

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1,2-Dibromo-3-chloropropane

Product Number : 676713

Brand : Aldrich

Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA

Manufacturer : Sigma-Aldrich Corporation
3050 Spruce St.
St. Louis, Missouri 63103
USA

Telephone : +1 9058299500

Fax : +1 9058299292

Emergency Phone # (For both supplier and manufacturer) : 1-800-424-9300

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Testes., Central nervous system, Eyes, Liver, Kidney

WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D1B	Toxic Material Causing Immediate and Serious Toxic Effects	Toxic by ingestion
D2A	Very Toxic Material Causing Other Toxic Effects	Toxic by inhalation.
D2B	Toxic Material Causing Other Toxic Effects	Teratogen Carcinogen Reproductive hazard Mutagen

GHS Classification

Flammable liquids (Category 4)

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 4)

Eye irritation (Category 2B)

Germ cell mutagenicity (Category 1B)

Carcinogenicity (Category 1B)

Reproductive toxicity (Category 1A)

Specific target organ toxicity - repeated exposure (Category 2)

Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)	
H227	Combustible liquid
H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H320	Causes eye irritation.
H330	Fatal if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H402	Harmful to aquatic life.

Precautionary statement(s)	
P201	Obtain special instructions before use.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing.
P284	Wear respiratory 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.
P310	Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	2
Physical hazards:	0

Potential Health Effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Skin	May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	: DBCP
Formula	: C ₃ H ₅ Br ₂ Cl
Molecular Weight	: 236.33 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
1,2-Dibromo-3-chloropropane			
96-12-8	202-479-3	602-021-00-6	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Hydrogen bromide gas

Explosion data - sensitivity to mechanical impact

no data available

Explosion data - sensitivity to static discharge

no data available

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash protection
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 60 min
Material tested: Butoject® (KCL 897 / Aldrich Z677647, 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 CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist 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.

Eye protection

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

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	60 - 65 °C (140 - 149 °F) at 10.0 hPa (7.5 mmHg)
Flash point	76.7 °C (170.1 °F)
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	2.081 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 3.11
Relative vapor density	no data available

Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, Magnesium

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Hydrogen bromide gas

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 170.0 mg/kg

Inhalation LC50

LC50 Inhalation - rat - 8 h - 103 ppm

Dermal LD50

LD50 Dermal - rabbit - 1,400 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - Severe skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

May alter genetic material.

In vivo tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC: 2B - Group 2B: Possibly carcinogenic to humans (1,2-Dibromo-3-chloropropane)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

May cause reproductive disorders.

Teratogenicity

Known human reproductive toxicant

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

no data available

Potential health effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., Central nervous system depression, Gastrointestinal disturbance, Damage to the eyes., Liver injury may occur., Kidney injury may occur.

Synergistic effects

no data available

Additional Information

RTECS: TX8750000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - other fish - 20 mg/l - 48.0 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 2872 Class: 6.1 Packing group: III
Proper shipping name: Dibromochloropropane
Reportable Quantity (RQ): 1 lbs
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 2872 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: DIBROMOCHLOROPROPANES
Marine Pollutant: No

IATA

UN number: 2872 Class: 6.1 Packing group: III
Proper shipping name: Dibromochloropropanes

15. REGULATORY INFORMATION**WHMIS Classification**

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D2B	Toxic Material Causing Other Toxic Effects	Teratogen Carcinogen Reproductive hazard Mutagen

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

16. OTHER INFORMATION**Further information**

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