

## Chemical Safety Data Sheet MSDS / SDS

## 1-Bromopropane

Revision Date:2024-12-21 Revision Number:1

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

## Product identifier

Product name : 1-Bromopropane  
CBnumber : CB8341613  
CAS : 106-94-5  
EINECS Number : 203-445-0  
Synonyms : 1-bromopropane,N-Propyl Bromide

## 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 : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P370+P378 In case of fire: Use ... for extinction.

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.....

#### **Hazard statements**

H420 Harms public health and the environment by destroying ozone in the upper atmosphere

H412 Harmful to aquatic life with long lasting effects

H373 May cause damage to organs through prolonged or repeated exposure

H372 Causes damage to organs through prolonged or repeated exposure

H360 May damage fertility or the unborn child

H351 Suspected of causing cancer

H340 May cause genetic defects

H336 May cause drowsiness or dizziness

H335 May cause respiratory irritation

H332 Harmful if inhaled

H319 Causes serious eye irritation

H315 Causes skin irritation

H226 Flammable liquid and vapour

H225 Highly Flammable liquid and vapour

#### **Disposal**

WARNING.Cancer - <https://oehha.ca.gov/proposition-65/chemicals/1-bromopropane-1-bp>

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: 1-Bromopropane
Synonyms	: 1-bromopropane,N-Propyl Bromide
CAS	: 106-94-5
EC number	: 203-445-0
MF	: C3H7Br
MW	: 122.99

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## SECTION 4: First aid measures

### **Description of first aid measures**

### General advice

Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Call in physician.

### 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 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### 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.

### Special hazards arising from the substance or mixture

Carbon oxides Hydrogen bromide gas Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors. Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

### Advice for firefighters

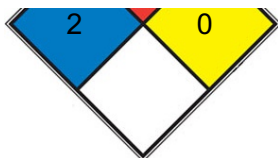
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### Further information

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

### NFPA 704





**HEALTH** 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

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**FIRE** 2 Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

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**REACT** 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

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**SPEC.**

**HAZ.**

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, 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. 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 (e.g.

Chemisorb?). Dispose of properly. Clean up affected area.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### Precautions for safe handling

#### Advice on safe handling

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

#### Advice on protection against fire and explosion

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

#### Hygiene measures

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

For precautions see section 2.2.

## **Conditions for safe storage, including any incompatibilities**

### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **control parameter**

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

Does not contain substances with occupational exposure limits.

### **Exposure controls**

#### **Personal protective equipment**

##### **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 protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Splash contact

Material: Fluorinated rubber Minimum layer thickness: 0,7 mm Break through time: 467 min

Material tested: Vitoject? (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### **Body Protection**

Flame retardant antistatic protective clothing.

##### **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 ABEK

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.

#### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	clear, liquid
Odour	pleasant
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/range: -110 °C - lit.
Initial boiling point and boiling range	71 °C - lit.
Flash point	22 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 9,1 %(V) Lower explosion limit: 4,6 %(V)
Vapour pressure	117,31 hPa at 25 °C
Vapour density	4,25 - (Air = 1.0)
Relative density	1,354 g/cm <sup>3</sup> at 25 °C - lit. 1,35 at 20 °C - OECD Test Guideline 109
Water solubility	ca.2,45 g/l at 20 °C - OECD Test Guideline 105- soluble
Partition coefficient: n-octanol/water	log Pow: ca.2,1 at 20 °C - Bioaccumulation is not expected.
Autoignition temperature	490 °C
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0,52 mPa.s at 20 °C - OECD Test Guideline 114
Explosive properties	No data available
Oxidizing properties	No data available
Henry's Law Constant	7.3*10 <sup>-3</sup> atm-m <sup>3</sup> /mol (estimated)

### Other safety information

Relative vapor density

4,25 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### Reactivity

Vapors 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:

Oxidizing agents azides Aluminum

Risk of explosion with:

alkali amides Alkali metals

Alkaline earth metals Metals

aromatic hydrocarbons Light metals

Bases

### **Conditions to avoid**

Warming.

### **Incompatible materials**

No data available

### **Hazardous decomposition products**

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### **Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 35 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

#### **Skin corrosion/irritation**

Causes skin irritation. (Regulation (EC) No 1272/2008, Annex VI) Drying-out effect resulting in rough and chapped skin.

Dermatitis

#### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Irritating to eyes. Remarks: (ECHA)

(Regulation (EC) No 1272/2008, Annex VI)

#### **Respiratory or skin sensitization**

(OECD Test Guideline 406)

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: positive

Test Type: In vivo micronucleus test Species: Mouse

Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative

Test Type: Transgenic rodent somatic cell gene mutation assay Species: Mouse

Application Route: Inhalation Method: OECD Test Guideline 488 Result: negative

Test Type: In vivo micronucleus test Species: Mouse

Application Route: inhalation (vapor) Method: OECD Test Guideline 474 Result: negative

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

May damage the unborn child. May damage fertility.

#### **Specific target organ toxicity - single exposure**

May cause respiratory irritation. - Lungs

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) May cause drowsiness or dizziness. - Central nervous system

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

#### **Specific target organ toxicity - repeated exposure**

inhalation (vapor) - May cause damage to organs through prolonged or repeated exposure.

- Liver, Central nervous system

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

#### **Aspiration hazard**

No data available

#### **Toxicity**

LD50 orally in Rabbit: > 2000 mg/kg LD50 dermal Rat > 2000 mg/kg

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## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 24,3 mg/l - 96 h

(OECD Test Guideline 203)

#### **Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - *Daphnia magna* (Water flea) - 99,3 mg/l - 48 h (OECD Test Guideline 202)

#### **Toxicity to algae**

static test ErC50 - *Pseudokirchneriella subcapitata* (algae) - 72,3 mg/l - 96 h

(OECD Test Guideline 201)

#### **Toxicity to bacteria**

static test EC50 - activated sludge - 270 mg/l - 5 min Remarks: (ECHA)

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d



Result: 19,2 % - Not readily biodegradable. (OECD Test Guideline 301D)

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

#### **Incompatibilities**

Strong oxidants; strong bases

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## SECTION 14: Transport information

### **UN number**

ADR/RID: 2344 IMDG: 2344

### **UN proper shipping name**

ADR/RID: BROMOPROPANES IMDG: BROMOPROPANES IATA: Bromopropanes

### **Transport hazard class(es)**

ADR/RID: 3 IMDG: 3 IATA: 3

### **Packaging group**

ADR/RID: II IMDG: II IATA: II

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

### **Special precautions for user**

No data available

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Listed. website: <https://www.mem.gov.cn/>

#### Measures for Environmental Management of New Chemical Substances

EC Inventory:Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

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