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# ZeroTol™



## BROAD SPECTRUM ALGAECIDE / FUNGICIDE

- \* Preventative treatment for ornamental plants and turf.
- \* A treatment for the prevention and control of horticultural diseases in Commercial Greenhouses, Garden Centers, Landscapes, Nurseries and Interiorscapes.

### FOR HORTICULTURAL AND COMMERCIAL USE ONLY

#### ACTIVE INGREDIENT:

Hydrogen Dioxide..... 27%

INERT INGREDIENTS:..... 73%

TOTAL:..... 100%

### KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

*Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)*

#### STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get immediate medical attention.

IF ON SKIN: Remove contaminated clothing and wash affected areas with plenty of soap and water. Get immediate medical attention.

IF SWALLOWED: Call a physician or poison control center immediately. Drink large quantities of water. Do not induce vomiting. Avoid alcohol. Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

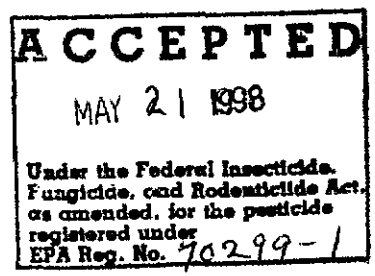
IF INHALED: Remove victim to fresh air. Get immediate medical attention.

See side panel for additional precautionary statements.

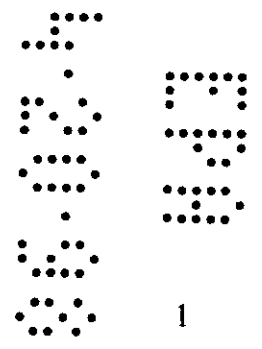
Sold by: BioSafe Systems, 45 E. Woodthrush Trail, Medford, NJ 08055

EPA Registration No. 70299-1  
EPA Establishment No. 68660-TX-01

Net Contents: 2.5 gallons



ZeroTol Broad Spectrum Algaecide/Fungicide  
Last revised April 13, 1998 (Turf Directions Amendment)



**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMAN AND DOMESTIC ANIMALS**

**CORROSIVE:** Concentrate causes irreversible eye damage. Concentrate may be fatal if swallowed. Concentrate causes skin irritation or temporary discoloration on exposed skin. Do not breathe vapor of concentrate. Do not get concentrate in eyes, on skin or on clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

When handling concentrate wear protective eyewear (goggles or face shield) and rubber gloves. Applicators and handlers must wear coveralls over long-sleeved shirt, long pants, and chemical resistant footwear plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water.

**USER SAFETY RECOMMENDATIONS**

Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

**FOR TERRESTRIAL USES.** Keep out of lakes, ponds and streams. This pesticide is toxic to birds and fish. Do not apply directly to water, or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wash waters.

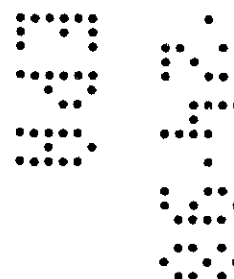
This product is highly toxic to bees and other beneficial insects exposed to direct contact on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not apply this product or allow it to drift to crops where beneficials are part of an Integrated Pest Management strategy.

**PHYSICAL AND CHEMICAL HAZARDS**

Strong oxidizing agent. **Corrosive.** Do not use in concentrated form. Mix only with water in accordance with label instructions. Never bring concentrate in contact with other pesticides, cleaners or oxidative agents.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.



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### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and Restricted-Entry Interval (REI). The requirements in this box only apply to the uses of this product that are covered by the Worker Protection Standard.

There is a restricted entry of zero (0) hours for this product.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: long-sleeved shirt, long pants, and shoes plus socks.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinses (or equivalent). Then offer for recycling or dispose in a sanitary landfill, or incineration, if allowed by state and local authorities by burning, stay out of smoke.

### Directions for Use:

- \* Treats / Controls / Prevents: Algae - *Anthrachnose* - Black Spot - *Botrytis* - Downy Mildew - *Fusarium* - Leaf Spot - *Psuedomonas* - *Pythium* - *Phytophthora* - Powdery Mildew - *Rhizoctonia* - Rust - Scab - Smut - *Thielaviopsis* - Wilts & Blights.
- \* May be used as a fungicide on bedding plants, flowering plants, roses, poinsettia, ornamentals, nursery stock, trees, turf, cut flowers, bulbs, cuttings, seedlings and seeds.
- \* May be used as an fungicide and algacide on greenhouse structures, benches, pots, watering systems, evaporative coolers, storage rooms, ventilation equipment, floors and other equipment.

ZeroTol works by surface contact with the plants and materials being treated. It is important to ensure that all surfaces are thoroughly wetted. ZeroTol does not produce any visible residue, distinct odor or deleterious effects to plants when used in accordance with label directions. Do not use at higher than recommended dilution rates as leaf burn may result.

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Last revised April 13, 1998 (Turf Directions Amendment)

Do not apply this product through any irrigation system unless directed by the label, refer to Chemigation Directions for Use.

**Solution Preparation:**

- \* ZeroTol works best when diluted with water containing low levels of organic or inorganic materials and having a neutral pH. Thoroughly rinse out mixing tank with water before mixing concentrate. ZeroTol will readily mix with clean, neutral water and does not require agitation.
- \* ZeroTol should not be combined or mixed with any other pesticide or fertilizer.
- \* ZeroTol is formulated with minimal surfactant for plants having waxy or hairy surfaces. Additional surfactant may be added at a rate of 1 to 2 fl. oz. per gallon.

**Use Rates and Directions:**

**Greenhouse Surfaces and Equipment -**

ZeroTol can be used to control fungi and slime forming algae on greenhouse structures, glazing, plastic, benches, walkways, floors, walls, fan blades, ventilation ducts, watering systems, coolers, storage rooms and equipment.

- 1) Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
- 2) Use a dilution of 1:50 or 2½ fl. oz. per gallon of clean water. Additional surfactant can be added at a rate of 1 fl. oz. of surfactant per gallon of solution.
- 3) Apply solution with mop, sponge, power sprayer or fogger to thoroughly wet all surfaces.
- 4) Heavy growths of algae and fungi may have to be scrubbed off. Use a solution of ZeroTol to wash away dead growth.
- 5) Reapply as often as needed for control.

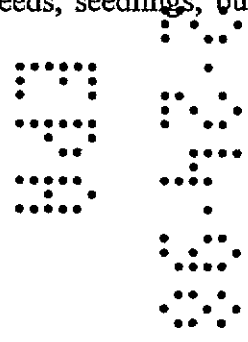
For evaporative coolers, treat cooler water every week with ¼ fl. oz. of ZeroTol for every gallon of cooler water.

For irrigation systems (flooded floors, flooded benches, recycled water systems, humidification and misting systems), treat already contaminated water with ½ fl. oz. of ZeroTol for every gallon of water. Treat clean water with a 1:10,000 dilution or one gallon of ZeroTol per 10,000 gallons of water.

**Pre-Plant Dip Treatment -**

Use ZeroTol for the control of damping-off, root and stem rot disease caused by *Pythium*, *Phytophthora*, *Rhizoctonia*, *Fusarium* or *Thielaviopsis* on ornamental and nursery plants, seeds, seedlings, bulbs, or cuttings.

- 1) Use 64 fl. oz. per 50 gallons of water.
- 2) Immerse plants or cuttings; remove and allow to drain. Do not rinse.



**Soil Drench -**

ZeroTol is effective for the control of soil borne plant diseases such as *Pythium*, *Phytophthora*, *Rhizoctonia*, *Thielaviopsis* or *Fusarium*. Use as a soil drench at the time of seeding or transplanting, as well as a periodic drench throughout the plant's life. ZeroTol can also be used on potting soil and growing mediums prior to planting.

- 1) Mix 2½ fl. oz. ZeroTol per gallon of clean water.
- 2) Apply to soil or growing media to the point of saturation.
- 3) Wait fifteen minutes before planting or watering.

**Foliar Spray Treatments in Greenhouses –**

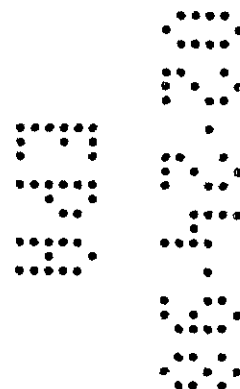
ZeroTol works immediately on contact with any plant surface for control. Apply ZeroTol to ornamentals, bedding plants, flowering plants, shrubs, and trees. Good coverage and wetting of the foliage is necessary.

Initial Application:

- 1) Use a dilution of 1:100 or 1¼ fl. oz. per gallon of clean water. Do not reuse already mixed solution, make fresh daily.
- 2) Spray, mist or fog plants in early morning or late evening.
- 3) Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
- 4) Apply for three consecutive days and then follow directions for preventive treatment after the initial application.

Weekly Preventative Treatment:

- 1) Use a dilution of 1:300 or ½ fl. oz. per gallon of clean water.
- 2) Spray, mist or fog plants.
- 3) Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks.
- 4) Spray every five to seven days as a preventive treatment.
- 5) At the first sign of disease spray daily with a 1:50 dilution for three consecutive days and then resume weekly preventative treatment.



**Foliar Spray Treatments in the Field –**

ZeroTol works immediately on contact with any plant surface for control. Apply ZeroTol to woody ornamentals, bedding plants, flowering plants, roses, container plants, azaleas, rhododendrons, conifers, shade trees and nursery stock. Good coverage and wetting of the foliage is necessary.

Initial Application:

- 1) Use a dilution of 1:50 or 2½ fl. oz. per gallon of clean water. Do not reuse already mixed solution, make fresh daily.
- 2) Spray, mist or fog plants and trees.
- 3) Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
- 4) Apply for three consecutive days and then follow directions for preventive treatment after the initial application.

Weekly Preventative Treatment:

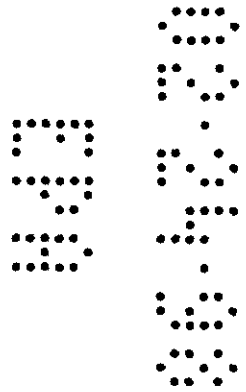
- 1) Use a dilution of 1:100 or 1¼ fl. oz. per gallon of clean water.
- 2) Spray, mist or fog plants and trees.
- 3) Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks.
- 4) Spray every five to seven days as a preventive treatment.
- 5) At the first sign of disease spray daily with a 1:50 dilution for three consecutive days and then resume weekly preventative treatment.

**Cut Flowers –**

Use ZeroTol to prevent *Botrytis*, Downy Mildew and Powdery Mildew on flowers in cold storage or in transit. Apply as a post harvest treatment. Mix 3 fl. oz. ZeroTol per 10 gallons of water. Spray flowers after grading and prior to storage or shipment. Repeat weekly for flowers in storage.

**Bareroot Nursery Stock –**

Use ZeroTol to prevent *Botrytis* on budwood and nursery stock in storage. Apply at a rate of 2½ fl. oz. ZeroTol per gallon of water. Dip plants or spray until dripping wet. Repeat weekly if necessary.



**Turf Applications –**

- Broad spectrum treatment for control of algae, fungi and bacteria on turf.
- For use on all turf applications, such as commercial turf, lawns, athletic fields and golf course fairways, greens and tees.
- Use ZeroTol to control *Anthracnose*, Dollar Spot, Copper Spot, Fairy Ring, Pink Snow Mold, *Pythium*, Summer Patch, Scum, *Fusarium* Blight, Stripe Smut, Leaf Spot, Algae, Slime Molds and their spores.
- ZeroTol controls on contact.

**Algaecide / Bactericide Treatment:**

Use ZeroTol to control algae and bacterial diseases, and the odors and conditions that these organisms may cause.

- 1) Mix 2½ fl. oz. per gallon of clean water. Spray entire area until run-off. Typical treatment rates involve treating approximately 1000 square feet of lawn area with 1 to 10 gallons of diluted solution. Saturation of the entire area will help ensure the solution penetrates built-up algae crusts and deposits. Add a spreader surfactant at a rate of 1 ounce per gallon of water for best results.
- 2) Repeat applications every 5 to 7 days or as needed to control new or established disease conditions. For best results, apply immediately after grass has been cut.

Optimum treatment time is early morning or late afternoon. Applications can be made during wet or rainy weather. Use spray solution the same day it is prepared, do not store and reuse mixed spray solution. ZeroTol can be injected through automatic irrigation systems in turf areas. Refer to Chemigation Directions for Use for specific instruction on using this product through irrigation systems.

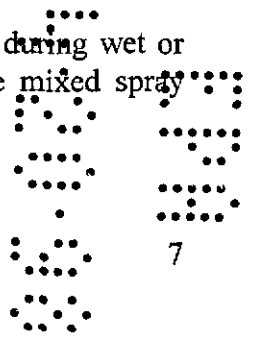
**Fungicide Treatment:**

For use on golf course fairways, greens and tees of Bentgrass, Bluegrass, Bermudagrass, Fescue, Ryegrass, St. Augustinegrass and their mixtures.

- 1) Mix 1¼ fl. oz. per gallon of clean water. Spray entire area until run-off. Typical treatment rates involve treating approximately 1000 square feet of lawn area with 1 to 10 gallons of diluted solution. Add a spreader surfactant at a rate of 1 ounce per gallon of water for best results.
- 2) Start applications at the first sign of disease and repeat every 5 to 7 days or as needed to control new or established disease conditions. For best results, apply uniformly over the area immediately after grass has been cut.

Optimum treatment time is early morning or late afternoon. Applications can be made during wet or rainy weather. Use spray solution the same day it is prepared, do not store and reuse mixed spray solution.

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**Seed Bed Treatment:**

- 1) Prior to sowing seed, mix 2½ fl. oz. per gallon of clean water. Thoroughly wet or drench the seed bed to the point of saturation. Let sit for one hour then immediately seed soil.
- 2) After seeds have germinated, mix 1¼ fl. oz. per gallon of clean water. Lightly spray or irrigate the soil and seedlings until thoroughly wetted. Retreat once per week until seed is well established.

**Treatment for Soil, Pre-Innoculation with Beneficial Organisms:**

Use ZeroTol, prior to inoculation with beneficial organisms, as a treatment to reduce the number of potentially plant pathogenic organisms in the soil that will prevent beneficials from becoming established.

Mix 2½ fl. oz. per gallon of clean water. Thoroughly wet or drench the area to be innoculated. Wait one day before innoculating soil.

**Treatment for Soil, Post-Innoculation with Beneficial Organisms:**

ZeroTol may be used to control plant pathogens on the foliar portion of turf. Careful application of ZeroTol must be made to prevent drenching into the root system and subsequent temporary reduction in soil organisms.

Mix 1¼ fl. oz. per gallon of clean water. Apply to the turf by lightly spraying leaf surfaces. Do not allow solution to be drenched into the soil and root system. Drenching of ZeroTol into the soil will result in temporary reduction of beneficial organism colonies that are directly affected.



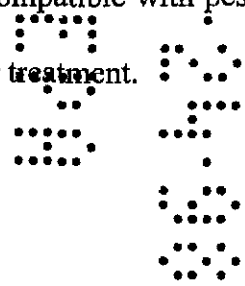
# CHEMIGATION DIRECTIONS FOR USE

## General Requirements:

- 1) Apply this product only through a sprinkler including a center pivot, lateral move, end tow, side wheel roll, traveler, solid set, hand move, flood basin or drip trickle irrigation system. Do not apply this product through any other type of irrigation system.
- 2) Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- 3) Ensure that the irrigation system used is properly calibrated and if you have questions, call the state extension service or the equipment manufacturer.
- 4) Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless proper safety devices for public water systems are in place. Read label for instructions.
- 6) A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make any necessary adjustments should the need arise.

## Specific Requirements:

- 1) Public water supply means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of 25 individuals daily at least 60 days throughout the year.
- 2) Chemigation systems connected to the public water systems must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3) The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of liquid back towards the injector.
- 4) The pesticide injection pipeline must contain a functional, normally closed, solenoid, operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being drawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump, or equivalent, effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.



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**Application Instructions:**

- 1) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
- 2) Determine the treatment rates as indicated in the directions for use and make proper dilutions.
- 3) Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. The product will immediately go into suspension without any required agitation.
- 1) ZeroTol should not be applied in conjunction with any other pesticides or fertilizers, this may cause reduced performance of the product and should be avoided.

**WARRANTY**

This material conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing, method of application, weather, watering practices, nature of soil, potting medium, disease problem, condition of crop, incompatibility with other chemicals, pre-existing conditions and other conditions influencing the use of this product are beyond the control of the seller. Buyer assumes all risks associated with the use, storage, or handling of this material not in strict accordance with directions given herewith. NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY IS MADE.

