

SAFETY DATA SHEET

Version 6.7
Revision Date 04/21/2022
Print Date 06/01/2022

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

Product name : 1-Bromopropane-d7

Product Number : 614874
Brand : Aldrich
CAS-No. : 61909-26-0

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

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-
527-3887 CHEMTREC (International) 24
Hours/day; 7 Days/week

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 2), H225
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 1B), H360
Specific target organ toxicity - single exposure (Category 3), Respiratory system, Central nervous system, H335, H336
Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Liver, Central nervous system, H373
Short-term (acute) aquatic hazard (Category 3), H402
Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statement(s)

H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs (Liver, Central nervous system) through prolonged or repeated exposure if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

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.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
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): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam 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 an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

Aldrich - 614874

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SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Propyl bromide-d7
Propyl bromide-d7

Formula : C₃D₇Br
Molecular weight : 129.89 g/mol
CAS-No. : 61909-26-0
EC-No. : 685-183-0

Component	Classification	Concentration
1-Bromopropane-d7		
	Flam. Liq. 2; Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; Repr. 1B; STOT SE 3; STOT RE 2; Aquatic Acute 3; Aquatic Chronic 3; H225, H315, H319, H351, H360, H335, H336, H373, H402, H412	<= 100 %
Copper(bulk)		
		>= 1 - < 5 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 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.

4.2 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

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 Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Hydrogen bromide gas

Copper oxides

Carbon oxides

Hydrogen bromide gas

Copper oxides

Combustible.

Pay attention to flashback.

Vapors 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.

5.3 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.

5.4 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.

SECTION 6: Accidental release measures

6.1 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.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 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. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 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.

7.2 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.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
1-Bromopropane-d7	61909-26-0	TWA	0.1 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Confirmed animal carcinogen with unknown relevance to humans		
		PEL	5 ppm 25 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

Copper(bulk)	7440-50-8	TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	1 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	1 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.1 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	0.1 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls

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

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

required

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.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|-------------------|---|
| a) Appearance | Form: clear, liquid
Color: light brown |
| b) Odor | No data available |
| c) Odor Threshold | No data available |
| d) pH | No data available |

e) Melting point/freezing point	Melting point/range: -110 °C (-166 °F) - lit.
f) Initial boiling point and boiling range	71 °C 160 °F - lit.
g) Flash point	22 °C (72 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Lower explosion limit: ca.4.6 %(V)
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	1.43 g/mL at 25 °C (77 °F)1.43 g/cm ³ at 25 °C (77 °F)
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	log Pow: ca.2.1 - Bioaccumulation is not expected.
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

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

Stable

Contains the following stabilizer(s):

Copper(bulk) (>=0 - <=02 %)

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

Strong oxidizing agents, Strong bases

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimate Oral - 2,551 mg/kg

(Calculation method)

LD50 Oral - Rat - male and female - > 2,000 mg/kg (1-Bromopropane-d7)

(OECD Test Guideline 401)

The value is given in analogy to the following substances: 1-bromopropane

Acute toxicity estimate Inhalation - 4 h - 35.71 mg/l - vapor (Calculation method)

LC50 Inhalation - Rat - male and female - 4 h - 35 mg/l - vapor

(1-Bromopropane-d7)

(OECD Test Guideline 403)

The value is given in analogy to the following substances: 1-bromopropane

Inhalation: Irritating to respiratory system. (1-Bromopropane-d7)

Acute toxicity estimate Dermal - 2,551 mg/kg

(Calculation method)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (1-Bromopropane-d7)

(OECD Test Guideline 402)

The value is given in analogy to the following substances: 1-bromopropane

Skin corrosion/irritation

Causes skin irritation. (Regulation (EC) No 1272/2008, Annex VI) (1-Bromopropane-d7)

Drying-out effect resulting in rough and chapped skin. (1-Bromopropane-d7)

Dermatitis (1-Bromopropane-d7)

Serious eye damage/eye irritation

Eyes - Rabbit (1-Bromopropane-d7)

Result: Irritating to eyes.

Remarks: (ECHA)

The value is given in analogy to the following substances: 1-bromopropane

(Regulation (EC) No 1272/2008, Annex VI) (1-Bromopropane-d7)

Respiratory or skin sensitization

Maximization Test - Guinea pig (1-Bromopropane-d7)

Result: negative

(OECD Test Guideline 406)

The value is given in analogy to the following substances: 1-bromopropane

Germ cell mutagenicity

Test Type: Ames test

(1-Bromopropane-d7)

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

The value is given in analogy to the following substances: 1-bromopropane
Test Type: In vitro mammalian cell gene mutation test

(1-Bromopropane-d7)

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: positive

The value is given in analogy to the following substances: 1-bromopropane (1-Bromopropane-d7)

Test Type: In vivo micronucleus test

Species: Mouse

Application Route: Intraperitoneal

Method: OECD Test Guideline 474

Result: negative

The value is given in analogy to the following substances: 1-bromopropane (1-Bromopropane-d7)

Test Type: Transgenic rodent somatic cell gene mutation assay

Species: Mouse

Application Route: Inhalation

Method: OECD Test Guideline 488

Result: negative

The value is given in analogy to the following substances: 1-bromopropane (1-Bromopropane-d7)

Test Type: In vivo micronucleus test

Species: Mouse

Application Route: inhalation (vapor)

Method: OECD Test Guideline 474

Result: negative

The value is given in analogy to the following substances: 1-bromopropane

Carcinogenicity

Suspected of causing cancer. (1-Bromopropane-d7)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (1-Bromopropane-d7)

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

May damage the unborn child. (1-Bromopropane-d7)

May damage fertility. (1-Bromopropane-d7)

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Lungs (1-Bromopropane-d7)

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: 1-bromopropane

May cause drowsiness or dizziness. - Central nervous system (1-Bromopropane-d7)

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: 1-bromopropane

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)

The value is given in analogy to the following substances: 1-bromopropane

Aspiration hazard

No data available

11.2 Additional Information

May cause irritation of the: Eyes, Skin, May cause nervous system disturbances., Neurological disorders, May cause headache and dizziness., Loss of balance, Unconsciousness, Changes in the blood count, Immunosuppression., Liver injury may occur., toxic effects for reproduction (1-Bromopropane-d7)
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (1-Bromopropane-d7)

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 24.3 mg/l - 96 h (1-Bromopropane-d7) (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 99.3 mg/l - 48 h (1-Bromopropane-d7) (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (algae) - 72.3 mg/l - 96 h (1-Bromopropane-d7) (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - 270 mg/l - 5 min (1-Bromopropane-d7) Remarks: (ECHA) The value is given in analogy to the following substances: 1-bromopropane

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d (1-Bromopropane-d7) Result: 19.2 % - Not readily biodegradable. (OECD Test Guideline 301D)
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12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

DOT (US)

UN number: 2344 Class: 3 Packing group: II
Proper shipping name: Bromopropanes
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG

UN number: 2344 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: BROMOPROPANES

IATA

UN number: 2344 Class: 3 Packing group: II
Proper shipping name: Bromopropanes

SECTION 15: Regulatory information

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
1-Bromopropane-d7	61909-26-0	2015-11-23

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

SECTION 16: Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of

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