

BROMOPROPANE

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SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.20

Section 1 - Product and Company Information

Product Name 1-Bromopropane, 99%
Product Number B78106
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052

Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name 1-BROMOPROPANE
CAS # 106-94-5
SARA 313 No

Formula C3H7Br
Synonyms 1-Bromopropane, Propyl bromide, n-Propyl bromide

Section 3 - Hazards Identification

Emergency Overview
Harmful, Flammable.
Harmful by inhalation.

HMIS Rating
Health: 1 Flammability: 3 Reactivity: 0

NFPA Rating
Health: 1 Flammability: 3 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes

Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back. Container explosion can occur under fire conditions. In advanced or massive fires the area should be evacuated and the fire should be fought from a remote explosion-resistant location.

Flash Point: 71.6 °F 22 °C

Explosion Limits: Lower: 4.6 %

Autoignition Temp: 490 °C **Flammability:** Yes

Extinguishing Media
Suitable
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed In Case of Leak or Spill
Evacuate area. Shut off all sources of ignition.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep container closed. Keep away from heat, sparks, and open flame.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Government approved respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance	
Physical State	Color
Clear liquid	Faintly brown

Molecular Weight: 123 AMU

pH	N/A
BP/BP Range	70 - 71 °C
MP/MP Range	-110 °C
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	4.3 g/l
Saturated Vapor Conc.	N/A
SG/Density	1.352 g/cm3
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	71.6 °F
Flash Point °C	22 °C
Explosion Limits	Lower: 4.6 %

Method: closed cup
Method: closed cup

Flammability	N/A
Autoignition Temp	490 °C
Refractive Index	1.434
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity**Stability**Stable
Stable.**Materials to Avoid**

Strong oxidizing agents, Strong bases.

Hazardous Decomposition Products**Hazardous Decomposition Products**

Carbon monoxide, Carbon dioxide, Hydrogen bromide gas.

BROMOPROPANE

Hazardous Polymerization
Hazardous Polymerization
Will not occur.**Section 11 - Toxicological Information****Route of Exposure****Skin Contact**

May cause skin irritation.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

May cause eye irritation.

Inhalation

Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: TX4110000**Toxicity Data**

Inhalation - Rat: 253,000 mg/m3 (LC50)

Intraperitoneal - Rat: 2950 MG/KG (LD50)

Intraperitoneal - Mouse: 2530 MG/KG (LD50)

Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Rat	2 GM/KG	Oral	(5D MALE)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Rat	2 GM/KG	Oral	(5D MALE)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Rat	821 PPM/8H	Inhalation	(12W MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Rat	200 PPM/8H	Inhalation	(12W MALE)
Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.			

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations**Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information**DOT****Proper Shipping Name:** 2-Bromopropanes**UN#:** 2344**Class:** 3**Packing Group:** Packing Group II**Hazard Label:** Flammable liquid**PIH:** Not PIH

IATA

Proper Shipping Name: Bromopropanes
IATA UN Number: 2344
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU Directives Classification

Symbol of Danger: Xn

Indication of Danger

Harmful.

Risk Statements R: 10 20

Flammable, Harmful by inhalation.

Safety Statements S: 9 24

Keep container in a well-ventilated place. Avoid contact with skin.

US Classification and Label Text

Indication of Danger

Harmful, Flammable.

Risk Statements

Harmful by inhalation.

Safety Statements

Keep container in a well-ventilated place. Keep away from sources of Ignition - no smoking. Avoid contact with skin.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

