

Material Safety Data Sheet

Version 3.1
Revision Date 01/09/2009
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Bromomethane

Product Number : 65950
Brand : Fluka

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832
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Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Methyl bromide

Formula : CH₃Br

Molecular Weight : 94.94 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Bromomethane			
74-83-9	200-813-2	602-002-00-2	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Toxic by inhalation., Toxic by ingestion, Irritant, Reproductive hazard

Target Organs

Central nervous system, Kidney

HMIS Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 4
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation
Skin
Eyes
Ingestion

Toxic if inhaled. Causes respiratory tract irritation.
May be harmful if absorbed through skin. Causes skin irritation.
Causes eye irritation.
Toxic if swallowed.

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. 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

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point no data available

Ignition temperature 536 °C (997 °F) -

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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 for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

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.

Contents under pressure. Refrigerate before opening.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Bromomethane	74-83-9	TWA	1 ppm 3.9 mg/m3	1997-05-21	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
Remarks	Skin contact does contribute to exposure. The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans .				
		TWA	5 ppm 20 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
	Skin contact does contribute to exposure.				
		CEIL	20 ppm 80 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.
	Skin contact does contribute to exposure.				

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 AXBEK (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.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid, clear
Colour	colourless colourless

Safety data

pH	no data available
Melting point	-94 °C (-137 °F)
Boiling point	4 °C (39 °F)
Flash point	no data available
Ignition temperature	536 °C (997 °F) -
Lower explosion limit	10 %(V)
Upper explosion limit	16 %(V)
Vapour pressure	1,893.2 hPa (1,420.0 mmHg) at 20.0 °C (68.0 °F) 5,259.6 hPa (3,945.0 mmHg) at 55.0 °C (131.0 °F) 1,866.5 hPa (1,400.0 mmHg) at 20.0 °C (68.0 °F)
Density	3.3 g/mL at 25 °C (77 °F) 1.73 g/mL at 20 °C (68 °F)
Water solubility	soluble

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Extremes of temperature and direct sunlight.

Materials to avoid

Strong oxidizing agents, Plastics, Rubber, Aluminum, Strong bases, and its alloys, Alkali metals, Zinc

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 214.0 mg/kg

LC50 Inhalation - rat - 8 h - 302 ppm

Remarks: Behavioral:Change in motor activity (specific assay). Nutritional and Gross Metabolic:Weight loss or decreased weight gain. Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: Group 3 - Not classifiable as to carcinogenicity to humans (Bromomethane)

NTP: No component 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 identified as a carcinogen or potential carcinogen by OSHA.

Experiments have shown reproductive toxicity effects in male and female laboratory animals.

Signs and Symptoms of Exposure

Nausea, Dizziness, Headache, Anorexia., Vomiting, Weakness, Blurred vision, Confusion., Tremors, Convulsions, Pulmonary edema. Effects may be delayed., Cyanosis, Coma., possibly death

Potential Health Effects

Inhalation	Toxic if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed.
Target Organs	Central nervous system, Kidney,

Additional Information

RTECS: PA4900000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish	LC50 - other fish - 0.0008 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	Immobilization EC50 - Daphnia magna (Water flea) - 2 mg/l - 48 h

Further information on ecology

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

Very toxic to aquatic organisms. Dangerous for the ozone layer.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1062 Class: 2.3
Proper shipping name: Methyl bromide
Marine pollutant: No
Poison Inhalation Hazard: Hazard zone C

IMDG

UN-Number: 1062 Class: 2.3
Proper shipping name: METHYL BROMIDE
Marine pollutant: No

EMS-No: F-C, S-U

IATA

UN-Number: 1062 Class: 2.3
Proper shipping name: Methyl bromide
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION**OSHA Hazards**

Toxic by inhalation., Toxic by ingestion, Irritant, Reproductive hazard

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

Bromomethane

CAS-No.
74-83-9

Revision Date
1987-01-01

SARA 313 Components

Bromomethane

CAS-No.
74-83-9

Revision Date
1987-01-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Bromomethane

CAS-No.
74-83-9

Revision Date
1987-01-01

Pennsylvania Right To Know Components

Bromomethane

CAS-No.
74-83-9

Revision Date
1987-01-01

New Jersey Right To Know Components

Bromomethane

CAS-No.
74-83-9

Revision Date
1987-01-01

California Prop. 65 Components

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Bromomethane

CAS-No.
74-83-9

Revision Date
2005-01-22

16. OTHER INFORMATION**Further information**

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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 the product. Sigma-Aldrich Co., 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.