

**MATERIAL SAFETY DATA SHEET**

MSDS

**BioGuard Brominating Tablets**

**Date-Issued:** 02/18/1997  
**MSDS Ref. No:** BBIO22023  
**Date-Revised:** 10/31/2005  
**Revision No:** 10

**1. PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** BioGuard Brominating Tablets  
**GENERAL USE:** Swimming Pool Sanitizer  
**CHEMICAL FAMILY:** Halogenated hydantoin

**MANUFACTURER**

Bio-Lab, Inc., A Chemtura Company  
 BioGuard  
 P.O. Box 300002  
 Lawrenceville, GA 30049-1002  
**Customer SERVICE:** 800-859-7946

**24 HR. EMERGENCY TELEPHONE NUMBERS**

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

**COMMENTS:** EPA Registration Number: 5185-420

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Chemical Name</u>	<u>CAS</u>	<u>Wt. %</u>
1-bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	96

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

**PHYSICAL APPEARANCE:** White tablets with halogen odor.

**IMMEDIATE CONCERNS:** DANGER. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wear protective clothing and rubber gloves when handling this product. Avoid breathing dust and fumes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**POTENTIAL HEALTH EFFECTS**

**EYES:** Causes irreversible eye damage. Do not get in eyes.

**SKIN:** Causes skin burns. Do not get on skin.

**INGESTION:** Harmful if swallowed.

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

**CHRONIC:** There are no known chronic hazards.

**MEDICAL CONDITIONS AGGRAVATED:** Existing dermatitis may be aggravated by exposure.

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

**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 advise.

**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.

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## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** Not Applicable

**FLAMMABLE CLASS:** NFPA Class II Oxidizer

**GENERAL HAZARD:** In large fires fueled by other materials, this product may smolder for prolonged periods emitting a dense black smoke. Any spilled material should be considered contaminated. Neutralize to a non-oxidizing material for safe disposal. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. If the material is damp, it should be neutralized to a non-oxidizing material for safe disposal.

**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.

**HAZARDOUS COMBUSTION PRODUCTS:** Combustion products may include, but are not limited to, carbon monoxide, carbon dioxide, hydrogen bromide, bromine, hydrogen chloride or chlorine.

**EXPLOSION HAZARDS:** A dust explosion severity determination was performed using the Hartmann Dust Explosibility Bomb designed at the U.S. Bureau of Mines. The product was determined not to be ignitable.

**FIRE FIGHTING PROCEDURES:** Fires fueled by other materials may release hydrogen bromide, bromine, hydrogen chloride or chlorine. Wear self-contained breathing apparatus. Ammonium phosphate (ABC) fire extinguishers should not be used.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may produce hydrogen bromide, bromine, hydrogen chloride, and/or chlorine.

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## 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, disposal or cleaning of equipment. Dispose of according to local, state and federal regulations.

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## 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 brominators. 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 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 materials before discarding this container. Do not contaminate food or feed by storage or disposal. Do not reuse container, but place in trash collection. Rinse thoroughly before discarding in trash.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	TWA	<u>EXPOSURE LIMITS</u>					
		<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>SUPPLIER OEL</u>	
		<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
1-bromo-3-chloro-5,5-dimethylhydantoin		N/E		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:** Faint halogen odor.

**APPEARANCE:** Tablet

**COLOR:** White

**pH:** 4.5 (0.1% solution in DI water)

**VAPOR PRESSURE:** Not Applicable

**VAPOR DENSITY:** Not Applicable

**BOILING POINT:** Not Applicable

**MELTING POINT:** 160°C to 165°C

**THERMAL DECOMPOSITION:** 145°C to 150°C

**SOLUBILITY IN WATER:** 0.15g/100g water

**DENSITY:** 60.1 lb/ft<sup>3</sup>

**OXIDIZING PROPERTIES:** Oxidizer

### COMMENTS:

**FREEZE / MELT:** (with decomposition)

## 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:** Thermal decomposition may produce hydrogen bromide, bromine, hydrogen chloride, and/or chlorine.

**INCOMPATIBLE MATERIALS:** Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; other swimming pool/spa chemicals in their concentrated form; alkalis. Avoid contact with all other chemicals.

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## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** Toxicological studies indicate this product to be corrosive to eyes.

**DERMAL LD<sub>50</sub>:** The dermal LD<sub>50</sub> is greater than 2.0 g/kg (rabbit). The primary skin irritation index is 6.1 and the product is considered corrosive to skin.

**ORAL LD<sub>50</sub>:** 578 mg/kg (rat).

**EYE EFFECTS:** This product causes irreversible eye damage.

**SKIN EFFECTS:** This product causes skin burns.

**SENSITIZATION:** This product is not expected to be a skin sensitizer.

### 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.

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## 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.

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## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture 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.

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

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## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Oxidizing Solid, N.O.S. (Bromo-chloro-dimethylhydantoin)

**PRIMARY HAZARD CLASS/DIVISION:** 5.1

**UN/NA NUMBER:** 1479

**PACKING GROUP:** II

### AIR (ICAO/IATA)

**NOTE:** Not recommended for transport by air.

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## 15. REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

##### 311/312 HAZARD CATEGORIES:

**FIRE:** YES **PRESSURE GENERATING:** NO **REACTIVITY:** YES **ACUTE:** YES **CHRONIC:** NO

**313 REPORTABLE INGREDIENTS:** This product or its components are not listed.

#### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** This product or its components are not listed.

#### TSCA (TOXIC SUBSTANCE CONTROL ACT)

**TSCA REGULATORY:** This product or its components are not subject to export notification.

**TSCA STATUS:** This product or its components are listed on the TSCA Inventory.

**OSHA HAZARD COMM. RULE:** Product is hazardous by definition of the Hazardous Communication Standard.

**CLEAN WATER ACT:** Not Listed.

**FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):** This product is a registered pesticide.

**SDWA (SAFE DRINKING WATER ACT):** Not listed.

**CLEAN AIR ACT**

**40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION:** Not listed.

**CALIFORNIA PROPOSITION 65:** This product or its components are not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.

## 16. OTHER INFORMATION

**PREPARED BY:** Regulatory Affairs Department

**REVISION SUMMARY** Revision #: 10 This MSDS replaces the February 22, 2005 MSDS. Any changes in information are as follows:

**HMIS RATING**

<b>HEALTH:</b>		3
<b>FLAMMABILITY:</b>		1
<b>PHYSICAL HAZARD:</b>		1
<b>PERSONAL PROTECTION:</b>		B

**NFPA RATING**

<b>HEALTH:</b>	3
<b>FIRE:</b>	1
<b>REACTIVITY:</b>	1
<b>SPECIAL:</b>	OX

**Key**

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

**NFPA STORAGE CLASSIFICATION:** NFPA Oxidizer Class 2

**COMMENTS:** The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard, National Fire Protection Association (NFPA), and Hazardous Materials Identification System (HMIS).

**MANUFACTURER DISCLAIMER: IMPORTANT:** The 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, provincial, state, municipal, 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.