Material Safety Data Sheet
2-Bromobutane MSDS

Section 1: Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>2-Bromobutane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Codes:</td>
<td>SLB2035</td>
</tr>
<tr>
<td>CAS#:</td>
<td>78-76-2</td>
</tr>
<tr>
<td>RTECS:</td>
<td>EJ6228000</td>
</tr>
<tr>
<td>TSCA:</td>
<td>TSCA 8(b) inventory: 2-Bromobutane</td>
</tr>
<tr>
<td>CI#:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synonym:</td>
<td></td>
</tr>
<tr>
<td>Chemical Formula:</td>
<td>C4H9Br</td>
</tr>
</tbody>
</table>

Contact Information:
Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396
US Sales: 1-800-901-7247
International Sales: 1-281-441-4400
Order Online: ScienceLab.com
CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300
International CHEMTREC, call: 1-703-527-3887
For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>{2-}Bromobutane</td>
<td>78-76-2</td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: 2-Bromobutane LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

| Flammability of the Product: Flammable. |
| Auto-Ignition Temperature: Not available. |
| Flash Points: CLOSED CUP: 21°C (69.8°F). |
| Flammable Limits: Not available. |
| Products of Combustion: These products are carbon oxides (CO, CO2). |
| Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks. |
| Explosion Hazards in Presence of Various Substances: |
| Fire Fighting Media and Instructions: Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Never direct a water jet in the container in order to prevent any splashing of the product which could cause spreading of the fire. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. |
| Special Remarks on Fire Hazards: Not available. |
| Special Remarks on Explosion Hazards: Not available. |

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage
Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.
Odor: Pleasant.
Taste: Not available.
Molecular Weight: 137.03 g/mole
Color: Clear Colorless.
pH (1% soln/water): Not applicable.
Boiling Point: 91.2°C (196.2°F)
Melting Point: -112°C (-169.6°F)
Critical Temperature: Not available.
Specific Gravity: 1.2425 (Water = 1)
Vapor Pressure: 9.3kPa (@ 20°C)
Vapor Density: Not available.
Volatility: Not available.
Odor Threshold: Not available.
Water/Oil Dist. Coeff.: Not available.
Ionicity (in Water): Not available.
Dispersion Properties: Not available.
Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data
Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Not available.
Incompatibility with various substances: Not available.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity: Not available.
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.
Toxicity to Animals:
LD50: Not available. LC50: Not available.
Chronic Effects on Humans: Not available.
Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are more toxic.
Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.
Identification: 2-Bromobutane UNNA: UN2339 PG: II
Special Provisions for Transport: Not available.
Section 15: Other Regulatory Information

Federal and State Regulations:
New Jersey: 2-Bromobutane TSCA 8(b) inventory: 2-Bromobutane


Other Classifications:
WHMIS (Canada): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

DSCL (EEC):
R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):
- Health Hazard: 2
- Fire Hazard: 3
- Reactivity: 0
- Personal Protection: h

National Fire Protection Association (U.S.A.):
- Health: 2
- Flammability: 3
- Reactivity: 0
- Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 04:25 PM

Last Updated: 11/01/2010 12:00 PM

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