



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;">2</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	2	Reactivity	0	Personal Protective Equipment <p style="text-align: center;">See Section 15.</p>
Health Hazard	3							
Fire Hazard	2							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1	
Common Name/Trade Name	Tributylamine	Catalog Number(s).	
		YY287, T1103	
Manufacturer	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS#	
		102-82-9	
Commercial Name(s)	Not available.	RTECS	
Synonym	Not available.	YA0350000	
Chemical Name		TSCA	
Chemical Family	Not available.	TSCA 8(b) inventory: Tributylamine	
Chemical Formula	C ₁₂ H ₂₇ N	CI#	
		Not available.	
Supplier	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 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) Tributylamine	102-82-9				100
Toxicological Data on Ingredients	Tributylamine: ORAL (LD50): Acute: 114 mg/kg [Rat]. 114 mg/kg [Mouse]. 615 mg/kg [Rabbit]. DERMAL (LD50): Acute: 194 mg/kg [Rabbit]. VAPOR (LC50): Acute: 75 ppm 4 hour(s) [Rat].				

Section 3. Hazards Identification	
Potential Acute Health Effects	Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (permeator). 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.

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Potential Chronic Health Effects**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 an 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. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation

Allow the victim to rest in a well ventilated area. Seek immediate 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. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion

Not available.

Section 5. Fire and Explosion Data**Flammability of the Product**

Combustible.

Auto-Ignition Temperature

210°C (410°F)

Flash Points

CLOSED CUP: 63°C (145.4°F). (Setaflash) OPEN CUP: 85.5°C (185.9°F).

Flammable Limits

LOWER: 1.4% UPPER: 6%

Products of Combustion

These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances

Not available.

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

Not available.

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. If necessary: Neutralize the residue with a dilute solution of acetic acid.
Large Spill	Combustible material. 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. Eliminate all ignition sources. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid.

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/vapour/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.
Storage	Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

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	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	185.36 g/mole	Taste	Not available.
pH (1% soln/water)	12 [Basic.]	Color	Colorless to light yellow.
Boiling Point	216.5°C (421.7°F)		
Melting Point	-70°C (-94°F)		
Critical Temperature	Not available.		
Specific Gravity	0.7782 (Water = 1)		
Vapor Pressure	0.3 mm of Hg (@ 20°C)		
Vapor Density	6.38 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	The product is equally soluble in oil and water; log(oil/water) = 0		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Very slightly soluble in cold water.		

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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Not available.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	No.

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): 114 mg/kg [Mouse]. Acute dermal toxicity (LD50): 194 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 75 ppm 4 hour(s) [Rat].
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. 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 8: Corrosive liquid.

Identification : Corrosive liquids n.o.s. : UN2542 PG: III

Special Provisions for Transport Not available.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
 Pennsylvania RTK: Tributylamine
 Florida: Tributylamine
 Massachusetts RTK: Tributylamine
 New Jersey: Tributylamine
 TSCA 8(b) inventory: Tributylamine

California Proposition 65 Warnings

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

Other Classifications

WHMIS (Canada)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid.
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DSCL (EEC)
 R23- Toxic by inhalation.
 R38- Irritating to skin.
 R41- Risk of serious damage to eyes.

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	2
Reactivity	0
Personal Protection	0

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.



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 T3784

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/29/2006.

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.