral) H300

Acute Tox. 1 (Dermal) H310

Acute Tox. 2 (Inhalation) H330

Full text of H statements : see section 16

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

No additional information available

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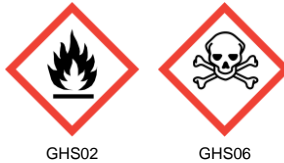
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### 2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

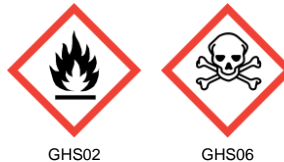
H226 - Flammable liquid and vapor  
H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/bond container and receiving equipment.  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P260 - Do not breathe fume, mist, spray, vapors.  
P264 - Wash both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P260 - Do not breathe fume, mist, spray, vapors.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash Both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P301+P310 - If swallowed: Immediately call a poison center or doctor  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P310 - Immediately call a poison center or doctor  
P320 - Specific treatment is urgent (see Hazard pictograms (CLP) on this label)  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P330 - Rinse mouth.  
P361 - Take off immediately all contaminated clothing.  
P363 - Wash contaminated clothing before reuse.  
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 - Dispose of contents/container to Comply with applicable regulations

### 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
ETHYL BROMOACETATE (1,2-13C2, 99%)	(CAS-No.) 61898-49-5 (EC-No.) 203-290-9 (Unlabeled) (EC Index-No.) 607-069-00-1 (Unlabeled)	100	T+; R26/27/28

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHYL BROMOACETATE (1,2-13C2, 99%)	(CAS-No.) 61898-49-5 (EC-No.) 203-290-9 (Unlabeled) (EC Index-No.) 607-069-00-1 (Unlabeled)	100	Flam. Liq. 3, H226 Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330

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

Name	Product identifier	%	GHS-US classification
ETHYL BROMOACETATE (1,2-13C2, 99%) (Main constituent)	(CAS-No.) 61898-49-5	100	Flam. Liq. 3, H226 Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330

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 off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Do NOT induce vomiting. 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	: Fatal if inhaled.
Symptoms/effects after skin contact	: Fatal in contact with skin. May cause skin irritation.
Symptoms/effects after eye contact	: Contact may cause eye irritation.
Symptoms/effects after ingestion	: Fatal 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

Fire hazard : Flammable liquid and vapor.

#### 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 : Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

- For containment : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
- Methods for cleaning up : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : 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.
- 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

- Technical measures : Keep container tightly closed in a dry and well-ventilated place.
- Storage conditions : Store at room temperature away from light and moisture.

### 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 : Safety glasses. Gloves. Respiratory protection of the dependent type. Protective clothing.



- 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 : Liquid
- Appearance : Clear, Liquid
- Molecular mass : 168.99 g/mol (Labeled)
- Color : Colorless to Pale Yellow
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : 159 °C (318 °F) - lit
- Flash point : 47 °C (117 °F) - closed cup
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available

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Vapor pressure	: 3.5 hPa (2.6 mmHg) at 25 °C (77 °F)
Relative vapor density at 20 °C	: 5.77 - (Air = 1.0)
Relative density	: No data available
Specific gravity / density	: 1.506 g/ml at 25 °C (77 °F)
Solubility	: Water: 0 % Insoluble
Log Pow	: 1.12
Log Kow	: No data available
Viscosity, kinematic	: No data available
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

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Avoid Heat, Flames and Sparks.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Formed under fire conditions - Carbon oxides, Hydrogen bromide gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Dermal: Fatal in contact with skin. Inhalation: Fatal if inhaled.

ETHYL BROMOACETATE (1,2-13C2, 99%) (61898-49-5)	
ATE CLP (oral)	5.000 mg/kg body weight
ATE CLP (dermal)	5.000 mg/kg body weight
ATE CLP (gases)	100.000 ppmV/4h
ATE CLP (vapors)	0.500 mg/l/4h
ATE CLP (dust, mist)	0.050 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Carcinogenicity - Rat - Subcutaneous Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.
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	: Cough. 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. Shortness of breath. Headache. Nausea. Vomiting.
Symptoms/effects after inhalation	: Fatal if inhaled.
Symptoms/effects after skin contact	: Fatal in contact with skin. May cause skin irritation.
Symptoms/effects after eye contact	: Contact may cause eye irritation.

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Symptoms/effects after ingestion : Fatal if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

ETHYL BROMOACETATE (1,2-13C2, 99%) (61898-49-5)	
Log Pow	1.12

#### 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

Other adverse effects : Avoid release to the environment. Disposal must be done according to official regulations.

### 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 as unused product.

### SECTION 14: Transport information

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

#### 14.1. UN number

UN-No.(DOT) : 1603  
DOT NA no. UN1603

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Ethyl bromoacetate  
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132  
Hazard labels (DOT) : 6.1 - Poison  
3 - Flammable liquid



Packing group (DOT) : II - Medium Danger  
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
DOT Packaging Exceptions (49 CFR 173.xxx) : None  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 243

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Marine pollutant : No

### 14.3. Additional information

Other information : No supplementary information available.  
Special transport precautions : IATA Passenger: Not permitted for transport.

#### Overland transport

Packing group (ADR) : II  
Class (ADR) : 6.1 - Toxic substances  
Hazard identification number (Kemler No.) : 63  
Classification code (ADR) : TF1  
Hazard labels (ADR) : 6.1 - Toxic substances  
3 - Flammable liquids



Orange plates :

Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 100ml  
EAC : 2W  
APP : A(fl)  
Excepted quantities (ADR) : E4

#### Transport by sea

DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"  
MFAG-No : 155

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden  
Civil Aeronautics Law : Toxic and infectious substances/Toxic substances

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : IATA Passenger: Not permitted for transport.

### 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

ETHYL BROMOACETATE (1,2-13C2, 99%) (61898-49-5)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

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### ETHYL BROMOACETATE (1,2-13C2, 99%) (61898-49-5)

SARA Section 313 - Emission Reporting

Not subject to reporting requirements of the United States SARA Section 313

## 15.2. International regulations

### CANADA

#### ETHYL BROMOACETATE (1,2-13C2, 99%) (61898-49-5)

Listed on the Canadian DSL (Domestic Substances List)

### 15.2.1. National regulations

No additional information available

## 15.3. US State regulations

#### ETHYL BROMOACETATE (1,2-13C2, 99%)(61898-49-5)

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	RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List

## 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.

Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Flam. Liq. 3	Flammable liquids Category 3
H226	Flammable liquid and vapor
H300	Fatal if swallowed
H310	Fatal in contact with skin
H330	Fatal if inhaled
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
T+	Very toxic

NFPA health hazard

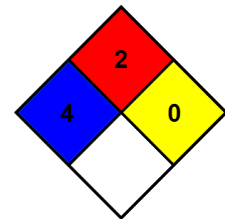
: 4 - Materials that, under emergency conditions, can be lethal.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

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



### Hazard Rating

Health : 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures

Flammability : 2 Moderate 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*