





# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>3</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	3	Reactivity	0	<div></div> <div>See Section 15.</div>
Health Hazard	2							
Fire Hazard	3							
Reactivity	0							

Section 1. Chemical Product and Company Identification			Page Number: 1	
Common Name/ Trade Name	1-Bromobutane		Catalog Number(s).	B1152
			CAS#	109-65-9
Manufacturer	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		RTECS	EJ6225000
			TSCA	TSCA 8(b) inventory: 1-Bromobutane
Commercial Name(s)	Not available.		CI#	Not available.
Synonym	1-Bromobutane		<b><u>IN CASE OF EMERGENCY</u></b> <b><u>CHEMTREC (24hr) 800-424-9300</u></b>  CALL (310) 516-8000	
Chemical Name				
Chemical Family	Not available.			
Chemical Formula	C4H9Br			
Supplier	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248			

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) {1-}Bromobutane	109-65-9				100
Toxicological Data on Ingredients	1-Bromobutane LD50: Not available. LC50: Not available.				

Section 3. Hazards Identification	
Potential Acute Health Effects	Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Continued on Next Page



**Section 4. First Aid Measures**

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
<b>Serious Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	Flammable.
<b>Auto-Ignition Temperature</b>	265°C (509°F)
<b>Flash Points</b>	CLOSED CUP: 23°C (73.4°F). OPEN CUP: 18.33°C (65°F).
<b>Flammable Limits</b>	LOWER: 2.6% UPPER: 6.6%
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ).
<b>Fire Hazards in Presence of Various Substances</b>	Flammable in presence of open flames and sparks, of heat, of oxidizing materials.
<b>Explosion Hazards in Presence of Various Substances</b>	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.
<b>Fire Fighting Media and Instructions</b>	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.
<b>Special Remarks on Fire Hazards</b>	Not available.
<b>Special Remarks on Explosion Hazards</b>	Not available.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
<b>Large Spill</b>	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**

<b>Precautions</b>	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. Wear suitable protective clothing. 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.
<b>Storage</b>	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**

<b>Engineering Controls</b>	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.
<b>Personal Protection</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	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.
<b>Exposure Limits</b>	Not available.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Liquid.	<b>Odor</b>	Not available.
<b>Molecular Weight</b>	137.03 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not applicable.	<b>Color</b>	Not available.
<b>Boiling Point</b>	101.4°C (214.5°F)		
<b>Melting Point</b>	-112.4°C (-170.3°F)		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	1.276 (Water = 1)		
<b>Vapor Pressure</b>	5.2 kPa (@ 20°C)		
<b>Vapor Density</b>	4.72 (Air = 1)		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	Not available.		
<b>Solubility</b>	Insoluble in cold water.		

**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Not available.
<b>Incompatibility with various substances</b>	Not available.
<b>Corrosivity</b>	Non-corrosive in presence of glass.

**Continued on Next Page**



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

**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.**  
Acute toxicity of the vapor (LC50): 237000 1 hours [Rat].

Chronic Effects on Humans

Causes damage to the following organs: lungs, mucous membranes.

Other Toxic Effects on  
Humans

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

: n-Butyl bromide UNNA: UN1126 PG: II

Special Provisions for  
Transport

Not available.

Continued on Next Page



## DOT (Pictograms)



## Section 15. Other Regulatory Information and Pictograms

## Federal and State Regulations

Pennsylvania RTK: 1-Bromobutane  
 Massachusetts RTK: 1-Bromobutane  
 TSCA 8(b) inventory: 1-Bromobutane

## 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-2A: Material causing other toxic effects (VERY TOXIC).

## DSCL (EEC)

R10- Flammable.  
 R36/38- Irritating to eyes and skin.

## HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	3
Reactivity	0
Personal Protection	h

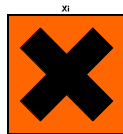
## National Fire Protection Association (U.S.A.)

Health	2	3	0	Flammability
				Reactivity
				Specific hazard

## WHMIS (Canada) (Pictograms)



## DSCL (Europe) (Pictograms)



## TDG (Canada) (Pictograms)



## ADR (Europe) (Pictograms)



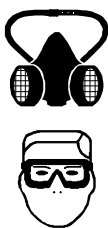
## Protective Equipment



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

**MSDS Code** B3890

**References** Not available.

**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.*