

**SIGMA-ALDRICH**

**Material Safety Data Sheet**

Version 3.1  
Revision Date 09/11/2009  
Print Date 01/27/2010

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : **Bromoacetic acid**  
Product Number : B56307  
Brand : Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +18003255832  
Fax : +18003255052  
Emergency Phone # : (314) 776-6555

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C<sub>2</sub>H<sub>3</sub>BrO<sub>2</sub>  
Molecular Weight : 138.95 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Bromoacetic acid</b>			
79-08-3	201-175-8	607-065-00-X	-

**3. HAZARDS IDENTIFICATION**

**Emergency Overview**

**OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Corrosive

**Target Organs**

Kidney, Liver

**Other hazards which do not result in classification**

Lachrymator.

**HMIS Classification**

Health Hazard: 4  
Chronic Health Hazard: \*  
Flammability: 1  
Physical hazards: 0

**NFPA Rating**

Health Hazard: 4  
Fire: 1  
Reactivity Hazard: 0

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**Potential Health Effects**

**Inhalation** : May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** : Causes skin burns. May be fatal if absorbed through skin.  
**Eyes** : Causes eye burns.  
**Ingestion** : May be fatal if swallowed. Causes burns.

**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**

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

**In case of eye contact**

Continue rinsing eyes during transport to hospital. 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. FIRE-FIGHTING MEASURES**

**Flammable properties**

Flash point : 113 °C (235 °F) - closed cup

Ignition temperature : no data available

**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 dust formation. Avoid breathing dust. 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**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE**

**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

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Light sensitive, hygroscopic Handle and store under inert gas.

## 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 particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) 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

Face shield and 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 crystalline  
Colour colourless

### Safety data

pH no data available  
Melting point 47 - 49 °C (117 - 120 °F) - lit.  
Boiling point 208 °C (406 °F) - lit.  
Flash point 113 °C (235 °F) - closed cup  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Vapour pressure 40 hPa (30 mmHg) at 127 °C (261 °F)  
Density 1.934 g/cm<sup>3</sup>  
Water solubility soluble  
Partition coefficient: log Pow: 0.41  
n-octanol/water

## 10. STABILITY AND REACTIVITY

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### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents, Strong bases

### Hazardous decomposition products

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

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 50 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Rigidity (includes catalepsy).

LD50 Dermal - rabbit - 59.9 mg/kg

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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.

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.

Genotoxicity in vitro - mouse - leukocyte  
DNA damage

### Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

### Potential Health Effects

#### Inhalation

May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

#### Skin

Causes skin burns. May be fatal if absorbed through skin.

#### Eyes

Causes eye burns.

#### Ingestion

May be fatal if swallowed. Causes burns.

#### Target Organs

Kidney, Liver,

### Additional Information

RTECS: AF5950000

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

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**Ecotoxicity effects**

Toxicity to algae EC50 - Scenedesmus subspicatus - 0.02 - 14.00 mg/l - 72 h

**Further information on ecology**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic organisms.

**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: 3425 Class: 8 Packing group: II  
Proper shipping name: Bromoacetic acid, solid  
Marine pollutant: No  
Poison inhalation Hazard: No

**IMDG**

UN-Number: 3425 Class: 8 Packing group: II EMS-No: F-A, S-B  
Proper shipping name: BROMOACETIC ACID, SOLID  
Marine pollutant: No

**IATA**

UN-Number: 3425 Class: 8 Packing group: II  
Proper shipping name: Bromoacetic acid, solid

**15. REGULATORY INFORMATION****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Corrosive

**DSL Status**

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Bromoacetic acid	CAS-No. 79-08-3
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**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

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

**Pennsylvania Right To Know Components**

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Bromoacetic acid

79-08-3

1989-12-01

**New Jersey Right To Know Components**

Bromoacetic acid

CAS-No.  
79-08-3

Revision Date  
1989-12-01

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION****Further Information**

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