

# Material Safety Data Sheet

<p><b>NFPA</b></p> 	<p><b>HMIS</b></p> <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; border: 1px solid black;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center; border: 1px solid black;">1</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	<p><b>Personal Protective Equipment</b></p>  <p style="text-align: center;">See Section 15.</p>
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							

<b>Section 1. Chemical Product and Company Identification</b>		<i>Page Number: 1</i>
<b>Common Name/Trade Name</b>	<b>Tetrabutylammonium Chloride</b>	
	<b>Catalog Number(s).</b>	T2002
	<b>CAS#</b>	1112-67-0
<b>Manufacturer</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	<b>RTECS</b>	Not available.
	<b>TSCA</b>	TSCA 8(b) inventory: Tetrabutylammonium Chloride
<b>Commercial Name(s)</b>	Not available.	
	<b>CI#</b>	Not available.
<b>Synonym</b>	1-Butanaminim, N,N,N-tributyl, chloride	
<b>Chemical Name</b>	Tetrabutylammonium Chloride	
<b>Chemical Family</b>	Not available.	
<b>Chemical Formula</b>	C16-H-36-N-Cl	
<b>Supplier</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
<p><b><u>IN CASE OF EMERGENCY</u></b>  <b><u>CHEMTREC (24hr) 800-424-9300</u></b>            CALL (310) 516-8000</p>		

<b>Section 2. Composition and Information on Ingredients</b>					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Tetrabutylammonium Chloride	1112-67-0				100
<b>Toxicological Data on Ingredients</b>					
		<b>Tetrabutylammonium Chloride hydrate</b>			
		LD50: Not available.			
		LC50: Not available.			

<b>Section 3. Hazards Identification</b>	
<b>Potential Acute Health Effects</b>	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
<b>Potential Chronic Health Effects</b>	<p><b>CARCINOGENIC EFFECTS:</b> Not available.</p> <p><b>MUTAGENIC EFFECTS:</b> Not available.</p> <p><b>TERATOGENIC EFFECTS:</b> Not available.</p> <p><b>DEVELOPMENTAL TOXICITY:</b> Not available.</p> <p>Repeated or prolonged exposure is not known to aggravate medical condition.</p>

**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. Cold water may be used. 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. Cold water may be used. 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.
<b>Serious Inhalation</b>	Not available.
<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>	May be combustible at high temperature.
<b>Auto-Ignition Temperature</b>	Not available.
<b>Flash Points</b>	CLOSED CUP: 113°C (235.4°F). OPEN CUP: 200°C (392° F).
<b>Flammable Limits</b>	Not available.
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ) and water, nitrogen oxides (NO, NO <sub>2</sub> ...), halogenated compounds.
<b>Fire Hazards in Presence of Various Substances</b>	Slightly flammable to flammable in presence of heat.
<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>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Special Remarks on Fire Hazards</b>	Material in powder form, capable of creating a dust explosion.
<b>Special Remarks on Explosion Hazards</b>	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
<b>Large Spill</b>	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**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 breathe dust. Wear suitable protective clothing. 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. Keep away from incompatibles such as oxidizing agents.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection</b>	Splash goggles. Lab coat. Dust 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. Dust 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>	Solid. (Powdered solid. Crystalline powder.)	<b>Odor</b>	Odorless to slight tributylamine
<b>Molecular Weight</b>	277.92 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available.	<b>Color</b>	White. Off-white.
<b>Boiling Point</b>	Not available.		
<b>Melting Point</b>	83°C (181.4°F) - 86 C.		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	Density: 1.05 (Water = 1)		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not available.		
<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>	See solubility in water.		
<b>Solubility</b>	Soluble 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>	Excess heat and incompatible materials (oxidizers).
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents.
<b>Corrosivity</b>	Not available.
<b>Special Remarks on Reactivity</b>	Not available.

Continued on Next Page

**Tetrabutylammonium Chloride**

Page Number: 4

**Special Remarks on Corrosivity** Not available.

**Polymerization** Will not occur.

**Section 11. Toxicological Information**

**Routes of Entry** Inhalation. Ingestion.

**Toxicity to Animals** LD50: Not available.  
LC50: Not available.

**Chronic Effects on Humans** Not available.

**Other Toxic Effects on Humans** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**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** Acute Potential Health Effects:  
Skin: Causes skin irritation.  
Eye: Causes eye irritation  
Inhalation: Causes respiratory tract irritation.  
Ingestion: No toxicity or other health information is available. May cause digestive tract irritation. May be harmful if swallowed.

**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 than the product itself.

**Special Remarks on the Products of Biodegradation** Not available.

**Section 13. Disposal Considerations**

**Waste Disposal** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

**DOT Classification** Not a DOT controlled material (United States).

**Identification** Not applicable.

**Special Provisions for Transport** Not applicable.

**DOT (Pictograms)**



Continued on Next Page

**Section 15. Other Regulatory Information and Pictograms**

**Federal and State Regulations** TSCA 8(b) inventory: Tetrabutylammonium Chloride

**California Proposition 65 Warnings** California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. (EINECS No. 214-195-7).  
Canada: Listed on Canadian Domestic Substance List (DSL).  
China: Listed on National Inventory.  
Japan: Listed on National Inventory (ENCS).  
Korea: Listed on National Inventory (KECI).  
Philippines: Listed on National Inventory (PICCS).  
Australia: Listed on AICS.

<b>Other Classifications</b>	<b>WHMIS (Canada)</b> CLASS D-2B: Material causing other toxic effects (TOXIC).		
	<table border="1"> <tr> <td><b>DSCL (EEC)</b></td> <td>R36/37/38- Irritating to eyes, respiratory system and skin.</td> <td>S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection.</td> </tr> </table>	<b>DSCL (EEC)</b>	R36/37/38- Irritating to eyes, respiratory system and skin.
<b>DSCL (EEC)</b>	R36/37/38- Irritating to eyes, respiratory system and skin.	S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection.	

<b>HMIS (U.S.A.)</b>	<b>Health Hazard</b> 2	<b>National Fire Protection Association (U.S.A.)</b>		Flammability	
	<b>Fire Hazard</b> 1			Health	Reactivity
	<b>Reactivity</b> 0				Specific hazard
	<b>Personal Protection</b> E				

**WHMIS (Canada) (Pictograms)**

**DSCL (Europe) (Pictograms)**

**TDG (Canada) (Pictograms)**

**ADR (Europe) (Pictograms)**

**Protective Equipment**

	Gloves.
	Lab coat.
	Dust 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** T0443**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 7/23/2009.

Verified by Sonia Owen.

Printed 7/23/2009.

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.*