

53883-165

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

November 22, 2006

Carroll Draper
Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

SUBJECT: Application for Pesticide Notification
Bifenthrin Nursery Concentrate
EPA Reg. No. 53883-165
Application Dated October 27, 2006

Dear Ms. Draper:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above product. The Registration Division (RD) has conducted a preliminary screen of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please me directly at 703-305-6249 or Terri Stowe of my staff at 703-305-6117.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs



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C O N T R O L
S O L U T I O N S
i n c o r p o r a t e d

October 27, 2006

NOTIFICATION

NOV 22 2006

Document Processing Desk (NOTIF)
Office of Pesticide Programs
U.S. Environmental Protection Agency
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Re: Notification per (PR) Notice 98-10, Addition of required New York Language
EPA Reg. No. 53883-165 Bifenthrin Nursery Concentrate

Dear Sir or Madam:

Enclosed is a Notification for the addition of required New York language per (PR) Notice 98-10. See highlighted text on attached labeling.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

If you have any questions or need additional information, please feel free to contact me.

Sincerely,

Carroll Draper
Registration Specialist



United States
Environmental Protection Agency
Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 53883 - 165	2. EPA Product Manager George LaRocca	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Bifenthrin Nursery Concentrate	PM# 13	
5. Name and Address of Applicant (Include ZIP Code) Control Solutions, Inc. 5903 Genoa-Red Bluff Pasadena, TX 77507-1041 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

NOTIFICATION

NOV 22 2006

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification to add required New York language. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	Other (Specify) _____	
		If "Yes" Package wgt.	No. per container		
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> on label	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Carroll Draper	Title Registration Specialist	Telephone No. (Include Area Code) 800-242-5562
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Specialist	
4. Typed Name Carroll Draper	5. Date 10-27-06	

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 those uses covered by the certified applicator's certification

Bifenthrin Nursery Concentrate

NOTIFICATION

NOV 22 2006

For Commercial Non-Food Use on:

- Indoor and Outdoor Ornamentals
- Greenhouses
- Nurseries
- Turf on Golf Courses and Sod Farms.

Do not use this product on golf courses and Sod Farms 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 Nursery Concentrate contains 3/4 pound active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

(See other panels [inside attached booklet] for additional precautionary information)

NOTE: USERS OF THIS PRODUCT IN CALIFORNIA MUST BE IN POSSESSION OF STATE SPECIFIC SUPPLEMENTAL LABELING.

First Aid	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall® (866) 897-8050 for emergency medical treatment information.	
If swallowed:	<ul style="list-style-type: none"> • 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 or doctor. • <i>Do not give anything by mouth to an unconscious person.</i>
If in eyes:	<ul style="list-style-type: none"> • Hold eye 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 eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • 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.
If inhaled:	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for further treatment advice.

Note to physician: 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.

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 and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personnel Protective Equipment:

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions or category C on an EPA chemical resistance category selection chart.

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.
- Shoes plus socks
- Protective Eyewear

Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations
Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash 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 to 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

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 this product through any kind of irrigation system.

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 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:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride or viton.
- Shoes 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 Standards 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.

Do not allow people or pets on treated surfaces until the spray has dried.

GENERAL APPLICATIONS INSTRUCTIONS

Bifenthrin Nursery Concentrate controls numerous insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Spreader stickers are not necessary with Bifenthrin Nursery Concentrate.

Bifenthrin Nursery Concentrate can be tank-mixed with insect growth regulators, other pesticides and other aqueous carriers. Observe all precautions and Directions for Use for each product. Physical compatibility may vary with different combinations of products, so prepare a small scale (pint or quart jar) test sample for any combination not tested previously. Use proper proportions in the small scale test to achieve the correct result.

Unless otherwise noted in the label instructions, use the procedure below for preparation of a new tank mix:

1. Add wettable powders to tank water.

1 fl. oz. = 29.57 ml = 2 tablespoons = 6 teaspoons

Do not use household utensils to measure Bifenthrin Nursery Concentrate.

Formula for Determining the Active Ingredient Content of the Finished Spray Mixture: To determine the percent active ingredient that is in the spray tank after mixing Bifenthrin Nursery Concentrate use the formula below:

$$\frac{(7.9)(\text{Fl. Oz. of Bifenthrin Nursery Concentrate added to tank})}{(\text{Gallons of finished spray mix})(128)} = \text{Percent a.i. of spray mix}$$

ORNAMENTALS

Ornamentals in Greenhouses, Lath Houses, Shade Houses and Outdoor Nurseries, including Non-Bearing Fruit and Nut Trees

Apply 0.025 to 0.2 lbs ai/A (5 to 40 fl. ozs.) of Bifenthrin Nursery Concentrate. Provided the maximum label rate (0.2 lbs. ai/A or 40 fl. ozs.) is not exceeded, Bifenthrin Nursery Concentrate can be diluted and applied in various volumes of water. It may also be applied through low volume application equipment by dilution with water or other carriers Refer to Dilution Chart for specific instructions.

ORNAMENTAL APPLICATION RATES

Under typical conditions, the application rates in the table below will provide control of the pests listed. However, at the discretion of the applicator, Bifenthrin Nursery Concentrate may be applied at up to 0.2 lbs. ai/A (40 fl. ozs.) to control the pests listed in this Table.

Pest	Application Rate Bifenthrin Nursery Concentrate	
	Lbs Ai/A	Fluid Ounces Per Acre
Aphids, Bagworms ¹ , Cutworms, Elm Leaf Beetles, Fall Webworms, Lace Bugs, Leaf Feeding Caterpillars, Plant Bugs (Including <i>Lygus spp.</i>), Tent Caterpillars	0.025-0.05	5-10
Beet Armyworm, Black Vine Weevil (Adults), Brown Soft Scales, Broad Mites, Budworms, California Red Scale (Crawlers) ² , Centipedes, Citrus Thrips, Clover Mites, Crickets, Diaprepes (Adults), Earwigs, European Red Mite, Flea Beetles, Fungus Gnats (Adults), Grasshoppers, Gypsy Moth Caterpillars, Leafhoppers, Leafrollers, Mealybugs, Millipedes, Mites, Orchid Weevil, Pillbugs, Pine Needle Scales (Crawlers) ² , San Jose Scales (Crawlers) ² , Sowbugs, Spider Mites, Spiders, Thrips, Tip Moths, Twig Borers ² , Weevils, Whiteflies	0.05-0.1	10-20
Ants, Imported Fire Ants**, Japanese Beetle (Adult), Leafminers, Pecan Leaf Scorch Mite, Pine Shoot Beetle (Adults)	0.1-0.2	20-40

**For foraging ants.

¹**Bagworms:** For optimum control treat when larvae have started to hatch and are young, directing spray to contact as many larvae as possible.

²**Scale Crawlers and Twig Borers:** Apply to plant foliage; also treat trunks, stems, and twigs.

Treat a small number of plants, and observe for one week to determine if certain cultivars are sensitive to the final spray solution.

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

Use proportional amounts of Bifenthrin Nursery Concentrate for potting media with bulk densities not listed.

High Volume Drench: Mix the appropriate amount based on the bulk density of the media in 100 gallons of water (see table below). Use Bifenthrin Nursery Concentrate as a high volume drench each of the containers to the point of saturation. The amount of mix used for each plant is normally 1/5 volume of the container. This application will provide a 6 month certification period when used in accordance with USDA guidelines.

Recommended Application Rate for High Drench of Bifenthrin Nursery Concentrate to Control Imported Fire Ants (IFA) in Potting Media.

Potting Media Bulk Density (lbs. cubic yard)	Fluid ounces of Bifenthrin Nursery Concentrate in 100 gallons.
200	2.4
400	4.8
600	7.2
800	9.6
1000	12.0
1200	14.4
1400	16.8

Use proportional amounts of Bifenthrin Nursery Concentrate for potting media with bulk densities not listed.

LARVAL CONTROL IN POTTING MEDIA OF CONTAINERIZED PLANTS

PREVENTATIVE TREATMENT			
PEST	APPLICATION TYPE	TREATMENT with BIFENTHRIN NURSERY CONCENTRATE	REMARKS
Black Vine Weevil Larvae	Topical Drench	<p>Use at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb/AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fluid ounces of finished spray per 6" (diameter) container.</p> <p>The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.</p>	<p>10 fluid ounces of Bifenthrin Nursery Concentrate per 100 gallons and applying 8 fluid ounces of finished spray per 6" (diameter) container will provide control for one growing season when the application is made in the spring.</p> <p>20 to 40 fluid ounces of Bifenthrin Nursery Concentrate per 100 gallons and applying 8 fluid ounces of finished spray per 6" (diameter) container will provide control for two growing seasons when the application is made in the spring.</p> <p>Use a proportional volume of finished spray for containers less than or greater than 6" in diameter.</p>

<p>White Grubs - Japanese beetle - Oriental beetle - European chafer</p>	<p>Topical Drench</p>	<p>Use at the rate of 40 to 80 fluid ounces (0.2 to 0.4 lb AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fluid ounces of finished spray per 6" (diameter) container.</p> <p>The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.</p>	<p>Use the higher application rate for a longer period of control.</p> <p>Use a proportional volume of finished spray for containers less than or greater than 6" in diameter.</p>
<p>Black Vine Weevil Larvae and White Grub</p>	<p>Media Incorporation</p>	<p>Incorporate the appropriate volume of Bifenthrin Nursery Concentrate (see table below) per cubic yard of potting media by diluting it in water (typically 1 quart to 1 gallon per cubic yard of media) and sprinkling or spraying it onto the media.</p>	<p>Use the higher application rates for longer periods of control.</p>
<p>Fungus Gnat Larvae</p>	<p>Topical Drench</p>	<p>Use at the rate of 20 to 40 fl. ozs (0.1 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 4 to 8 fl. ozs. of finished spray per 6" (diameter) container.</p> <p>The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.</p>	<p>Use a proportional volume of finished spray for containers less than or greater than 6" in diameter</p>
<p>Root Weevil Larvae</p>	<p>Bare-root Treatment</p>	<p>Use at the rate of 1 gallon in 100 gallons of water and treat the bare roots of plants that are being transplanted into the field. Either dip the roots into the insecticide solution for ten seconds or spray the insecticide solution onto the roots.</p>	

Potting Media Bulk Density (lbs. per cubic yard)	Fluid ounces of Bifenthrin Nursery Concentrate In one cubic yard			
	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

The application rates in the table above are based on the dry bulk density of the potting media. For potting media with dry bulk densities not listed above, use proportional volumes of Bifenthrin Nursery Concentrate.

CURATIVE TREATMENT			
PEST	APPLICATION TYPE	TREATMENT with BIFENTHRIN NURSERY CONCENTRATE	REMARKS
Black Vine Weevil Larvae	Topical Drench	Use at the of 10 to 40 fl. ozs. (0.05 to 0.2 lb. AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6" (diameter) container. The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.	10 fluid ounces of Bifenthrin Nursery Concentrate per 100 gallons and applying 8 fluid ounces of finished spray per 6" (diameter) container will provide control for one growing season when the application is made in the spring. 20 to 40 fluid ounces of Bifenthrin Nursery Concentrate per 100 gallons and applying 8 fluid ounces of finished spray per 6" (diameter) container will provide control for two growing seasons when the application is made in the spring. Use a proportional volume of finished spray for containers less than or greater than 6" in diameter.
Diaprepes Weevil Larvae	Topical Drench	Use at the rate of 10 to 40 fl. ozs (0.05 to 0.2 lb AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6" (diameter) container. The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.	Use the higher application rate for a longer period of control. Use a proportional volume of finished spray for containers less than or greater than 6" in diameter.
Fungus Gnat Larvae	Topical Drench	To control fungus gnat larvae infesting containerized plants, dilute Bifenthrin Nursery Concentrate at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lbs AI) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid	Use the higher application rates for longer periods of control. Use a proportional volume of finished spray for containers less than or greater than 6" in diameter.

	<p>ounces of finished spray per 6" (diameter) container.</p> <p>The media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.</p>	
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APPLICATION RECOMMENDATIONS – Turf (Golf Courses and Sod farms)

County: New York

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 Nursery Concentrate if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Bifenthrin Nursery Concentrate may be applied as a surface or sub-surface treatment. To get uniform coverage when treating dense and/or long turf foliage use application volumes of up to 10 gallons per 1000 sq. feet.

For low volume applications (less than 2 gallons/1000 square feet): The treated area should be irrigated with at least 0.25 inches of water immediately following treatment to ensure control of sub-surface pests such as, but not limited to, Mole Crickets.

APPLICATION RATES

TURF (Golf Courses and Sod Farms)

Under typical conditions, the application rates listed in the table below will provide control of the pests that are listed. During periods of high pest pressure or for maximum residual control, Bifenthrin Nursery Concentrate can be applied at up to 0.1 lb. ai/A (20 fl. ozs.). (0.2 lb ai/A or 40 fl. oz. for ants, imported fire ants and mole crickets).

Pest	Active Ingredient lbs. per acre	Application Rate Bifenthrin Nursery Concentrate	
Armyworms ³ , Cutworms ³ , Sod Webworm ³	0.05 lbs. ai per acre	10 fl. oz. per acre	0.25 fl. oz. per 1000 sq. ft.
Annual Bluegrass Weevil (Hyperodes)(Adult) ⁴ , Ants, Billbugs (Adult) ⁵ Black Turfgrass Ataenius (Adult) ⁶ , Centipedes, Chinch Bugs ⁷ , Crickets, Earwigs, Fleas (Adult), Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites ⁸ , Mole Cricket (Adult) ⁹ , Mole Cricket (Nymph) ¹⁰ , Pillbugs, Sowbugs	0.05-0.1 lbs ai per acre	10-20 fl. oz. per acre	0.25-0.5 fl. oz. per 1000 sq. ft
Fleas (Larvae) ¹¹ , Imported Fire Ants, Japanese Beetle (Adult), Ticks ¹²	0.1 lbs. ai per acre	20 fl. oz. per acre	0.5 fl. oz. per 1000 sq. ft.

Ants, Imported Fire Ants ¹⁴ , Mole Crickets	0.2 ¹³ lbs. ai per acre	40 ¹³ fl. oz. per acre	1 fl. oz. ¹³ per 1000 sq. ft.
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³**Armyworms, Cutworms, and Sod Webworms:** Postpone irrigation or mowing for 24 hours following application to obtain the best possible control. Higher treatment rates (up to 0.1 lb ai/A or 20 fl. ozs. of Bifen Nursery Concentrate) may be necessary if high pest pressure exists and if the turf area is maintained at a height taller than 1 inch.

⁴**Annual Bluegrass Weevil (*Hyperodes*) adults:** Treatment of this species should be timed as they travel into grass areas and away from their overwintering sites. Travel usually begins when *Forsythia* is in full bloom and ends when *Cornus florida* (flowering dogwood) is in full bloom. For additional detailed information regarding treatment timing, check with your State Cooperative Extension Service.

⁵**Billbug Adults:** Treatment of adult billbugs should be made when they are first noticed in April and May. To optimize treatment timing, degree day models have been developed. For detailed information particular to your region, check with your State Cooperative Extension Service. Spring treatments for billbug adults will also offer control of over-wintered chinch bugs in temperate climates.

⁶**Black Turfgrass Ataenius adults:** In order to control the 1st and 2nd generation of black turfgrass ataenius adults, respectively, treatments should take place in May and July. Time the May treatment to match with the full bloom stage of *Vanhoutte spiraea* (*Spiraea vanhoutte*) and horse chestnut (*Aesculus hippocastanum*). Time the July treatment to match with the blooming Rose of Sharon (*Hibiscus syriacus*).

⁷**Chinch Bugs:** Mostly found in the thatch layer, chinch bugs infest the base of turf plants. In order to optimize the penetration of the insecticide to location of the chinch bugs, irrigation of the turf prior to treatment may be necessary. If a long mowing height is being maintained or if the thatch layer is excessive, use higher volume treatments. It may be necessary to use higher application rates (up to 0.1 lb ai/A or 20 fl. ozs. of Bifen Nursery Concentrate) to control populations made up of both adults and nymphs in mid-summer.

⁸**Mites:** Apply Bifen I/T in combination with a labeled rate of a surfactant to achieve optimal control of eriophyid mites. A second application may be needed 5 to 7 days after the first to ensure optimal control.

⁹**Mole Cricket adults:** Because preferred turf areas are subject to constant invasion during the early spring by this very active stage, it is difficult to attain suitable control of adult mole crickets. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately following treatment. To bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized, it is imperative to irrigate prior to application if the soil is not moist. To obtain optimum control of subsequent nymph populations (see below), turf areas that receive pressure from adult mole crickets should be treated at peak egg hatch.

¹⁰**Mole Cricket nymphs:** Treat those turf areas that are hit with intense adult mole cricket pressure in the spring right before peak egg hatch. Young nymphs are more vulnerable to insecticides at this time because they are close to the soil surface where the insecticide is most concentrated therefore, the greatest amount of control is reached. In order to sustain adequate control of larger, more damaging, nymphs later in the year, it may be necessary to use higher application rates more often. It is ideal to treat the areas as late in the day as possible and water immediately after treatment with up to 0.5 inches of water. To get mole crickets nearer to the soil surface where there will be maximum contact, it is necessary to irrigate prior to application if the soil is not moist.

¹¹**Flea Larvae:** Immature fleas mature in shaded areas accessible to pets or other animals. When treating these areas use a higher volume treatment so that the insecticide penetrates into the soil.

Note: if the lawn area is being treated with Bifenthrin Nursery Concentrate at 0.05 lb. ai/A (10 fl. ozs.) for adult flea control, then the larval application rate can be achieved by doubling the application volume.

¹²**Ticks:** Make application to the entire area where contact with ticks may occur. Do not make spot treatments. When applying to areas with heavy leaf litter or dense ground cover use higher

spray volumes. To attain and/or sustain control in times of high pest pressure, retreatments may be necessary; retreat only if signs of continued or renewed tick activity are present. Repeat treatments should not be made more often than once per 7 days. **Deer ticks (*Ixodes sp.*)** have a four-stage life cycle spanning 2 years. Treat in late fall and/or early spring to both larval and nymphal stages present in leaf litter and the soil, and adults living in the grass and low-lying vegetation above ground. **American dog ticks** invade suburban settings in areas where residences and dwellings are constructed on former fields or wooded areas. These pests normally gather by paths or roadways where they are likely to find a host. To control tick larvae, nymphs and adults, treatments should take place, as needed, from mid spring to early fall.

¹³**Note:** A single application of 0.2 lb. ai/acre (40 fluid ounces of Bifen Nursery Concentrate) may be applied once per year for larger infestations of ants, imported fire ants, and mole crickets.

¹⁴**Imported Fire Ants:** The best control will be achieved by using broadcast treatments in combination with mound drenches. This will control present colonies along with foraging workers and newly mated fly-in queens. It is critical either to use high volume treatments or to irrigate prior to application if the soil is dry. Apply 0.2 lb ai/A (40 fl. ozs. of Bifen Nursery Concentrate) when making broadcast treatments. For mound drenches, dilute 1 teaspoon of Bifen I/T per gallon of water and use 1 to 2 gallons of finished dilution using sufficient force to penetrate the top and allow dilution to flood ant channels. Treat a four-foot diameter around each ant mound. Treatment should take place in cool weather (65-80°F) or in the early morning or late evening hours in order to achieve the greatest results. Note: A spray rig that is calibrated to apply 0.2 lb. ai/A (40 ozs.) of Bifen Nursery Concentrate in 5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank.

- Apply with ground application equipment only (and apply with nozzles not more than two feet above the turf).
- Do not apply when wind conditions favor downwind drift to nearby water bodies.
- Do not apply when wind velocity exceeds 10 mph.
- Avoid application when wind gusts approach 10 mph.
- Do not apply when a temperature inversion exists.
- Apply using nozzles that provide the largest droplet size compatible with sufficient coverage.
- If rain is expected within 12 hours (or whatever time is necessary for the spray to dry), do not apply for surface feeding pests.
- Do not apply by ground equipment within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.
- Do not apply when turf areas are water-logged or soil is saturated with water (i.e. will not accept irrigation).

WARRANTY STATEMENT

Control Solutions, Inc. warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc. To the extent allowed by law, Control Solutions, Inc. shall in no event be liable for consequential, special, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. In addition to the foregoing, no purchaser of this product (other than an end user) shall be entitled to any reimbursement for any loss suffered as a result of any suspension or cancellation of the registration for this product by the U.S. Environmental Protection Agency. Except, as expressly provided herein, Control Solutions, Inc. makes no warranties, guarantees, or representations of any kind, either expressed or implied, or by usage of trade, statutory or otherwise, with regard to the product sold, including, but not limited to merchantability, fitness for a particular purpose, use or eligibility of the product for any particular trade usage. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damage resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall be damages not exceeding the purchase price paid for this product or, at Control Solutions, Inc. election, the replacement of this product.

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5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

Control Solutions, Inc.
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EPA reg. No. 53883 – 165
EPA Est. No. 53883-TX-002

(Rewrite 11-06-05)

**RESTRICTED USE PESTICIDE
TOXIC TO FISH AND AQUATIC ORGANISMS**

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

BIFENTHRIN NURSERY CONCENTRATE

**ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT AND EXTENDED REAPPLICATION
INTERVALS REQUIREMENTS FOR GREENHOUSE USE IN CALIFORNIA.**

EPA Reg. No. 53883-165

**DIRECTIONS FOR USE
RESTRICTED USE PESTICIDE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. This supplemental labeling must be in possession of all users of the product in greenhouses in California.

CALIFORNIA SPECIFIC REQUIREMENTS FOR GREENHOUSE APPLICATORS AND HARVESTERS:

In addition to following all applicable precautionary statements on the label on the product container, the following is required for greenhouse applicators and harvesters:

Greenhouse Applicator: Greenhouse applicators must wear a full body chemical-resistant protective suit (such as barrier laminate, butyl rubber, nitrile rubber, polyvinyl chloride, or equivalent).

Reapplication Interval: Reapplications to greenhouses must be at intervals of 30 days or longer.

Greenhouse Harvesters: Greenhouse harvesters must wear either regular-length gloves plus a long sleeved shirt or elbow-length (gauntlet type) gloves during the 30 days following application.

PLEASE REFER TO CONTAINER LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS. FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS, AND PRECAUTIONS ON THE CONTAINER LABEL.