



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1" style="margin: auto;"> <tr> <td style="background-color: #00b0f0; color: white;">Health Hazard</td> <td style="text-align: center; border: 1px solid black;">2</td> </tr> <tr> <td style="background-color: #ff6b6b; color: white;">Fire Hazard</td> <td style="text-align: center; border: 1px solid black;">1</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">Reactivity</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							
		See Section 15.						

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/Trade Name	Tributyl Tin Chloride	
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
Commercial Name(s)	Not available.	
Synonym	Chlorotributylstannane; Monochlorotributyltin; Stannane, tributylchloro-Tin, tri-n-butyl, chloride; Tri-n-butyltin chloride; Tributylchlorotin Tributylstannium chloride; Tributylstannyl chloride; Tributyltin chloride Tributyltin-chloride	
Chemical Name	Stannane, chlorotributyl-	
Chemical Family	Not available.	
Chemical Formula	C ₁₂ H ₂₇ Cl-Sn	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	Catalog Number(s).	T2022
	CAS#	1461-22-9
	RTECS	WH6820000
	TSCA	TSCA 8(b) inventory: Tributyl Tin Chloride
	CI#	Not available.
	<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000	

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Tributyl Tin Chloride	1461-22-9	0.1			100
Toxicological Data on Ingredients	Tributyl Tin Chloride: ORAL (LD50): Acute: 129 mg/kg [Rat]. 60 mg/kg [Mouse]. 147 mg/kg [Hamster].				

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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.
Skin Contact	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.
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.
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	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	>150°C (302°F)
Flash Points	CLOSED CUP: >112°C (233.6°F).
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO ₂), halogenated compounds.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of open flames and sparks, of heat.
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	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	When heated to decomposition it emits toxic fumes of hydrogen chloride, carbon monoxide, carbon dioxide, tin/tin oxides.
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	Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas, dike if needed. Eliminate all ignition sources. Call for assistance on disposal. 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 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. Keep away from incompatibles such as oxidizing agents.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

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	TWA: 0.1 STEL: 0.2 (mg(Sn)/m ³) from ACGIH (TLV) [United States] TWA: 0.1 (mg(Sn)/m ³) from OSHA (PEL) [United States] TWA: 0.1 (mg(Sn)/m ³) from NIOSH [United States] TWA: 0.1 STEL: 0.2 (mg(Sn)/m ³) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Stench.
Molecular Weight	325.49 g/mole	Taste	Not available.
pH (1% soln/water)	Not applicable.	Color	Clear Colorless.
Boiling Point	171°C (339.8F) 173 C. @ 25 mm Hg.		
Melting Point	-9°C (15.8F)		
Critical Temperature	Not available.		
Specific Gravity	1.2 (Water = 1)		
Vapor Pressure	Not available.		
Vapor Density	11.2 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	The product is more soluble in oil; log(oil/water) = 4.8		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Insoluble in cold water. Soluble in common organic solvents, including alcohol, heptane, benzene, toluene. Insoluble in cold water, but hydrolyzes in hot water.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents
Corrosivity	Not available.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation.
Toxicity to Animals	Acute oral toxicity (LD50): 60 mg/kg [Mouse].
Chronic Effects on Humans	CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Lethal Dose/Conc 50% Kill: LD50[Rabbit] - Route: Oral; Dose: 30 ug/kg
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects and birth defects (teratogenic) May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes moderate to severe eye irritation. Inhalation: Inhalation of mist or vapor may cause respiratory tract irritation. Ingestion: Harmful if swallowed. May cause anorexia, nausea, vomiting, diarrhea). May affect behavior/central nervous system/peripheral nervous system (ataxia, tremor, local anesthetic). Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may cause weight loss. It may also affect the spleen, thymus, respiration (respiratory depression). Skin: Prolonged or repeated skin contact may cause dermatitis.

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 as toxic as the product itself.
Special Remarks on the Products of Biodegradation	Tributyl tin compounds are extremely toxic to marine life.

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 CLASS 6.1: Poisonous material.

Identification UNNA: 2788: Organotin compound, liquid, n.o.s (Chlorotributyltin) PG: III

Special Provisions for Transport Not available.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations TSCA 8(b) inventory: Tributyl Tin 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 OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 215-958-7).
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.

Other Classifications

WHMIS (Canada)	CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).	
DSCL (EEC)	R25- Toxic if swallowed. R36/38- Irritating to eyes and skin. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMS (U.S.A.)

Health Hazard	2
Fire Hazard	1
Reactivity	0
Personal Protection	h

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

Health

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 T0210

References Not available.

Other Special Considerations

Major Uses: Intermediate; rodenticide, rodent-repellent cable coating; industrial biocide; in agricultural chemicals, wood preservatives, and marine antifoulants.
Use of tributyltin compounds in antifoulants is restricted because of toxicity to aquatic organisms and the EPA is cooperating in international efforts for global phase-out.

Validated by Sonia Owen on 11/13/2008.

Verified by Sonia Owen.

Printed 12/2/2008.

CALL (310) 516-8000

[Notice to Reader](#)

Continued on Next Page

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.