



Material Safety Data Sheet

NFPA 	HMIS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; font-weight: bold;">3</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center; font-weight: bold;">3</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> </table>	Health Hazard	3	Fire Hazard	3	Reactivity	0	Personal Protective Equipment  See Section 15.
Health Hazard	3							
Fire Hazard	3							
Reactivity	0							

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/Trade Name	n-Butylamine	Catalog Number(s). B1184
Manufacturer	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# 109-73-9
Commercial Name(s)	Not available.	RTECS EO2975000
Synonym	1-Butanamine	TSCA TSCA 8(b) inventory: n-Butylamine
Chemical Name	1-Aminobutane	CI# Not applicable.
Chemical Family	Primary aliphatic amine. (Alkali.)	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000
Chemical Formula	CH ₃ (CH ₂) ₃ NH ₂	
Supplier	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
Name	CAS #	<i>Exposure Limits</i>			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) {n-}Butylamine	109-73-9			5	100
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.

Potential Chronic Health Effects	<p>Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. Hazardous in case of inhalation.</p> <p>CARCINOGENIC EFFECTS: Not available.</p> <p>MUTAGENIC EFFECTS: Not available.</p> <p>TERATOGENIC EFFECTS: Not available.</p> <p>DEVELOPMENTAL TOXICITY: Not available.</p> <p>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.</p>
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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, CO ₂), nitrogen oxides (NO, NO ₂ ...).
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	Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.
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

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

Continued on Next Page

Dispersion Properties	See solubility in water, methanol, diethyl ether, acetone.
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether, acetone.

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.

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.

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 : n-Butylamine UNNA: UN1125 PG: II

Special Provisions for Transport Not available.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations Pennsylvania RTK: n-Butylamine
 Massachusetts RTK: n-Butylamine
 TSCA 8(b) inventory: n-Butylamine
 CERCLA: Hazardous substances.: n-Butylamine

California Proposition 65 Warnings

Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications

WHMIS (Canada)	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).
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DSCL (EEC)	R11- Highly flammable. R22- Harmful if swallowed. R35- Causes severe burns.
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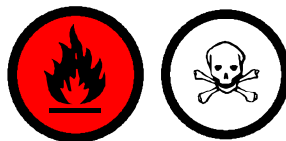
HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	3
Reactivity	0
Personal Protection	0

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

Health		Flammability
		Reactivity
		Sort (Fast)e.En

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



**TDG (Canada)
(Pictograms)**



**ADR (Europe)
(Pictograms)**



Protective Equipment



Gloves.



Full suit.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Face shield.

Section 16. Other Information

MSDS Code B4175

References

- Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
- Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
- SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
- The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
- Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.
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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.