

MATERIAL SAFETY DATA SHEET

MSDS

Tower Pro Tablets

Date-Issued: 10/03/1997
MSDS Ref. No: BBIO61734
Date-Revised: 02/22/2005
Revision No: 5

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Tower Pro Tablets
GENERAL USE: Industrial water treatment.
CHEMICAL FAMILY: Chlorinated Isocyanurates

MANUFACTURER

Bio-Lab, Inc.
 BioLab Water Additives Division
 P.O. Box 300002
 Lawrenceville, GA 30049-1002
Customer SERVICE: (800) 600-4523

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical) : (877) 800 - 5553
CHEMTREC (US Transportation) : (800) 424 - 9300

COMMENTS: EPA Registration Number: 5185-144

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>
Trichloro-s-triazinetrione	87-90-1	99

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL APPEARANCE: White tablets with halogen odor.

IMMEDIATE CONCERNS: DANGER: Highly Corrosive: Causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or safety glasses and rubber gloves when handling this product. Irritating to nose and throat. Avoid breathing dust and fumes. Remove contaminated clothing and wash before reuse.

POTENTIAL HEALTH EFFECTS

EYES: DANGER: Highly Corrosive. Causes eye damage. Do not get in eyes.

SKIN: DANGER: Highly Corrosive. Causes skin damage. Do not get on skin.

INGESTION: May be fatal if swallowed.

INHALATION: Irritating to nose and throat. Avoid breathing dust or fumes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: May result in corrosion to the eyes. Dust or vapors may cause irritation and tearing.

SKIN: Dermal contact is expected to be a primary route of exposure and can cause skin irritation which may result in corrosion if not promptly removed.

INGESTION: Will result in burning of mouth, throat and esophagus, abdominal distress and severe irritation, possible corrosion of the digestive tract.

INHALATION: Breathing dust or fumes is expected to be a primary route of exposure and may produce throat and respiratory tract irritation.

ROUTES OF ENTRY: Skin Contact, Inhalation, Ingestion, Eye Contact.

COMMENTS HEALTH: There are no known chronic hazards.

4. FIRST AID MEASURES

EYES: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SKIN: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: If swallowed: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call poison control center or doctor for treatment advice.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Applicable

AUTOIGNITION TEMPERATURE: Not Applicable

GENERAL HAZARD: This product did not ignite when exposed to pallet scale burn tests. When in direct contact with combustible material, this product may slightly enhance the burning rate of the combustible material. Under extreme heat (greater than 400F), this product will evolve noxious chlorine containing gases necessitating the need for self contained breathing apparatus (SCBA) when applying extinguishing media (WATER).

EXTINGUISHING MEDIA: In case of fire or smoke, call the fire department. Do not attempt to extinguish the fire without a self-contained breathing apparatus (SCBA). Do not let the fire burn. Flood with copious amounts of water. DO NOT use ABC or other dry chemical extinguishers since there is the potential for a violent reaction.

EXPLOSION HAZARDS: Nitrogen trichloride can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Nitrogen trichloride can present an explosion hazard. Immediately after a fire has been extinguished, check for wet or damp material. Any spilled material from burned or broken containers should be assumed contaminated. Neutralize to a non-oxidizing material for safe disposal. Do not attempt to re-close broken containers, even for movement to the disposal area. They should be left open to disperse any nitrogen trichloride that may form. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. If the plastic liner (where applicable) of the container is damaged or the material is damp, the material should be chemically treated if allowable, to a non-oxidizing material for safe disposal. Bulging containers require extreme care. Contact the fire department.

FIRE FIGHTING PROCEDURES: Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA). Using a 10% solution of sodium carbonate, thoroughly decontaminate fire fighting equipment including all fire fighting apparel after the incident.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Using appropriate protective clothing and safety equipment, contain spilled material. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not use floor sweeping compounds to clean up spills. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form. Do not transport wet or damp material. Keep product out of sewers, watersheds and water systems. Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Dispose of according to local, state and federal regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin or clothing. Avoid breathing dust or fumes.

HANDLING: STRONG OXIDIZING AGENT: Do not mix with other chemicals. Mix only with water. Never add water to product. Always add product to large quantities of water. When using automatic feeding devices, always follow manufacturer's directions as to the proper addition of sanitizer product to chlorinators. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other

product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter or other chemicals will start a chemical reaction and generate heat, hazardous gas, possible fire and explosion. In case of contamination or decomposition, do not reseal container. If possible, isolate container in open air or well ventilated area. Flood area with large volumes of water.

STORAGE: Keep this product dry in original tightly closed container when not in use. Store in a cool, dry, well ventilated area away from heat or open flame. Moisture may decompose this product and cause a violent reaction leading to fire and explosion. In case of decomposition, isolate container if possible and flood area with large amounts of water to dissolve all material before discarding this container. Do not contaminate food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	<u>EXPOSURE LIMITS</u>					
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>SUPPLIER OEL</u>	
	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
Trichloro-s-triazinetriene						
	TWA	N/E ^[1]			N/E	

OSHA TABLE COMMENTS:

1. N/E = Not Established

ENGINEERING CONTROLS: General room ventilation plus local exhaust should be used to minimize exposure to dust/vapors.

PERSONAL PROTECTIVE EQUIPMENT:

EYES AND FACE: Wear goggles or safety glasses with side shields when handling this product.

SKIN: Wear rubber gloves when handling this product. Avoid contact with skin.

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

WORK HYGIENIC PRACTICES: Remove and wash contaminated clothing before reuse.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: Chlorine

APPEARANCE: Tablet

COLOR: White

pH: 3 to 3.5(1% solution @ 25 C)

PERCENT VOLATILE: Not Applicable

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Determined

BOILING POINT: Not Applicable

FREEZING POINT: Not Applicable

THERMAL DECOMPOSITION: 225°C to 230°C

SOLUBILITY IN WATER: 1.2 g/100g Water @ 25 C

DENSITY: 55 - 60 lb/cu ft

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: High temperature. Poor ventilation. Contamination. Moisture/high humidity.

STABILITY: This product is stable under normal conditions.

POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Chlorine containing gases can be produced.

INCOMPATIBLE MATERIALS: This material is a strong oxidizing agent. Avoid contact with water on concentrated material in the container. Also avoid contact with easily oxidizable organic material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; alkalis; other swimming pool/spa chemicals in their concentrated forms.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: 7600 mg/kg of body weight in rabbits.

ORAL LD₅₀: 600 mg/kg of body weight in rats

On contact with moisture, this material readily hydrolyzes to hypochlorous acid and cyanuric acid. The tissue damage resulting from contact is considered to result, in part, from its hypochlorous acid decomposition products. May cause gastrointestinal and respiratory tract irritation. May be severely irritating or corrosive to eyes and skin.

EYE EFFECTS: This product is corrosive to eyes.

SKIN EFFECTS: This product is corrosive to skin.

CHRONIC / SUBCHRONIC:

Chronic exposure to large amounts of this compound has not been characterized and the irritating properties of the compound make such an exposure highly unlikely.

CARCINOGENICITY:

This product is not listed as a carcinogen by IARC.

This product is not listed as a carcinogen by NTP.

This product is not listed as a carcinogen by OSHA.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Pesticide wastes are toxic. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction or fire.

EMPTY CONTAINER: Do not reuse container, but place in trash collection. Rinse thoroughly before discarding in trash.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Trichloroisocyanuric Acid, Dry

PRIMARY HAZARD CLASS/DIVISION: 5.1

UN/NA NUMBER: 2468

PACKING GROUP: II

AIR (ICAO/IATA)

IATA NOTE: Not recommended for transport by air.

15. REGULATORY INFORMATION

UNITED STATES

HMIS RATING

HEALTH:		3
FLAMMABILITY:		1
PHYSICAL HAZARD:		1
PERSONAL PROTECTION:		B

NFPA RATING

HEALTH:	3
FIRE:	1
REACTIVITY:	1

Key

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

NFPA STORAGE CLASSIFICATION: NFPA Oxidizer Class 1

MANUFACTURER DISCLAIMER: IMPORTANT: This information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.