

MATERIAL SAFETY DATA SHEET

MSDS

BioGuard ALGAE Optimizer Plus

Date-Issued: 10/26/1998
MSDS Ref. No: BBIO23514
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Revision No: 1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BioGuard ALGAE Optimizer Plus
GENERAL USE: Suppresses algae and increases sanitizer efficiency.
CHEMICAL FAMILY: Inorganic Borates

MANUFACTURER

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

COMMENTS: EPA Registration Number: 5185-461

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS</u>	<u>Wt. %</u>
Disodium Biborate Pentahydrate	12179-04-3	99.5

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL APPEARANCE: White, odorless powder.

IMMEDIATE CONCERNS: DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed. Irritating to nose and throat. Avoid breathing dust. Avoid contact with eyes, skin or clothing. Wear protective eyewear (goggles or safety glasses) and rubber gloves when handling this product. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

POTENTIAL HEALTH EFFECTS

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

SKIN: May cause skin irritation. Avoid contact with skin.

INGESTION: Harmful if swallowed.

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

CHRONIC: This product contains a boron compound. This boron compound, when fed to test animals at very high doses, has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to man.

ROUTES OF ENTRY: Eye Contact, Inhalation, Ingestion.

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: Observation only is required for adult ingestion of a few grams of Sodium Tetraborate Pentahydrate. For ingestion in larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analysis of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Non-flammable solid.

GENERAL HAZARD: None, because Sodium Tetraborate Pentahydrate is not flammable, combustible or explosive. The product is itself a flame retardant.

EXTINGUISHING MEDIA: Any fire extinguishing media may be used on nearby fires.

FIRE FIGHTING EQUIPMENT: Firefighters should wear full protective clothing and self contained breathing apparatus (SCBA). Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Sodium Tetraborate Pentahydrate will cause localized contamination of surrounding waters depending on the quantity dissolved in the water. At high concentrations some damage to local vegetation, fish and other aquatic life may be expected.

LAND SPILL: Sodium Tetraborate Pentahydrate is a water-soluble powder that may cause damage to trees or vegetation by root absorption.

GENERAL PROCEDURES: STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Utilizing appropriate protective clothing and safety equipment, contain spilled material. Keep spill out of sewers and open bodies of water. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place in clean dry plastic containers for disposal. 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.

HANDLING: Use safe chemical handling procedures for the hazards presented by this material.

STORAGE: Keep this product in its original container when not in use. Store in cool, dry, well-ventilated area. Keep this product and all other chemicals out of children's reach.

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/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
Disodium Biborate Pentahydrate							

ENGINEERING CONTROLS: General room ventilation plus local exhaust should be used to maintain exposure below TLV.

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: If product gets on clothing, remove and wash 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: Odorless

APPEARANCE: Granules

COLOR: White

pH: 9.3 (3% solution @ 20 C)

MELTING POINT: 200°C (392°F)

SOLUBILITY IN WATER: 3.82g / 100 g water

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.

INCOMPATIBLE MATERIALS: Other swimming pool/spa chemicals in their concentrated forms. Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: 2000 mg/kg of body weight in rabbits.

Low acute dermal toxicity; LD₅₀ in rabbits is greater than 2000 mg/kg of body weight. This product is not absorbed through intact skin.

ORAL LD₅₀: > 3200 mg/kg of body weight in rats

Low acute oral toxicity; LD₅₀ of this product in rats is 3200 to 3400 mg/kg of body weight.

EYE EFFECTS: This product causes irreversible eye damage.

SKIN EFFECTS: This product may be irritating to skin.

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: Although boron is an essential micro-nutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities. Plants and trees can easily be exposed by root absorption to toxic levels of boron in the form of water-soluble borate leached into nearby soil or waters. Care should be taken to minimize the amount of borate product released to the environment.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Small quantities of Sodium Tetraborate Pentahydrate can usually be disposed of at Municipal Landfill sites. No special disposal treatment is required, but refer to state and local regulations for applicable site-specific requirements.

FOR LARGE SPILLS: Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be re-used

for an appropriate application.

EMPTY CONTAINER: Do not reuse container. Rinse thoroughly before discarding in trash.

GENERAL COMMENTS: California identifies substances with acute LD50's less than 5000 mg/kg as "hazardous wastes". Sodium Tetraborate Pentahydrate is therefore a "hazardous waste" if spilled in California, and should be handled in accordance with applicable state regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

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: Sodium Tetraborate Pentahydrate appears on the EPA TSCA inventory list under the CAS No. 1330-43-4, which represents the anhydrous form of this inorganic salt.

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

REVISION SUMMARY Revision #: 1 This MSDS replaces the October 26, 1998 MSDS. Any changes in information are as follows: In Section 4 Firstaid - Eyes Firstaid - Skin Firstaid - Ingestion Firstaid - Inhalation

HMIS RATING

HEALTH:		3
FLAMMABILITY:		0
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:		B

NFPA RATING

HEALTH:		3
FIRE:		0
REACTIVITY:		0

Key

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

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.