Safety Data Sheet

Borathor Max PT

Emergency Phone 1-800-535-5053 (Infotrac)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Borathor Max PT
Chemical Name: Disodium octaborate tetrahydrate
Recommended use of the chemical and restrictions on use: Insecticide

Company: Ensystex II, Inc.
Address: 202 Fairway Dr., Fayetteville, NC 28305
Daytime Phone: 1-888-398-3772

2. HAZARDS IDENTIFICATION

Hazard classification
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200
Acute toxicity - Category 4 - Oral
Specific target organ toxicity - repeated exposure - Category 2
Reproductive toxicity - Category 2
Aquatic acute toxicity - Category 3

Label Elements
Hazard pictograms

Signal Word: DANGER!

Hazards
H302 - Harmful if swallowed
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to kidneys by prolonged or repeated exposure by ingestion.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements
Prevention
P260 - Do not breathe spray mist or vapors
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment

Response
P321 - Specific treatment (see supplemental first aid instructions on the label)
P308 + P311 - If exposed or concerned: Call a POISON CONTROL CENTER or doctor
P304 + P340 - If INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CONTROL CENTER or doctor if you feel unwell
P301 + P312 - IF SWALLOWED: Call a POISON CONTROL CENTER or doctor if you feel unwell
P330 - Rinse mouth

Storage
P405 - Store locked up.

Disposal
P501 - Dispose of contents/ container to an approved waste disposal facility.

Other hazards
No data available

Other Information
Very toxic to aquatic life with long lasting effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene glycol	CAS # 107-21-1	Weight % - 50-60
Disodium octaborate tetrahydrate	CAS # 12280-03-4	Weight % - 40

4. FIRST-AID

Description of first-aid measures
General advice: First-Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists, refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. If the person is not breathing and has no pulse, consider cardiopulmonary resuscitation (CPR); use pocket resuscitation mask, bag valve mask etc., to avoid risk of poisoning rescuer. Consult a physician in all cases.
Eye Contact: Hold eye open and rinse slowly and gently with water for at least 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a Poison Control Center or doctor immediately for treatment advice.
Skin Contact: Take off Contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor immediately for treatment advice.
Ingestion: Call a 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. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed: May cause eye and skin irritation. Inhalation of mists may cause mild mucous membrane and respiratory irritation. Repeated ingestion may cause kidney damage

Indication of any immediate medical attention and special treatment needed
If large amounts have been ingested, seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Foam. Carbon dioxide (CO^2). Dry chemical. Soft stream or water fog only if necessary.
Advice for firefighters
Explosion Data
Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Not sensitive

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. Contain all runoff.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate and post spill area. Wear appropriate safety clothing, respiratory protection devices and eye/face protection (see Section 8). Evacuate unprotected personnel that are nearby.

Environmental precautions: Keep people and animals away from and upwind of spill or leak. Prevent from entering into soil, ditches, sewers, waterways and /or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleanup:
Small spills: Absorb and collect all spilled materal. Large spills: Contact Ensystex Inc. for cleanup assistance. See Section 13, Disposal considerations, for additional information.

7. HANDLING AND STORAGE

Handling: Use good personal hygiene. Avoid contact with eyes, skin and clothing. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.
Storage: Keep out of reach of children. Product should be stored in compliance with local regulations. Store in a well ventilated, cool, dry area. Keep away from heat sources. Store in original container.
Incompatible products: None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Applicators should refer to the product label for personal protection equipment requirements during application.

Component	Regulation	Type of listing	Value/Notation
Ethylene glycol 107-21-1	Ceiling ACGIH TLV	TLV	100 mg/m^3
Disodium octaborate tetrahydrate 12280-03-4	ACGIH TWA TLV ACGIH STEL TLV	TWA (inhalable) STEL (inhalable)	2 mg/m^3 6 mg/m^3

These recommendations are for Manufacturing. Applicators should see the product label for proper personal protective equipment.
Engineering measures: Apply technical measures to comply with the occupational exposure limits.
Exposure controls
Provide general and/or local exhaust ventilation to control airborne levels below the exposure limits.
Respiratory Protection: Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required or during emergency conditions, use a NIOSH/MSHA approved respiratory protection.
Hand/Skin Protection: Wear long-sleeved shirt, long pants, socks, protective gloves and shoes
Eye/Face Protection: Chemical proof goggles / face shield

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor: Clear liquid, No odor
pH: 6.7
Flash Point/Range: > 104ºC/ > 220ºF TOC
Water solubility: Soluable in water
Flammability (solid, gas): N/A
Flammability limit in Air
Upper flammability limit: No information available
Lower flammability limit: No information available
Autoignition temperature: N/A
Vapor pressure: No information available
Vapor density: No information available
Relative density: 1.38
Solubility in other solvents: No information available
Partition coefficient: No information available
Autoignition temperature: No information available
Decomposition temperature: No information available

10. STABILITY AND REACTIVITY

Reactivity: None under normal use conditions
Chemical Stability: Stable under normal storage conditions.
Conditions to Avoid: None known.
Materials to Avoid: Avoid strong oxidizing agents and aluminum.
Hazardous Decomposition Products: Carbon oxides (CO_x) and ethylene oxide.

11. TOXICOLOGICAL INFORMATION

Product toxicity data
Acute Toxicity: Inhalation LC50/Rat/> 5.06 mg/L 4 hr (no mortality was observed in any test); Oral LD50/Rat/> 5,000mg/kg; Dermal LD50/Rabbit/> 5,050mg/kg

Component toxicity data
Ethylene glycol: Oral LD50/Rat/ 4,700 mg/kg; Dermal LD50/rabbit/ 9,350 mg/kg.
Disodium octaborate tetrahydrate: Inhalation LC50/rat/>2.0mg/l; Oral LD50/rat/ 3500 mg/kg; Dermal LD50/rabbit/ >2,000mg/kg
Skin corrosion/irritation
May cause irritation on prolonged or repeated exposure.
Serious eye damage/eye irritation
May cause a slight irritation or reddening of the eye, pain and tearing.
Inhalation: Inhalation of mists may cause irritation of the nose, throat and upper respiratory tract.
Sensitization
Non-sensitizing
Information on toxicological effects
Symptoms: large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
Carcinogenicity: Not known to cause cancer
Neurological effects: Not know to cause neurological effects.
Teratogenic effect: Do data available.
Reproductive toxicity effects: Ethylene glycol has been found to cause birth defects in laboratory animals, but no correlation has been proven to humans.
Mutagenic effects: No information available

12. ECOTOXICOLOGICAL INFORMATION

Toxicity
Ethylene glycol
Acute toxicity to fish (flathead minnow)
LC_{50}, 96 Hour, <10,000 mg/l
Acute toxicity to aquatic crustacea (water flea)
EC_{50}, 48 Hour. 100,000 mg/l
Acute toxicity to algae/aquatic plants (*Scenedesmus quandricuada*)
EC_{50} 72 Hour >10,000mg/l
Disodium octaborate tetrahydrate
Acute toxicity to fish (rainbow trout)
LC_{50}, 24 day, 150mg B/L
Acute toxicity to aquatic crustacea (water flea)
EC_{50}, 48 Hour. 133 mg B/L
Acute toxicity to algae/aquatic plants (*green algae*)
EC_{50} 96 Hour 24 mg B/L

Persistence and degradability
Ethylene glycol is readily biodegradable. Disodium octaborate tetreaydrate readily degrades to boron in the environment. Boron is an element found naturally in the environment.
Bioaccumulative potential
Ethylene glycol: ABF of 10 reported in fish, golden ide, after 3 days of exposure suggests the potential for bio-concentration in aquatic organisms is low. Disodium octaborate tetrahydrate: Log K_{ow} -07570 at 25ºC.
Mobility in soil
Disodium octaborate tetrahydrate is soluble in water and is leachable through normal soil.
Other adverse effects:
Some plants are sensitive to boron. Avoid releases into the environment. Use product only are recommended by label.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods: Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to the label instructions, contact appropriate authorities for guidance.
Contaminated Packaging: Containers must be disposed of in accordance with local, state and federal regulations. Refer to product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT This material is not a hazardous material as defined by U.S. Department of Transportation 49 CFR Parts 100 - 185 (unless package contains a reportable quantity).
Note: If a shipment of a reportable quantity (8,333 lbs) in a single package is involved, the following information applies:

UN #: UN3082
Proper Shipping Name: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
Hazard Class: 9
Packing Group: III

15. REGULATORY INFORMATION

The information herein is given in good faith, but no warranty, expressed or implied, is made. Consult Ensystex II for further information.
US Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reathorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-#	Weight %
Ethylene glycol	107-21-1	50-60

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

CERCLA
This product has a reportable quantity (RQ) of 10,000 lbs based on the RQ of ethylene glycol of 8,333 lbs present at 50-60 %. There may be specific reporting requirements of the local, regional, or state level pertaining to releases of this material.
FIFRA Information
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
Caution
Harmful if inhaled or absorbed through skin. Avoid breathing vapors or spray mist. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Thoroughly wash with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before reuse. Avoid contamination of food or feed. Do not leave container where children or animals may gain access.

16. Other Information

Hazard rating System

NFPA		
Health	**Fire**	**Reactivity**
2	1	0

HMIS		
Health	**Fire**	**Physical Hazard**
2	1	0

Disclaimer: The information of this SDS is based on the present state of our knowledge. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.

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