1. PRODUCT AND COMPANY IDENTIFICATION

Product name: 4-Bromobutyronitrile
Product Number: B59802
Brand: Aldrich
Company: Sigma-Aldrich

3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: C₄H₆BrN
Molecular Weight: 148.00 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<td>5332-06-9</td>
<td>226-236-6</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
No known OSHA hazards

HMIS Classification
Health Hazard: 0
Flammability: 1
Physical hazards: 0

NFPA Rating
Health Hazard: 0
Fire: 1
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES
**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**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.

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5. **FIRE-FIGHTING MEASURES**

**Flammable properties**
- **Flash point**: 103 °C (217 °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.

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6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

**Environmental precautions**
Do not let product enter drains.

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

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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.

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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
For prolonged or repeated contact use protective 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
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form: clear, liquid
Colour: light yellow

Safety data
pH: no data available
Melting point: no data available
Boiling point: 205 °C (401 °F) - lit.
Flash point: 103 °C (217 °F) - closed cup
Ignition temperature: no data available
Lower explosion limit: no data available
Upper explosion limit: no data available
Density: 1.489 g/mL at 25 °C (77 °F)
Water solubility: no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas, Hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Intraperitoneal - mouse - 100 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.

**Signs and Symptoms of Exposure**

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

**Potential Health Effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

**Additional Information**

RTECS: ET8925000

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**12. ECOLOGICAL INFORMATION**

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

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**13. DISPOSAL CONSIDERATIONS**

**Product**

Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN-Number: 3276  Class: 6.1  Packing group: III

Proper shipping name: Nitriles, toxic, liquid, n.o.s. (4-Bromobutyronitrile)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN-Number: 3276  Class: 6.1  Packing group: III  EMS-No: F-A, S-A
Proper shipping name: NITRILES, TOXIC, LIQUID, N.O.S. (4-Bromobutyronitrile)
Marine pollutant: No

IATA
UN-Number: 3276  Class: 6.1  Packing group: III
Proper shipping name: Nitriles, toxic, liquid n.o.s. (4-Bromobutyronitrile)

15. REGULATORY INFORMATION

OSHA Hazards
No known OSHA hazards

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

4-Bromobutyronitrile  CAS-No.  5332-06-9

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
No SARA Hazards

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

Pennsylvania Right To Know Components
4-Bromobutyronitrile  CAS-No.  5332-06-9

New Jersey Right To Know Components
4-Bromobutyronitrile  CAS-No.  5332-06-9

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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