Section 1. Chemical Product and Company Identification

Common Name/Trade Name: n-Butylamine

CAS# 109-73-9

Manufacturers:
SPECTRUM QUALITY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Commercial Name(s) Not available.

Synonym 1-Butanamine

Chemical Name 1-Aminobutane

Chemical Family Primary aliphatic amine. (Alkali.)

Chemical Formula CH₃(CH₂)₃NH₂

Supplier SPECTRUM QUALITY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Section 2. Composition and Information on Ingredients

Exposure Limits

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) (n-)Butylamine</td>
<td>109-73-9</td>
<td></td>
<td>5</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

n-Butylamine:

ORAL (LD50): Acute: 366 mg/kg [Rat.].

DERMAL (LD50): Acute: 850 mg/kg [Rabbit].

Section 3. Hazards Identification

Potential Acute Health Effects: Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. Hazardous in case of inhalation. Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Continued on Next Page
**Potential Chronic Health Effects**

Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. Hazardous in case of inhalation.

**Carcinogenic Effects:** Not available.

**Mutagenic Effects:** Not available.

**Teratogenic Effects:** Not available.

**Developmental Toxicity:** Not available.

Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

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### Section 4. First Aid Measures

#### Eye Contact

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately. Finish by rinsing thoroughly with running water to avoid a possible infection.

#### 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. Cold water may be used. 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 immediate medical attention.

#### Inhalation

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

#### Serious Inhalation

Not available.

#### 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

312°C (593.6°F)

#### Flash Points

CLOSED CUP: -14°C (6.8°F). OPEN CUP: 1.1°C (34°F) (Cleveland).

#### Flammable Limits

LOWER: 1.7%  UPPER: 9.8%

#### Products of Combustion

These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

#### Fire Hazards in Presence of Various Substances

Highly flammable in presence of open flames and sparks, of heat, of oxidizing materials.

#### Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

#### Fire Fighting Media and Instructions

- Flammable liquid, soluble or dispersed in water.
- SMALL FIRE: Use DRY chemical powder.
- LARGE FIRE: Use alcohol foam, water spray or fog.

#### Special Remarks on Fire Hazards

Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition it emits toxic fumes.

#### Special Remarks on Explosion Hazards

Not available.
### Section 6. Accidental Release Measures

**Small Spill**
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of acetic acid.** Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill**
Flammable liquid. Corrosive liquid. 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. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. **Neutralize the residue with a dilute solution of acetic acid.** Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### Section 7. Handling and Storage

**Precautions**
Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

**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**

**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**
CEIL: 5 from ACGIH (TLV) [United States]
Consult local authorities for acceptable exposure limits.

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical state and appearance</th>
<th>Odor</th>
<th>Molecular Weight</th>
<th>pH (1% soln/water)</th>
<th>Boiling Point</th>
<th>Melting Point</th>
<th>Critical Temperature</th>
<th>Specific Gravity</th>
<th>Vapor Pressure</th>
<th>Vapor Density</th>
<th>Volatility</th>
<th>Odor Threshold</th>
<th>Water/Oil Dist. Coeff.</th>
<th>Ionicity (in Water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid. (Liquid.)</td>
<td>Amine like.</td>
<td>73.14 g/mole</td>
<td>13 [Basic.]</td>
<td>77.1 (170.8°F)</td>
<td>-49.1°C (-56.4°F)</td>
<td>Not available.</td>
<td>0.74 (Water = 1)</td>
<td>9.1 kPa (@ 20°C)</td>
<td>2.5 (Air = 1)</td>
<td>Not available.</td>
<td>0.08 ppm</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Continued on Next Page
**Section 10. Stability and Reactivity Data**

**Stability**
The product is stable.

**Instability Temperature**
Not available.

**Conditions of Instability**
Not available.

**Incompatibility with various substances**
Reactive with oxidizing agents, acids.
Slightly reactive to reactive with metals.

**Corrosivity**
Highly corrosive in presence of aluminum, of copper.
Non-corrosive in presence of glass.

**Special Remarks on Reactivity**
Not available.

**Special Remarks on Corrosivity**
Incompatible with copper alloys.

**Polymerization**
Will not occur.

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**Section 11. Toxicological Information**

**Routes of Entry**
Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals**
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 366 mg/kg [Rat].
Acute dermal toxicity (LD50): 850 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 800 1 hours [Mouse].

**Chronic Effects on Humans**
Not available.

**Other Toxic Effects on Humans**
Extremely hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).
Very hazardous in case of skin contact (irritant, permeator), of ingestion.

**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**
Exposure can cause nausea, headache and vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract.

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**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.

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*Continued on Next Page*
### Section 13. Disposal Considerations

**Waste Disposal**

### Section 14. Transport Information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>CLASS 3: Flammable liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identification</strong></td>
<td>: n-Butylamine UNNA: UN1125 PG: II</td>
</tr>
<tr>
<td><strong>Special Provisions for Transport</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**DOT (Pictograms)**

![DOT Class 3 Pictogram](image)

### Section 15. Other Regulatory Information and Pictograms

<table>
<thead>
<tr>
<th>Federal and State Regulations</th>
<th>Pennsylvania RTK: n-Butylamine  Massachusets RTK: n-Butylamine  TSCA 8(b) inventory: n-Butylamine  CERCLA: Hazardous substances.: n-Butylamine</th>
</tr>
</thead>
</table>

**Other Classifications**

<table>
<thead>
<tr>
<th>Classifications</th>
<th>WHMIS (Canada)</th>
<th>DSCL (EEC)</th>
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</table>

**HMIS (U.S.A.)**

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**National Fire Protection Association (U.S.A.)**

![Health Hazard](image) ![Flammability](image) 3 0

**WHMIS (Canada) (Pictograms)**

![WHMIS (Canada) Pictogram](image)

**DSCL (Europe) (Pictograms)**

![DSCL (Europe) Pictogram](image)

**Continued on Next Page**
**Section 16. Other Information**

**MSDS Code**  B4175

**References**  
- The Sigma-Aldrich Library of Chemical Safety Data, Edition II.  

**Other Special Considerations**  
Not available.

**Validated by Sonia Owen on 8/11/2006.**

**Verified by Sonia Owen.**

**Printed 9/11/2006.**

**CALL (310) 516-8000**

**Notice to Reader**  
All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.