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3-28-2000

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ZeroTol™



BROAD SPECTRUM ALGAECIDE / FUNGICIDE

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

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 or give anything by mouth to an unconscious person. 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.

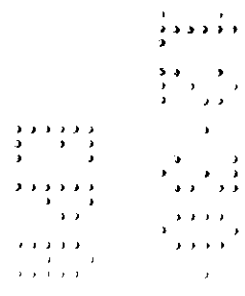
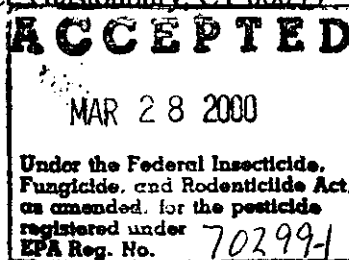
See side panel for additional precautionary statements.

Sold by: BioSafe Systems, 80 Commerce Street, Glastonbury, CT 06033

EPA Registration No. 70299-1

EPA Establishment No. XXXXX-XX-XX

Net Contents: 2.5 gallons



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ZeroTol Broad Spectrum Algaecide/Fungicide

Last revised December 29, 1999 - Label Amendment to add optional text for Turf Uses

MASTER LABEL

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.

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:

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.

- * Preventative treatment for suppressing fungal diseases including / Treats / Controls / Prevents: Algae - *Alternaria* - *Anthraco*se - *Aphanomyces* - Black Spot - *Boytrytis* (grey mold) - Downy Mildew - *Erwinia Fusarium* (root rot) - Leaf Spot - *Phytophthora* (blights, rots) - *Plasmopara* - Powdery Mildew - *Pseudomonas* - *Pythium* - *Rhizoctonia* - Rust - Scab - Smut - *Thielaviopsis* - *Uncinula* (powdery mildew) - 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, seeds and seedbeds.
- May be used as an fungicide and algaecide on greenhouse structures, benches, pots, watering systems, evaporative coolers, storage rooms, ventilation equipment, floors and other equipment (optional text: turf equipment, irrigation systems and structures).

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Compatibility:

Do not use at higher than recommended dilution rates as leaf burn may result. ZeroTol has been designed to provide a balanced source of the active ingredient directly to the plant surface and has been shown to not cause adverse cosmetic effects on most plants. Since we have not tested all plant species, however, it is always advisable to test ZeroTol on a few plants before treating large numbers.

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, if needed for treatment of plants with difficult to reach surfaces.

Use Rates and Directions

For greenhouse surfaces and equipment, ZeroTol can be used to suppress / control fungi and slime forming algae on greenhouse structures, such as: glazing, plastic, benches, walkways, floors, walls, fan blades, ventilation ducts, watering systems, coolers, storage rooms, structures 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 may be added, if needed.
- 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 following application. Use a solution of ZeroTol to wash away dead growth.
- 5) Reapply as often as needed for control.

For clean, non-porous surfaces, use a dilution of 1:300 or ½ fl. oz per gallon of clean water. Additional surfactant may be added, if needed.

For evaporative coolers, treat cooler water every week with a dilution of 1:500 or ¼ fl. oz. 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 a dilution of 1:500 or ¼ fl. oz. for every gallon of water. Treat clean water with a dilution of 1:10,000 or one gallon of ZeroTol per 10,000 gallons of water.



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As a pre-plant dip treatment, use ZeroTol for the control / suppression of damping-off, root and stem rot diseases such as *Pythium*, *Phytophthora*, *Rhizoctonia*, *Fusarium* or *Thielaviopsis* on ornamental and nursery plants, seed beds, seeds, seedlings, bulbs, or cuttings.

- 1) Use 64 fl. oz. per 50 gallons of water, a dilution of 1:100.
- 2) Immerse plants or cuttings. Remove and allow to drain. Do not rinse.

As a soil drench, ZeroTol is effective for the control / suppression 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) Use a dilution of 1:100 – 1:50 or 1¼ - 2½ fl. oz. 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.

As a foliar spray treatment in greenhouses, ZeroTol works immediately on contact with any plant surfaces for control / suppression of fungi. Apply ZeroTol to ornamentals, bedding plants, flowering plants, shrubs, and trees. To ensure that this contact fungicide is effective, thorough coverage and wetting of the foliage is necessary.

Initial (Curative) Application:

- 1) Use a dilution of 1:100 or 1¼ fl. oz. per gallon of clean water. 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 one to 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 1¼ fl. oz. per gallon of water for three consecutive days and then resume weekly preventative treatment.

As a foliar spray treatment in the field, ZeroTol works immediately on contact with any plant surface for control / suppression of disease. Apply ZeroTol to nursery stock such as: woody, ornamentals, bedding plants, flowering plants, roses, container plants, azaleas, rhododendrons, conifers, and shade trees. Good coverage and wetting of the foliage is necessary.

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Initial (Curative) Application:

- 1) Use a dilution of 1:100 – 1:50 or 1¼ - 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, including applications through irrigation or chemigation systems.
- 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 one to 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, including applications through irrigation or chemigation systems.
- 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 2½ fl. oz. per gallon of water for three consecutive days and then resume weekly preventative treatment.

For cut flowers, use ZeroTol to prevent fungal diseases such as *Botrytis*, Downy Mildew and Powdery Mildew on flowers in cold storage or in transit. Apply as a post harvest treatment. Use a dilution of 1:500 or ¼ fl. oz. per gallon of clean water. Spray flowers after grading and prior to storage or shipment. Repeat weekly for flowers in storage.

For bareroot nursery stock, use ZeroTol to prevent *Botrytis* on budwood and nursery stock in storage. Use a dilution of 1:50 or 2½ fl. oz. per gallon of water. Dip plants or spray until dripping wet. Repeat weekly if necessary.

For turf applications:

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

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For algaecide / bactericide treatment, use ZeroTol to control algae and bacterial diseases, and the odors and conditions that these organisms may cause.

- 1) Typical treatment rates involve treating approximately 1000 square feet of lawn area with 1 to 10 gallons of diluted solution. Spray entire area until run-off; saturation of the entire area will help ensure the solution penetrates built-up alga crusts and deposits. Add a spreader surfactant for best results.
- 2) For an initial (curative) treatment of heavy infestations of algae or bacterial disease, use a dilution of 12½ - 25 fl. oz. per 1000 square feet. Apply 5 - 10 gallons of dilute solution per 1000 square feet.
- 3) For preventative treatment of algae and bacterial disease, use a dilution of 2½ - 12½ fl. oz. per 1000 square feet. Apply 1 - 5 gallons of dilute solution per 1000 square feet.
- 4) 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.

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

- 1) Typical treatment rates involve treating approximately 1000 square feet of lawn area with 1 to 10 gallons of diluted solution. Spray entire area until run-off. Add a spreader surfactant 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.
- 3) For an initial (curative) treatment of heavy infestations of fungal disease, use a dilution of 6¼ - 12½ fl. oz. per 1000 square feet. Apply 5 - 10 gallons of dilute solution per 1000 square feet.
- 4) For preventative treatment of fungal disease, use a dilution of 1¼ - 6¼ fl. oz. per 1000 square feet. Apply 1 - 5 gallons of dilute solution per 1000 square feet.

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.

(Optional Text for Turf Use Directions)

BASE RATE: *For preventative treatment and control of algae or bacterial disease, use a dilution of 2½ - 6¼ fl. oz. per 1000 square feet.*

- *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 instructions on using this product through irrigation systems.*

CURATIVE CONTROL CONDITIONS:

For an initial (curative) treatment of heavy infestations of fungal disease, use a dilution of 6¼ - 12½ fl. oz. per 1000 square feet.

- *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.*
- *Repeat applications every 5 - 7 days or as needed to control new or established disease conditions.*

ZeroTol may be applied at 25 fl. oz. of concentrate per 1000 square feet for severe conditions of crusted algae. Severe conditions may require increased rates of active ingredient and increases in water volume to help penetrate layers of algae. Under severe conditions, applications may be doubled either by increasing the amount of active ingredient per 1000 square feet of turf or by applying twice over the same area.

For seed bed treatment,

- 1) *Prior to sowing seed, use a dilution of 1:50 or 2½ fl. oz. per gallon of clean water. Thoroughly wet or drench the seedbed, to the point of saturation, with 60 to 100 gallons of dilute solution per 1000 square feet. Let sit for one hour then immediately seed soil.*
- 2) *After seeds have germinated, use a dilution of 1:100 or 1 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.*

For soil treatment, pre-inoculation with beneficial organisms, use ZeroTol to reduce the number of potentially plant pathogenic organisms in the soil that will prevent beneficials from becoming established. Use a dilution of 1:100 or 1¼ fl. oz. per gallon of clean water. Thoroughly wet or drench the area to be inoculated. Wait one day before inoculating soil.

For turf treatment, post-inoculation with beneficial organisms, use ZeroTol 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.

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Use a dilution of 1:100 or 1 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.
- 5) 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 loose 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.

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