

51036-391

03/01/2006

1/M



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MAR 1 2006

William Washburn  
Micro Flo Company LLC  
P.O. Box 772099  
Memphis, TN 38117

Subject: Amendment - Copyright Infringement  
Bifenthrin 7.9%FL Nursery  
EPA Reg. No. 51036-391  
Your Letter Dated: January 30, 2006

Dear Mr. Washburn:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. On page 4, under maximum rate delete "you may" in the statement, "Per acre you may apply up to 0.2 lbs."
2. On page 5, replace, "under no circumstance should you" with "do not exceed the maximum ..... etc."
3. On page 7, add "Restrictions" to the title "Additional Application Recommendations/ Restrictions."
4. On page 7, change "may be applied" to "must be applied" under Additional Application Recommendations. Also delete "When applying by ground" under the fifth bullet. Make these same changes on page 9 under Application/Recommendation.

2/14

5. On page 9, add "Restrictions" to the title Additional Application Recommendation/ Restrictions.

If you have any questions regarding this action, please contact BeWanda Alexander of my team at (703) 305-7460.

Sincerely,

A handwritten signature in cursive script, appearing to read "George T. LaRocca".

George T. LaRocca  
Product Manager (13)  
Insecticide Branch  
Registration Division (7505C)

3/14

**RESTRICTED USE PESTICIDE**

**Toxic to fish and aquatic organisms.**

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.

**BIFENTHRIN 7.9% FL NURSERY  
INSECTICIDE/MITICIDE**

This product is for commercial Non-Food Use on Greenhouses, Indoor and Outdoor Ornamentals, Nurseries, Sod Farms and Turf on Golf Courses.

**Do Not Use This Product in Nassau County or Suffolk County, New York.**

**ACTIVE INGREDIENT: By Wt.**

Bifenthrin\* ..... 7.9%

**OTHER INGREDIENTS:** ..... 92.1%

**TOTAL:** ..... 100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum.

BIFENTHRIN 7.9% FL Nursery contains 2/3 lbs. a.i./gal.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

FIRST AID	
<b>IF SWALLOWED</b>	Call a physician or 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 a poison control center or doctor
<b>IF INHALED</b>	Remove person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
<b>IF ON SKIN OR CLOTHING</b>	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
<b>IF IN EYES</b>	Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice
<b>NOTE TO PHYSICIAN:</b> This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided	
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
<b>EMERGENCY TELEPHONE NUMBERS:</b> (800) 424-9300 (CHEMTREC, transportation and spills) (800) 832-HELP (1-800-832-4357)(human health) (800) 345-4735 (ASPCA, animal health)	

EPA Reg. No. 51036-391  
AD xxxxxx

EPA Est. No. 51036-GA-001  
NET CONTENTS: \_\_\_\_\_

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated**

**MAR 1 2006**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

**51036-391**

**Manufactured By:**  
**MICRO FLO COMPANY LLC**  
**P.O. BOX 772099**  
**MEMPHIS, TN 38117**

4/14

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

**CAUTION.** Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

### PERSONNEL PROTECTIVE EQUIPMENT

The following materials are chemical-resistant to BIFENTHRIN 7.9% NURSERY: Barrier laminate, butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride or viton. For further chemical-resistant material selections, please see Category C on the EPA chemical resistance category selection chart.

Applicators and other handlers (other than mixers and loaders) must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as
3. Footwear plus socks

Mixers and Loaders must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as barrier laminate, butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride or viton.
3. Footwear plus socks
4. Protective eyewear

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users Should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or in intertidal areas below the mean high water mark. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops if bees are visiting the treatment area.

### DIRECTIONS FOR USE

#### RESTRICTED USE PESTICIDE

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.

Do not apply by any type of irrigation system.

5/4

### AGRICULTURE 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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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:

1. Coveralls
2. Chemical-resistant gloves, such as barrier laminate, butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride or viton.
3. Footwear plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Keep children and pets out of the treated area until sprays have dried.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Open dumping is prohibited. Do not store this product near fertilizers, seeds, or other pesticides.

Keep this product out of reach of children and animals at all times. Store this product in a cool, dry place in its original container only. Do not expose the product to excessive heat. Open the product container carefully and, after use, replace the container lid by thoroughly tightening the screw cap. Keep product containers tightly closed when not in use. Damaged or leaking containers should be discarded. Do not put concentrated or diluted product into containers that are used for food or drink.

For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities. To prevent accidental misuse, different pesticides should be stored in separate areas with enough distance between the pesticides to provide clear identification.

**To Contain a Spill:** If the product is a liquid, surround the spill with a barrier and then absorb liquid by covering it with cat litter, sand or a commercial clay. If the product is dry material, cover the spilled product to prevent the material from spreading. If the product container is damaged, place the entire container along with the product in a secure receptacle and clearly label the contents. For any type of product spill, avoid contact with the spilled product and evacuate the area, keeping all unprotected persons and animals at a safe distance.

**Pesticide Disposal:** Pesticide wastes are toxic. Do not contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### Container Disposal:

**Plastic Container:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Returnable/Refillable Sealed Container:** Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

6/14

## GENERAL APPLICATIONS INSTRUCTIONS

BIFENTHRIN 7.9% FL Nursery formulation is effective for controlling many kinds of insects. It also is effective for controlling mites on trees and other plants, non-bearing fruit and nut trees (i.e., perennial crops with no harvestable output during the season of treatment), plants and flowers in outdoor nurseries and greenhouses and golf course and sod farm turf. This product mixes readily with water.

BIFENTHRIN 7.9% FL Nursery can be tank-mixed with insect growth regulators and other pesticides. Always observe all precautions and limitations on each product's label when tank mixing. BIFENTHRIN 7.9% FL Nursery's physical compatibility can differ with different sources of pesticide products and local cultural practices. When considering a tank mixture which has not previously been tested, test the mixture on a small scale using the intended proportions of products and water to determine the physical compatibility of the mixture.

Unless specified otherwise in the label direction, the following procedure is recommended for preparation of a new tank mix:

- a. Add wettable powders to tank water
- b. Agitate mixture
- c. Add flowables and liquids
- d. Re-agitate
- e. Add emulsifiable concentrates
- f. Agitate again.

Try reversing the order of addition or increase the volume of water, should the mixture be found to be incompatible following the above order of addition.

**Notice:** Recalibrate the sprayer if additional water is needed in the mixture. Do not let the tank mix stand overnight.

**Maximum rates for outdoor applications:** Per acre, you may apply up to 0.2 lbs. active ingredient (40 fl. ozs.) in a single application or per year.

**Resistance:** Repeated use of certain insecticides may create resistance in some insects. BIFENTHRIN 7.9% FL Nursery should be used in accordance with treatment area-appropriate strategies for resistance management. For further information regarding resistance management strategies for your treatment area, consult local or state pest management authorities.

Adequate control may not be attained if resistance to this or similar products arises in the treatment area. If you are unable to attain adequate control and this result cannot be explained by misapplication or weather extremes, it is possible that a resistant type of insect has developed. Discuss alternative control techniques with your pest management advisor or company representative if it appears that a resistant insect type is present.

7/14

# BIFENTHRIN 7.9% FL NURSERY DILUTION CHART

Application Volume: Gals. Per Acre	Application Rate: Lbs. a.i. Per Acre	Volume of Finished Spray Fluid Ounces* of BIFENTHRIN 7.9% FL Nursery			
		1 gal.	25 gals.	50 gals.	100 gals.
50	0.025	0.1	2.5	5.0	10.0
50	0.05	0.2	5.0	10.0	20.0
50	0.1	0.4	10.0	20.0	40.0
50	0.2	0.8	20.0	40.0	80.0
100	0.025	0.05	1.25	2.5	5.0
100	0.05	0.1	2.5	5.0	10.0
100	0.1	0.2	5.0	10.0	20.0
100	0.2	0.4	10.0	20.0	40.0
150	0.025	0.03	0.83	1.67	3.3
150	0.05	0.07	1.67	3.33	6.7
150	0.1	0.1	3.33	6.67	13.3
150	0.2	0.3	6.67	13.33	26.7
200	0.025	0.025	0.63	1.25	2.5
200	0.05	0.05	1.25	2.5	5.0
200	0.1	0.1	2.5	5.0	10.0
200	0.2	0.2	5.0	10.0	20.0
250	0.025	-	0.5	1.0	2.0
250	0.05	-	1.0	2.0	4.0
250	0.1	-	2.0	4.0	8.0
250	0.2	-	4.0	8.0	16.0
300	0.025	-	0.42	0.83	1.7
300	0.05	-	0.83	1.67	3.3
300	0.1	-	1.67	3.33	6.7
300	0.2	-	3.33	6.67	13.3

\*Multiply by 29.57 to convert to milliliters: 1 fl. oz. = 29.57 ml = 2 tablespoons = 6 teaspoons.  
Never use household utensils to measure this product.

## Determining the Active Ingredient Content Formula of Finished Spray Mixture:

Use the following formula to determine the percent A.I. (Active Ingredient) that is in the spray tank after mixing BIFENTHRIN 7.9% FL Nursery:

$$\frac{(\text{Fluid Ounces BIFENTHRIN 7.9\% FL Nursery added to tank}) \times (7.9)}{(\text{Gals. finished spray mix}) \times (128)} = \text{Spray Mix Percent Active Ingredient}$$

## APPLICATION RECOMMENDATIONS

### ORNAMENTAL PLANTS AND TREES (INCLUDING NON-BEARING FRUIT AND NUT TREES) IN GREENHOUSES, LATH HOUSES, OUTDOOR NURSERIES AND SHADE HOUSES

Five to forty fluid ounces of BIFENTHRIN 7.9% FL Nursery may be applied (equivalent to 0.025 to 0.2 lbs. a.i./A). This product can be diluted in different volumes of water as directed on the BIFENTHRIN 7.9% FL Nursery Dilution Chart above; however, under no circumstance should you exceed the maximum label rate of 0.2 lbs. a.i./A (40 fluid ounces per acre). Low volume application equipment may also be used to apply this product in a dilution with water, other pesticides or insect growth regulators; however, under no circumstance should you exceed the maximum label rate of 0.2 lbs. a.i./A (40 fluid ounces per acre).

8/14

### RECOMMENDED ORNAMENTAL APPLICATION RATES

The following table provides recommended application rates of this product for control of the respective pests under normal conditions. However, for each pest listed, BIFENTHRIN 7.9% FL Nursery can be applied at no more than 0.2 lbs. a.i./A (40 fluid ounces per acre).

Pest	BIFENTHRIN 7.9% FL Nursery Application Rate	
	Pounds Active Ingredient per Acre	Fluid Ounces per 1,000 Square Feet
Aphid Bagworm <sup>1</sup> Cutworm Elm Leaf Beetle Fall Webworm Lace Bug Leaf Feeding Caterpillar Plant Bug (Including <i>Lygus</i> spp.) Tent Caterpillar	0.025 - 0.05	0.125 - 0.25
Beet Armyworm Black Vine Weevil (Adult) Broad Mite Brown Soft Scale Budworm California Red Scale (Crawlers) <sup>2</sup> Centipede Citrus Thrip Clover Mite Cricket Diaprepes (Adult) Earwigs European Red Mite Flea Beetle Fungus Gnats (Adult) Grasshopper Gypsy Moth Caterpillar Leafhopper Leafroller Mealybug Millipede Mite Orchid Weevil Pillbug Pine Needle Scale (Crawlers) <sup>2</sup> San Jose Scale (Crawlers) <sup>2</sup> Sowbug Spider Spider Mite Thrip Tip Moth Twig Borer <sup>2</sup> Weevil Whitefly	0.05 - 0.1	0.25 - 0.5
Ants Imported Fire Ant** Japanese Beetle (Adult) Leafminer Pecan Leaf Scorch Mite Pine Shoot Beetle (Adult)	0.1 - 0.2	0.5 - 1.0



9/14

<sup>1</sup>**Bagworm:** For best control, make application when larvae begin to hatch. Make application directly on the larvae.

<sup>2</sup>**Scale Crawlers and Twig Borers:** Apply this product to plant foliage, stems, trunks and twigs.

\*\* Use on foraging ants only.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do make a single repeat application of BIFENTHRIN 7.9% FL Nursery if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

#### **Additional Application Recommendations:**

- This product may be applied only using ground equipment. Such ground equipment should utilize the largest nozzle size possible that ensures sufficient coverage.
- Application is prohibited when wind velocity tops ten (10) mph or the wind's downwind drift tends towards nearby water bodies. Do not apply this product when wind gusts near ten (10) mph.
- Application is prohibited during temperature inversions or if rain may occur within twelve (12) hours of application (or however long is required for the spray to dry).
- To check cultivar sensitivity to this product, prior to the main application, treat and monitor a small number of plants for one week.
- When applying by ground, do not apply within twenty-five (25) feet of commercial fish farm ponds, estuaries, lakes, marshes, natural ponds, reservoirs, permanent streams, or rivers.
- When applying this product to trees taller than fifteen (15) feet using high pressure sprays or any method of application involving air-assisted equipment, such as a mist blower, do not apply within 150 feet of commercial fish farm ponds, estuaries, lakes, marshes, natural ponds, reservoirs, permanent streams, or rivers.

### **APPLICATION RECOMMENDATIONS**

#### **TURF (GOLF COURSES AND SOD FARMS)**

#### **NOT FOR USE ON SOD FARMS IN THE STATE OF NEW YORK**

BIFENTHRIN 7.9% FL Nursery can be applied as a surface or subterranean treatment. To obtain uniform coverage when applying to long or dense grass, it may be necessary to apply up to 10 gals. / 1000 sq. ft. If less than 2 gals. / 1000 sq. ft. is applied in the treatment, water the treated area with a minimum of 0.25 inches of water. This is necessary to effectively treat subterranean pests.

#### **RECOMMENDED TURF (Golf Courses and Sod Farms) APPLICATION RATES**

The following table provides recommended application rates of this product for control of the respective pests under normal conditions. However, for each pest listed BIFENTHRIN 7.9% FL Nursery can be applied at a rate up to 0.1 lbs. a.i./A (20 fluid ounces per acre). You may double this amount to 0.2 lbs. a.i./A for effective control of ants (including fire ants) and mole crickets.

10/4

Pest	Pounds Active ingredient per acre	BIFENTHRIN 7.9% FL Nursery Application Rate	
Armyworm <sup>1</sup> Cutworm <sup>1</sup> Sod Webworm <sup>1</sup>	0.05	10 fl. oz. per acre	0.25 fl. oz. per 1000 sq. ft.
Annual Bluegrass Weevil (Hyperodes) (Adult) <sup>2</sup> Ant Billbug (Adult) <sup>3</sup> Black Turfgrass Ataenus (Adult) <sup>4</sup> Centipede Chinch Bug <sup>5</sup> Cricket Earwig Fleas (Adult) Grasshopper Leafhopper Leafroller Mealybug Millipede Mite <sup>6</sup> Mole Cricket (Adult) <sup>7</sup> Mole Cricket (Nymph) <sup>8</sup> Pillbug Sowbug	0.05 - 0.1	10 - 20 fl. oz. per acre	0.25 - 0.5 fl. oz. per 1000 sq. ft.
Flea (Larvae) <sup>9</sup> Imported Fire Ant Japanese Beetle (Adult)	0.1	20 fl. oz. per acre	0.5 fl. oz. per 1000 sq. ft.
Ant Imported Fire Ant <sup>11</sup> Mole Cricket	0.2 <sup>10</sup>	40 fl. oz. <sup>10</sup> per acre	1 fl. oz. <sup>10</sup> per 1000 sq. ft.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do make a single repeat application of BIFENTHRIN 7.9% FL Nursery if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

## COMMENTS

<sup>1</sup> **Armyworms, Cutworm, and Sod Webworm** – Do not water or mow for 24 hours after application. For grass maintained greater than 1 inch mowing height, higher application rates (up to 1 fl. oz. per 1000 sq. ft.) may be required during high pest pressure.

<sup>2</sup> **Annual Bluegrass Weevil (*Hyperodes*) (adult)**: Time applications to control adult insects as they move from overwintering sites and to grass areas. Movement generally starts when *Forsythia* is in full bloom and ends when flowering dogwood is in full bloom. Consult your State Cooperative Extension Service for more information.

<sup>3</sup> **Billbug (adult)**: Apply when adult insects are first observed (April and May). Degree-day models are available to determine best application timing. Spring applications will also control over-wintered chinch bugs in temperate regions. Consult your State Cooperative Extension Service for information.

<sup>4</sup> **Black Turfgrass *Ataenius* (adult)**: Apply during May and July for control of the first and second generation of insects. Apply in May when *Vanhoutte spiraea* and horse chestnut are blooming. Apply in July when *Rose of Sharon* is blooming.

11/14

<sup>6</sup>**Chinch Bug:** To optimize treatment of the base of grass plants and the thatch area, where the insects are often located, irrigate the grass area before treatment. Higher volume applications should be used if the thatch layer is excessive or if grass height is relatively high. Chinch bugs are difficult pests to control in grasses, thus, higher application rates (up to 1 fluid oz. per 1000 sq. ft) may be required during the middle of the summer.

<sup>6</sup>**Mite:** For best results, apply the labeled application rate in combination with the labeled application rate of a surfactant. A second application may be necessary to achieve acceptable control, five to seven days after the first.

<sup>7</sup>**Mole Cricket (adult):** Apply as late in the day as possible. If the soil is dry, irrigate before application to bring the insects closer to the soil surface (maximizing contact with the product). Immediately after application, water in with up to 0.5 inches of water. Treat grassy areas that receive pressure from adult mole crickets at peak egg hatch for best control of subsequent nymph populations see below.

<sup>8</sup>**Mole Cricket nymphs:** Apply as late in the day as possible. If the soil is dry, irrigate before application to bring the insects closer to the soil surface (maximizing contact with the product). Immediately after application, water in with up to 0.5 inches of water. Treat grassy areas that received intense adult mole cricket pressure in the spring immediately prior to peak egg hatch. Higher application rates and more frequent applications may be required to control larger nymphs later in the year.

<sup>9</sup>**Flea larvae:** A higher application volume should be used when treating the soil of shaded areas that are accessible to pets and other animals to ensure penetration of the product into the soil. If the lawn area is being treated at the rate of 0.25 fl. oz. per 1000 sq. ft. for adult flea control, the larval application rate should be two- to four-fold of this application volume.

<sup>10</sup> In order to effectively control large infestations of ants (including imported fire ants) and mole crickets, you may make one application of 0.2 lbs. a.i./A (40 fluid ounces per acre) per year.

<sup>11</sup>**Imported Fire Ants:** For best results, combine broadcast applications (to control foraging workers and newly mated fly-in queens) with mound drenches (to eliminate existing colonies). If the soil is dry, water before application or use a high volume application. For broadcast treatments, apply 1 fl. oz. per 1,000 sq. ft. Treat mounds by diluting 1 teaspoon of product per gallon of water and applying 1 to 2 gallons of finished spray per mound. A spray rig calibrated to apply 1 fl. oz. per 1,000 square feet of product in 5 gallons per 1,000 sq. ft contains this approximate dilution (1 teaspoon per gallon) in the spray tank. Spray with sufficient force to break the mound apex and allow the insecticide solution to flow into the ant tunnels. In addition, treat the four foot diameter circle surrounding each mound. For optimal control, treat in cool weather (65 - 80°F) or in early morning or late evening hours.

#### **Additional Application Recommendations:**

- This product may be applied only using ground equipment. Such ground equipment should utilize the largest droplet size possible that ensures sufficient coverage and the nozzles should not be set any higher than two feet off of the ground.
- Application is prohibited when wind velocity tops ten mph or the wind's downwind drift tends towards nearby water bodies. In addition, do not apply this product when wind gusts near ten mph.
- Application is prohibited during temperature inversions.
- If seeking to control surface-feeding insects, do not make application if rain may occur within twelve hours of application (or however long is required for the spray to dry).
- To check cultivar sensitivity to this product, prior to the main application, treat and monitor a small number of plants for one week.
- When applying by ground, do not apply within twenty-five feet of commercial fish farm ponds, estuaries, lakes, marshes, natural ponds, reservoirs, permanent streams, or rivers.
- When applying this product to trees taller than fifteen feet using high pressure sprays or any method of application involving air-assisted equipment, such as a mist blower, do not apply within 150 feet of commercial fish farm ponds, estuaries, lakes, marshes, natural ponds, reservoirs, permanent streams, or rivers.
- Do not apply when soil or turf is saturated with water. Turf and soil is saturated if it is unable to accept irrigation.

12/14

## IMPORTED FIRE ANT QUARANTINE TREATMENT

BIFENTHRIN 7.9% FL Nursery is approved for use in connection with the USDA Imported Fire Ant Quarantine Program, through application by high volume drench treatment, soil incorporation or topical application. Under the Program, this product can be used to control Imported Fire Ants in any Potting Media, such as bushes, Christmas trees, conifers, flowers, non-bearing fruit and nut-trees, nursery-grown ornamental trees (balled and containerized), plants and shrubs.

**Application by High Volume Drench:** The amount of BIFENTHRIN 7.9% FL Nursery required is dependent on the bulk density of the potting media and the size of the container. The proper amount of product to be mixed in 100 gallons of water is shown in the table below. The appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant. A 6 month certification period is provided when used in accordance with the USDA guidelines.

### Recommended High Drench Application Rate

Bulk Density of Potting Media (lbs./cubic yard)	Rate of BIFENTHRIN 7.9% FL Nursery (fl. ozs.) per 100 Gallons of water
200	2.4
400	4.8
600	7.2
800	9.6
1000	12.0
1200	14.4
1400	16.8

If the bulk density desired is not listed in the table, adjust the amount of BIFENTHRIN 7.9% FL Nursery proportionally.

**Application by Soil Incorporation:** First, determine the applicable volume of potting media based on its dry bulk density. Per cubic yard of potting media, dilute the applicable volume of this product using in the range of 1 qt. to 1 gal. of water. A 6 month certification period is provided when used in accordance with the USDA guidelines.

### Recommended Soil Incorporation Application Rate

Dry Bulk Density of Potting Media (lbs./cubic yard)	Rate of BIFENTHRIN 7.9% FL Nursery (fl. ozs.) for one cubic yard
200	1.9
400	3.8
600	5.7
800	7.6
1000	9.5
1200	11.4
1400	13.3

If the bulk density desired is not listed in the table, adjust the amount of BIFENTHRIN 7.9% FL Nursery proportionally.

**Topical Drench Application:** The amount of BIFENTHRIN 7.9% FL Nursery required is dependent on the bulk density of the potting media and the size of the container. The proper amount of product to be mixed in 1000 ounces of water is shown in the table below. One (1) ounce of appropriate mixture should be applied to the surface. Care should be taken to uniformly distribute the mixture over the entire surface of the potting media. After application, each container should be irrigated with 1.5 inches of water. A 6 month certification period is provided when used in accordance with the USDA guidelines.

13/14

## Recommended Topical Drench Application Rate

Bulk Density of Potting Media (lbs./cubic yard)	Rate of BIFENTHRIN 7.9% FL Nursery (fl. ozs.) per 1,000 ounces of water	
	3 Qt. Container	4 Qt. Container
200	3.6	5.2
400	7.2	10.4
600	10.8	15.6
800	14.4	20.8
1000	18.0	26.0
1200	21.6	31.2
1400	25.2	36.4

If the bulk density desired is not listed in the table, adjust the amount of BIFENTHRIN 7.9% FL Nursery proportionally.

## TREATMENT OF POTTING MEDIA FOR LARVAL CONTROL

**Control of Black Vine Weevil Larvae: Topical Drench Application as a Preventative Treatment:** Mix from 10 to 40 fluid ounces of this product (equivalent to 0.05 lbs. a.i. to 0.2 lbs. a.i.) in 100 gallons of water. Apply from 4 to 8 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant. For optimal control of black vine weevil larvae in a single growing season, make a Spring application as follows: Dilute 10 fluid ounces of this product in 100 gallons of water and apply 8 ounces of the diluted product to a container 6 inches in diameter. For two growing seasons, make a Spring application as follows: Dilute 20 to 40 fluid ounces of this product in 100 gallons of water and apply 8 ounces of the diluted product to a container 6 inches in diameter.

**Control of Black Vine Weevil Larvae: Bare-Root Treatment as a Preventative Treatment:** Mix one gallon of product in 100 gallons of water. Dip the roots of plants to be transplanted into the field into the diluted solution for ten seconds. Application can also be made by spraying the roots of the plants to be transplanted into the field. This treatment will protect the treated roots from root weevil larvae.

**Control of White Grub: Topical Drench Application as a Preventative Treatment:** Mix from 40 to 80 fluid ounces of this product (equivalent to 0.2 lbs. a.i. to 0.4 lbs. a.i.) in 100 gallons of water. Apply from 4 to 8 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant. Longer control is provided by the use of the higher rate.

**Larval Control of Black Vine Weevil and White Grub: Incorporation into Media as a Preventative Treatment:** First, determine the applicable volume of potting media based on its dry bulk density. Per cubic yard of potting media, dilute the applicable volume of this product using in the range of 1 qt. to 1 gal. of water. Incorporate the correct volume of this product, as indicated below, by spraying or sprinkling the media. Longer control is provided by the use of the higher rates.

24/14

Potting Media Bulk Density  (lbs./cubic yard)	Rate of BIFENTHRIN 7.9% FL Nursery (fl. ozs.) per one cubic yard of media to result in a media concentration of			
	10 PPM	15 PPM	20 PPM	25 PPM
200	0.4	0.6	0.8	1.0
300	0.6	0.9	1.2	1.5
400	0.8	1.2	1.6	2.0
500	1.0	1.5	2.0	2.5
600	1.2	1.8	2.4	3.0
700	1.4	2.1	2.8	3.5
800	1.6	2.4	3.2	4.0
900	1.8	2.7	3.6	4.5
1000	2.0	3.0	4.0	5.0

**Control of Fungus Gnat Larvae: Topical Drench Application as a Preventative Treatment:** Mix from 20 to 40 fluid ounces of product (equivalent to from 0.1 lbs. a.i. to 0.2 lbs. a.i.) in 100 gallons of water. Apply from 4 to 8 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount of diluted product used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant. Longer control is provided by the use of the higher rates.

**Control of Black Vine Weevil Larvae: Topical Drench Application as a Curative Treatment:** Mix from 10 to 40 fluid ounces of product (equivalent to from 0.05 lbs. a.i. to 0.2 lbs. a.i.) in 100 gallons of water. Apply from 8 to 16 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount of diluted product used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant.

**Control of Diaprepes Weevil Larvae: Topical Drench Application as a Curative Treatment:** Mix from 10 to 40 fluid ounces of product (equivalent to from 0.05 lbs. a.i. to 0.2 lbs. a.i.) in 100 gallons of water. Apply from 8 to 16 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant.

**Control of Fungus Gnat Larvae: Topical Drench Application as a Curative Treatment:** Mix from 10 to 40 fluid ounces of product (equivalent to from 0.05 lbs. a.i. to 0.2 lbs. a.i.) in 100 gallons of water. Apply from 8 to 16 ounces of the diluted solution to the media in a 6 inch (in diameter) container. Adjust the amount of diluted product used proportionally for containers other than 6 inches in diameter. For best results, the appropriately diluted product should be applied to each container up until saturation; generally this amount will be 20% of the volume of the container holding the plant. Longer control is provided by the use of the higher rates.

**Dealers Should Sell in Original Packages Only**

#### TERMS OF SALE OR USE

On purchase of this product buyer and user agree to the following conditions:

**Warranty:** Micro Flo Company makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

**Use of Product:** Micro Flo's recommendations for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

**Damages -** Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.