

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 1 of 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

1-Bromobutane, 100 ml

CAS No: 109-65-9

EC No: 203-691-9

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Laboratory chemicals

1.3. Details of the supplier of the safety data sheet**Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH

Street: Im Forstgarten 1

Place: D-66459 Kirkel

Internet: www.conatex.com

Supplier

Company name: Carbolution Chemicals GmbH

Street: Im Stadtwald, Gebäude A1.2

Place: D-66123 Saarbrücken

Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232

e-mail: michael.bauer@carbolution-chemicals.de

Internet: www.carbolution-chemicals.de

1.4. Emergency telephone number: +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: F - Highly flammable, Xi - Irritant, N - Dangerous for the environment

R phrases:

Highly flammable.

Irritating to eyes, respiratory system and skin.

Toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

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

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause respiratory irritation.

Causes skin irritation.

Toxic to aquatic life with long lasting effects.

2.2. Label elements

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 2 of 8

Hazardous components which must be listed on the label

1-Bromobutane

Signal word:

Danger

Pictograms:

GHS02-GHS07-GHS09



Hazard statements

- | | |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |

Precautionary statements

- | | |
|----------------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P240 | Ground/bond container and receiving equipment. |
| P243 | Take precautionary measures against static discharge. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P501 | Dispose of contents/container to Waste management. |

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C₄H₉Br
Molecular weight: 137,02

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
203-691-9	1-Bromobutane	100 %
109-65-9	F - Highly flammable, Xi - Irritant, N - Dangerous for the environment R11-36/37/38-51-53	
	Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H225 H315 H319 H335 H411	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Medical treatment necessary.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 3 of 8

After contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water. Carbon dioxide (CO₂). Foam. Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion hazard.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Vapours may form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition. - No smoking.

Advice on storage compatibility

Do not store together with: Material, rich in oxygen, oxidizing.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 4 of 8

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	No data available

Test method

pH-Value: No data available

Changes in the physical state

Melting point: -112 °C

Initial boiling point and boiling range: 100 °C

Sublimation point: No data available

Softening point: No data available

Flash point: 10 °C

Flammability

Solid: No data available

Gas: No data available

Lower explosion limits: 2,8 vol. %

Upper explosion limits: 6,6 vol. %

Ignition temperature: No data available

Auto-ignition temperature

Solid: No data available

Gas: No data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 5 of 8

Vapour pressure: (at 25 °C)	53 hPa
Vapour pressure: (at 50 °C)	200 hPa
Density (at 25 °C):	1,276 g/cm ³
Water solubility:	No data available
Partition coefficient:	2,75
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	4,73
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available

9.2. Other information

Solid content: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Keep away from heat. Ignition hazard.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

Toxicological data are not available.

Acute toxicity

Toxicological data are not available.

Irritation and corrosivity

Irritating to eyes. Following inhalation: Lung irritation. Coughing. shortage of breath. After skin contact: Irritant.

Sensitising effects

No data available

Severe effects after repeated or prolonged exposure

No data available

Carcinogenic/mutagenic/toxic effects for reproduction

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 6 of 8

Specific effects in experiment on an animal

No data available

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

Practical experience**Observations relevant to classification**

No data available

SECTION 12: Ecological information**12.1. Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
Classified as hazardous waste.

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 7 of 8

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN1126
14.2. UN proper shipping name:	1-BROMOBUTANE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

Other applicable information (land transport)

E2

Inland waterways transport (ADN)

14.1. UN number:	UN1126
14.2. UN proper shipping name:	1-BROMOBUTANE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L

Other applicable information (inland waterways transport)

E2

Marine transport (IMDG)

14.1. UN number:	UN1126
14.2. UN proper shipping name:	1-BROMOBUTANE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	-
Limited quantity:	1 L
EmS:	F-E, S-D

Other applicable information (marine transport)

E2

Air transport (ICAO)

14.1. UN number:	UN1126
14.2. UN proper shipping name:	1-BROMOBUTANE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Limited quantity Passenger:	1 L
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Bromobutane, 100 ml

Print date: 14.04.2015

Product code: 9991161

Page 8 of 8

IATA-max. quantity - Cargo:

60 L

Other applicable information (air transport)

E2

: Y341

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2004/42/EC (VOC): 100 %

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

National regulatory information

Water contaminating class (D): 3 - highly water contaminating

SECTION 16: Other information**Relevant R-phrases (Number and full text)**

- | | |
|----------|---|
| 11 | Highly flammable. |
| 36/37/38 | Irritating to eyes, respiratory system and skin. |
| 51 | Toxic to aquatic organisms. |
| 53 | May cause long-term adverse effects in the aquatic environment. |

Relevant H- and EUH-phrases (Number and full text)

- | | |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |