

## Chemical Safety Data Sheet MSDS / SDS

**BROMOETHANE-2-13C**

Revision Date:2026-05-30 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : BROMOETHANE-2-13C  
CBnumber : CB1422265  
CAS : 117890-45-6  
Synonyms : ethyl-2-13c bromide;Bromoethane-2-<sup>13</sup>C

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P201 Obtain special instructions before use.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P308+P313 IF exposed or concerned: Get medical advice/attention.

**Hazard statements**

H225 Highly Flammable liquid and vapour  
H351 Suspected of causing cancer  
H302 Harmful if swallowed

**SECTION 3: Composition/information on ingredients****Substance**

Product name	: BROMOETHANE-2-13C
Synonyms	: ethyl-2-13c bromide;Bromoethane-2- <sup>13</sup> C
CAS	: 117890-45-6
MF	: C2H5Br
MW	: 109.97

---

## SECTION 4: First aid measures

### General advice

Show this safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

---

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Specific hazards during fire fighting

Combustible. Pay attention to flashback. Vapours are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

## **Hazardous combustion products**

Carbon oxides Hydrogen bromide gas

## **Specific extinguishing methods**

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **Special protective equipment for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

---

## SECTION 6: Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### **Environmental precautions**

Do not let product enter drains. Risk of explosion.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

---

## SECTION 7: Handling and storage

### **Handling**

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

### **Storage**

#### **Further information on storage conditions**

Keep container tightly closed in a dry and wellventilated place. Keep away from heat and sources of ignition.

#### **Storage class**

3, Flammable liquids

#### **Recommended storage temperature**

2 - 8 °C

#### **Packaging material**

Suitable material: Mild Steel Drum

---

## SECTION 8: Exposure controls/personal protection

### **control parameter**

#### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

#### **Engineering measures**

No data available

#### **Personal protective equipment**

##### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

##### **Recommended Filter type**

Filter type AX

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

##### **Skin and body protection**

Flame retardant antistatic protective clothing.

##### **Hand protection**

##### **Material**

Viton®

##### **Break through time**

60 min

##### **Glove thickness**

0.7 mm

##### **Protective index**

Splash contact

##### **Manufacturer**

Vitoject® (KCL 890 / Aldrich Z677698, Size M)

##### **Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

---

#### **Color**

No data available

#### **Odor**

No data available

#### **Odor Threshold**

No data available

#### **pH**

No data available

#### **Melting point/ range**

-119 °C

Method: lit.

#### **Boiling point/boiling range**

37 - 40 °C

Method: lit.

#### **Flash point**

-23.00 °C

Method: closed cup

#### **Evaporation rate**

No data available

#### **Flammability (solid, gas)**

No data available

#### **Flammability (liquids)**

No data available

#### **Burning rate**

No data available

#### **Upper explosion limit / Upper flammability limit**

11.25 %(V)

#### **Lower explosion limit / Lower flammability limit**

6.75 %(V)

**Vapor pressure**

519.7 hPa (20.00 °C) 1,745 hPa (55.00 °C)

**Relative vapor density**

No data available

**Relative density**

1.473 g/mL at 25 °C

**Density**

1.473 g/mL (25 °C) 1.473 g/cm<sup>3</sup> (25 °C)

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

No data available

**Oxidizing properties**

none

**Molecular weight**

109.95 g/mol

**Particle characteristics Particle size**

No data available

## SECTION 10: Stability and reactivity

### Reactivity

Vapours may form explosive mixture with air.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Violent reactions possible with: Alkali metals Alkaline earth metals sodium amide Oxidizing agents Metals Bases

### Conditions to avoid

Warming.

### Incompatible materials

No data available

### Hazardous decomposition products

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 11.1 mg/l - vapour (Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: Ethyl bromide

Dermal: No data available

#### Skin corrosion/irritation

Classified based on available data. For more details, see section 2

#### Serious eye damage/eye irritation

Classified based on available data. For more details, see section 2

#### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

#### Germ cell mutagenicity

Classified based on available data. For more details, see section 2

#### Carcinogenicity

Suspected of causing cancer.

#### Reproductive toxicity

Classified based on available data. For more details, see section 2

#### Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

**Aspiration hazard**

Classified based on available data. For more details, see section 2

**11.2 Additional Information**

Classified based on available data. For more details, see section 2

---

## SECTION 12: Ecological information

**Ecotoxicity****Components:****Toxicity to algae/aquatic plants**

ErC50 (Pseudokirchneriella subcapitata): 200 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes

Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: Ethyl bromide

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

---

## SECTION 13: Disposal considerations

**Disposal methods****Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

---

## SECTION 14: Transport information

**International Regulations****IATA-DGR**

UN/ID No. : UN 1891

Proper shipping name : Ethyl bromide

Class : 3

Subsidiary risk : 6.1

Packing group : II

Labels : Class 3 - Flammable liquids, Division 6.1 - Toxic substances

Packing instruction (cargo aircraft) : 364

Packing instruction (passenger aircraft) : 352

### **IMDG-Code**

UN number : UN 1891

Proper shipping name : ETHYL BROMIDE

Class : 3

Subsidiary risk : 6.1

Packing group : II

Labels : 3 (6.1)

EmS Code : F-E, S-D

Marine pollutant : no

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

Not applicable for product as supplied.

### **National Regulations**

#### **JT/T 617**

UN number : UN 1891

Proper shipping name : ETHYL BROMIDE

Class : 3

Subsidiary risk : 6.1

Packing group : II

Labels : 3 (6.1)

Environmentally hazardous : no

### **Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

## **SECTION 15: Regulatory information**

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### **National regulatory information**

### **Law on the Prevention and Control of Occupational Diseases**

## Regulations on Safety Management of Hazardous Chemicals

### Catalogue of Hazardous Chemicals

Listed

### Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

W5.3 Flammable liquids 1,000 t

### Hazardous Chemicals for Priority Management

Not listed under SAWS

### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

### Catalogue of Highly Toxic Chemicals

Not listed

### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

### China Severely Restricted Toxic Chemicals for Import and Export

Not listed

### Measures on the Environmental Administration of New Chemical Substances Registration

### Registration/Notification number

B1A222240880

---

## SECTION 16: Other information

### Full text of other abbreviations

#### ACGIH

USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x%respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardisation; KECl - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; MERC of Dangerous Goods; n.o. - No Observed (Adverse) fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organisatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemica States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar

8-hour, time-weighted average ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonised System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration

ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China

IMDG - Interna- Goods

IMO - International Maritime Organisation

ISHL alth Law (Japan)

ISO - International Organisation for rea Existing Chemicals Inventory

LC50 - Lethal Concenopulation

LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- SUR - The Agreement for the Facilitation of the Transport . - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC ffect Concentration

NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons)

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.