



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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES.

Amy Warren
Registration Specialist
Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

AUG 8 2008

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Ms. Warren:

The Agency is in receipt of your Applications for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated June 3, 2008 for:

EPA Registration 53883-125 Bifenthrin GC Concentrate

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and finds that the label change(s) requested falls within the scope of PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Nicole Williams of my staff at 703-308-5551.

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



June 3, 2008

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

**Re: Notification per (PR) Notice 2007-4, Labeling Revisions required by the Final Rule
"Pesticide Management and Disposal"
Bifenthrin GC Concentrate (EPA Reg. No. 53883-125)**

Dear Sir or Madam:

Enclosed is a Notification for (PR) 2007-4; See highlighted text on attached labeling.

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, 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,

Amy Warren
Regulatory Affairs Specialist
Control Solutions, Inc.



lease read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 2-28-95



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

Company/Product Number 53883 - 125	2. EPA Product Manager George LaRocca	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
Company/Product (Name) Bifenthrin GC Concentrate	PM# 13	
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)(ii), my product is similar or identical in composition and labeling to: NOTIFICATION EPA Reg. No. _____ AUG 08 2008 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.

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

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, 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 checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
		If "Yes" Package wgt.	No. per container	Other (Specify) <u>Drums</u>	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 5, 30, 55 gal - 250 gal total		5. Location of Label Directions <input checked="" type="checkbox"/> on label	
6. Manner in Which Label is Affixed to Product <input checked="" 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 Amy Warren	Title Regulatory Affairs Specialist	Telephone No. (Include Area Code) 800-242-5562
2. Signature 		3. Title Regulatory Affairs Specialist
4. Typed Name Amy Warren		5. Date 06-03-08
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)

<p>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 license.</p>
--

Bifenthrin GC
Concentrate

For use to control insect pests on golf courses and on ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, golf courses, sod farms, and athletic fields.

Insecticide for use on:

- golf courses
- ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, golf courses, sod farms, and athletic fields.

Active Ingredient:	By Wt.
Bifenthrin*	7.9%
Other Ingredients:	<u>92.1%</u>
Total	100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum
 Bifenthrin GC Concentrate contains 2/3 pound active ingredient per gallon.

Net Contents _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

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

DO NOT USE THIS PRODUCT ON GOLF COURSES AND SOD FARM IN NASSAU COUNTY OR SUFFOLK COUNTY, NEW YORK.

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. • Do not give anything by mouth to an unconscious person.
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.

	<ul style="list-style-type: none"> • 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.
<p>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.</p>	

**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, spray mist or dust (if mixed with dry fertilizer). Wash thoroughly with soap and water after handling.

The following Personal Protective Equipment requirements apply to sod farm use only Personal Protective Equipment (PPE):

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 no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

<p>User Safety Recommendations</p> <p>Users should:</p> <ul style="list-style-type: none"> • 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 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

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
Do not apply by air.
Do not apply by 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 neoprene rubber or polyvinyl chloride or viton.
- Shoes plus socks

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.

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.

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

Do not touch treated surface until dry.

General Information

Bifenthrin GC Concentrate controls numerous insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowering plants in the following areas:

- Inside structures such as, but not limited to shopping malls, hotels, office buildings, etc.
- Outdoor plantscapes, such as, but not limited to residential, institutional, public, commercial and industrial buildings, home lawns, athletic fields, golf courses and sod farms.

Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Bifenthrin GC 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.
2. Mix well
3. Add liquids and flowables
4. Mix well
5. Add emulsifiable concentrates
6. Mix well

Try reversing the order of addition or increasing the amount of water if the combination is not compatible using the above order. NOTE: After increasing the amount of water, if the mixture is found to be compatible, it is necessary to recalibrate the sprayer for a higher volume application. Do not allow mixture to stand overnight.

Maximum rates

- Outdoor applications-Do not apply more than 0.2 lb. ai/acre (40 fl. ozs. of Bifenthrin GC Concentrate)
- Single application-Do not apply more than 0.1 lb. ai/acre (20 fl. ozs. Bifenthrin GC Concentrate)

Note: A single application of 0.2 lb. ai/acre (40 fl. ozs. of Bifenthrin GC Concentrate) can be applied once per year for larger infestations of mole crickets, imported fire ants, and ants.

Resistance:

When products are used repeatedly for control, some insects are known to build up resistance to products used, but resistance can not be predicted. This product should conform to resistance management strategies established for the use area. Check with your local or state pest management authorities for more information.

This product, or other products with a comparable modes of action, may not provide sufficient control if resistance should develop in your area. A resistant species may be present if poor efficacy can not be linked to extreme weather conditions or improper treatment. Consult pest management advisors for the other methods of control for your area if you believe resistance is factor.

TURF AND GRASS AREAS

(Including golf courses, sod farms, home lawns, lawn areas around parks, institutional, public, commercial and industrial buildings, recreational and athletic fields).

Apply Bifenthrin GC Concentrate as a surface or sub-surface treatment. For uniform coverage when treating long and/or dense grass foliage use treatment volumes of up to 10 gallons per 1000 square feet.

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

For efficacy of sub-surface pests such as, but not limited to, Mole Crickets, you should irrigate the treated area immediately after application with no less than 0.25 inches of water for low volume treatments (less than 2 gallons/1000 square feet).

Bifenthrin GC Concentrate Turf and Grass Dilution Chart

Application Volume: Gallons per 1,000 sq. ft.	Application Rate: Pounds AI/ Acre	Fluid Ounces* of Bifenthrin GC Concentrate Diluted to these Volumes of Finished Spray				
		1 Gallon	10 Gallons	25 Gallons	50 Gallons	100 Gallons
0.5	0.05	0.5	5.0	12.5	25.0	50.0
0.5	0.1	1.0	10.0	25.0	50.0	100.0
0.5	0.2	2.0	20.0	50.0	100.0	200.0
0.75	0.05	0.33	3.33	8.33	16.67	33.33
0.75	0.1	0.67	6.67	16.67	33.33	66.67
0.75	0.2	1.33	13.33	33.33	66.67	133.33
1	0.05	0.25	2.5	6.25	12.5	25.0
1	0.1	0.5	5.0	12.5	25.0	50.0
1	0.2	1.0	10.0	25.0	50.0	100.0
1.5	0.05	0.17	1.67	4.17	8.33	16.67
1.5	0.1	0.33	3.33	8.33	16.67	33.33
1.5	0.2	0.67	6.67	16.67	33.33	66.67
2	0.05	0.13	1.25	3.13	6.25	12.5
2	0.1	0.25	2.5	6.25	12.5	25.0
2	0.2	0.5	5.0	12.5	25.0	50.0
2.3 ^a	0.05	0.11	1.08	2.72	5.43	10.87
2.3 ^a	0.1	0.22	2.17	5.43	10.87	21.74
2.3 ^a	0.2	0.43	4.35	10.87	21.74	43.48
3	0.05	-	0.83	2.09	4.17	8.33
3	0.1	0.17	1.66	4.17	8.33	16.67
3	0.2	0.33	3.33	8.33	16.67	33.33
4	0.05	-	0.63	1.56	3.13	6.25
4	0.1	0.13	1.25	3.13	6.25	12.5
4	0.2	0.25	2.5	6.25	12.5	25.0

*To convert to milliliters, multiply by 29.57

^a100 gallons per acre

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

Do not use household utensils to measure Bifenthrin GC Concentrate.

Application Rates for Grass Areas

Under normal conditions, the treatment rates stated in the table below will control the pests listed in the table. Bifenthrin GC Concentrate may be applied at up to 0.1 lb. ai/A (20 fl.ozs.), at the discretion of the applicator. (0.2 lb ai/A or 40 fl. ozs. for ants, imported fire ants and mole crickets). See footnote 11 for more details.

Pest	Active Ingredient lbs. per Acre	Application Rate Bifenthrin GC Concentrate	
		10 fl. oz. per acre	0.25 fl. oz. per 1000 sq. ft.
Armyworms ¹ , Cutworms ¹ , Sod Webworm ¹	0.05 lbs ai per acre	10 fl. oz. per acre	0.25 fl. oz. per 1000 sq. ft.
Annual Bluegrass Weevil (Hyperodes)(Adult) ² , Ants, Billbugs (Adult) ³ , Black Turfgrass Ataenius (Adult) ⁴ , Centipedes, Chinch Bugs ⁵ , Crickets, Earwigs, Fleas (Adult), Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites ⁶ , Mole Cricket (Adult) ⁷ , Mole Cricket (Nymph) ⁸ , 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) ⁹ , Imported Fire Ants, Japanese Beetle (Adult), Ticks ¹⁰	0.1 lbs ai per acre	20 fl. oz. per acre	0.5 fl. oz. per 1000 sq. ft.
Ants, Imported Fire Ants ¹² , Mole Crickets	0.2 ¹¹ lbs ai per acre	40 ¹¹ fl. oz. per acre	1 fl. oz. ¹¹ 1000 sq. ft.

¹**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 Bifenthrin GC Concentrate) may be necessary if high pest pressure exists and if the grass is maintained at a height taller than 1 inch.

²**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.

³**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.

⁴**Black Turfgrass Ataenius adults:** In order to control the 1st and 2nd generation of black turfgrass ataenius adults, treatments should take place in May and July respectively. 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*).

⁵**Chinch Bugs:** Mostly found in the thatch layer, chinch bugs infest the base of grass plants. In order to optimize the penetration of the insecticide to location of the chinch bugs, irrigation of the grass prior to treatment may be necessary. If grass is being kept at a long mowing height 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 Bifenthrin GC Concentrate) to control populations made up of both adults and nymphs in mid-summer.

⁶**Mites:** Apply Bifenthrin GC Concentrate 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.

⁷**Mole Cricket adults:** Since the preferred grass areas are subject to constant invasion in early spring by the active adult stage, it can be difficult to maintain control of adult mole crickets. It is ideal to treat the areas as late in the day as possible and water immediately after application with up to 0.5 inches of water. To ensure maximum contact when soil is dry, it is necessary to irrigate prior to treatment to bring the mole crickets closer to the soil surface. To obtain optimum control

of potential nymphal populations (see below), the grass areas preferred by adult mole crickets should be treated immediately prior to peak hatch stage.

⁸**Mole Cricket nymphs:** Treat grass areas that are preferred by adult mole crickets in the spring just before peak egg hatch. Young nymphs are more vulnerable to insecticidal treatment at this stage because they are close to the soil surface where the insecticide is most concentrated and thereby providing the most efficient control. For larger more damaging nymphal stages later in the year, it may be necessary to use higher application rates more frequent. It is ideal to treat the areas as late in the day as possible and water immediately after application with up to 0.5 inches of water. To ensure maximum contact when soil is dry, it is necessary to irrigate prior to treatment to bring the adult mole crickets closer to the soil surface.

⁹**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.

¹⁰**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.

¹¹**Note:** A single application of 0.2 lb. ai/acre (40 fluid ounces of Bifenthrin GC Concentrate) may be applied once per year for larger infestations of ants, imported fire ants, and mole crickets.

¹²**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 Bifenthrin GC Concentrate) when using broadcast treatments. For mound drenches, dilute 1 teaspoon of Bifenthrin GC Concentrate 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. Application should be made in late evening or early morning when it is cooler (65-80°F) when insects are most active. Note: A spray rig that is calibrated to apply 0.2 lb. ai/A (40 ozs.) of Bifenthrin GC Concentrate in 5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) required for fire ant mound drenches in the spray tank.

ORNAMENTALS AND TREES

Treat with 0.125 to 1.0 fl. oz. of Bifenthrin GC Concentrate per 1,000 square feet or 5.4 to 43.5 fl. oz. per 100 gallons for ornamental applications. As long as the highest label rate (1.0 fl. oz. per 1000 square feet or 43.5 fl. oz. per 100 gallons) is not exceeded, Bifenthrin GC Concentrate may be diluted and used in different volumes of water. If diluted with water or other carriers, low volume equipment may be used for application as long as the highest label rate (1.0 fl. oz. per 1000 square feet or 43.5 fl. oz. per 100 gallons) is not exceeded.

Bifenthrin GC Concentrate Ornamental Dilution Chart

Application Volume	Application Rate	Fluid Ounces* of Bifenthrin GC Concentrate Diluted to these Volumes of Finished Spray			
		1 Gallon	5 Gallons	10 Gallons	100 Gallons
1.0	0.125	0.125	0.63	1.25	12.5
1.0	0.25	0.25	1.25	2.5	25.0
1.0	0.5	0.5	2.5	5.0	50.0
1.0	1.0	1.0	5.0	10.0	100.0
2.0	0.125	-	0.31	0.63	6.3
2.0	0.25	0.13	0.63	1.25	12.5
2.0	0.5	0.25	1.25	2.5	25.0
2.0	1.0	0.5	2.5	5.0	50.0
2.3 ^a	0.125	-	0.27	0.54	5.4
2.3 ^a	0.25	0.11	0.54	1.08	10.8
2.3 ^a	0.5	0.22	1.09	2.17	21.7
2.3 ^a	1.0	0.44	2.17	4.35	43.5
3.0	0.125	-	0.21	0.42	4.2
3.0	0.25	-	0.42	0.83	8.3
3.0	0.5	0.17	0.83	1.67	16.7
3.0	1.0	0.33	1.67	3.33	33.3
4.0	0.125	-	0.15	0.31	3.1
4.0	0.25	-	0.31	0.63	6.3
4.0	0.5	0.13	0.63	1.25	12.5
4.0	1.0	0.25	1.25	2.5	25.0
4.6 ^b	0.125	-	0.14	0.27	2.7
4.6 ^b	0.25	-	0.27	0.54	5.4
4.6 ^b	0.5	0.11	0.54	1.09	10.9
4.6 ^b	1.0	0.22	1.09	2.17	21.7
5.0	0.125	-	0.13	0.25	2.5
5.0	0.25	-	0.25	0.5	5.0
5.0	0.5	0.1	0.5	1.0	10.0
5.0	1.0	0.2	1.0	2.0	20.0
6.9 ^c	0.125	-	-	0.18	1.8
6.9 ^c	0.25	-	0.18	0.36	3.6
6.9 ^c	0.5	-	0.36	0.72	7.2
6.9 ^c	1.0	0.15	0.72	1.45	14.5
10.0	0.125	-	-	0.13	1.3
10.0	0.25	-	0.13	0.25	2.5
10.0	0.5	-	0.25	0.5	5.0
10.0	1.0	0.1	0.5	1.0	10.0

*To convert to milliliters, multiply by 29.57

^a 100 gallons per acre

^b 200 gallons per acre

^c 300 gallons per acre

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

Do not use household utensils to measure Bifenthrin GC Concentrate.

APPLICATION RATES FOR ORNAMENTALS

Under typical conditions, the application rates in the table below will offer optimal control of the listed pests, but Bifenthrin GC Concentrate can be used at up to 1 fl. oz. per 1000 square feet (43.5 fl. oz. per 100 gallons) at the discretion of the applicator. When maximum residual control is preferred, higher treatment rates are necessary, but do not exceed 1 fl. oz. per 1000 sq. ft.

Pest	Application Rate
	Fluid Ounces per 1,000 square feet
Aphids, Bagworms ¹³ , Cutworms, Elm Leaf Beetles, Fall Webworms, Lace Bugs, Leaf Feeding Caterpillars, Plant Bugs (Including <i>Lygus</i> spp.), Tent Caterpillars	0.125 - 0.25
Beet Armyworm, Black Vine Weevil (Adults), Brown Soft Scales, Broad Mites, Budworms, California Red Scale (Crawlers) ¹⁴ , 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) ¹⁴ , San Jose Scales (Crawlers) ¹⁴ , Sowbugs, Spider Mites, Spiders, Thrips, Tip Moths, Twig Borers ¹⁴ , Weevils, Whiteflies	0.25 - 0.5
Ants, Imported Fire Ants**, Japanese Beetle (Adult), Leafminers, Pecan Leaf Scorch Mite, Pine Shoot Beetle (Adults)	0.5 - 1.0

¹³**Bagworms:** For optimum control treat when larvae have started to hatch and are young, directing spray to contact as many larvae as possible.

¹⁴**Scale Crawlers and Twig Borers:** In addition to plant foliage, treat trunks, stems and twigs.

**For foraging ants.

Using a full coverage foliar spray, apply the stated application rate. Typical treatment volume is 100 gallons per acre. As foliage area and pest pressure increase, repeat treatment, as needed using higher application rates to achieve control.

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

It is recommended to use an alternate class of chemistry in a treatment program to avoid or delay pest resistance.

PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS

Bifenthrin GC Concentrate may be used to control pests such as Ants, Bees, Biting Flies, Boxelder Bugs, Centipedes, Cockroaches, Crickets, Earwigs, Elm Leaf Beetles, Firebrats, Fleas, Flies, Millipedes, Mosquitoes, Pillbugs, Silverfish, Sowbugs, Spiders, Ticks, and Wasps.

Use a 0.03 to 0.06% dilution to spray the outside surfaces of buildings such as exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, garages, fence lines, storage sheds, barns, and other residential and non-commercial structures, soil, trunks of woody ornamentals and other areas where pests may be found. Use a spray volume of up to 2 to 10 gallons of emulsion per 1,000 square feet.

Mixing Directions

Suspension	Bifenthrin GC Concentrate per gallon of water	Remarks
0.03%	0.5 fl. oz.	-Do not use household utensils to measure Bifenthrin GC Concentrate. -Use higher treatment rates for quicker knockdown or longer residual control. -High pest pressure may require subsequent applications. -Repeat application only if there is evidence of renewed insect activity and only if the maximum label rate is not exceeded.
0.06%	1.0 fl. oz.	

Perimeter Treatment: Treat a band of soil and vegetation 6 to 10 feet wide around and next to the structure and the foundation of the structure to a height of 2 to 3 feet. Use 0.5 to 1.0 fl. oz. of Bifenthrin GC Concentrate per 1,000 square feet in enough water to provide sufficient coverage (refer to Dilution Chart).

Ant and Fire Ant Mound Drench Using 0.06% Dilution: Use 1-2 gallons of dilution for each mound area. Sprinkle the mound until wet and apply to a 4 ft. diameter circle around the mound. For mounds larger than 12 inches, use a larger volume. Application should be made in late evening or early morning when it is cooler (65° - 80°) when insects are most active.

IMPREGNATION AND APPLICATION OF BIFENTHRIN GC CONCENTRATE ON DRY BULK FERTILIZERS

Bifenthrin GC Concentrate may be impregnated on dry bulk fertilizers. Bifenthrin/dry bulk fertilizer mixtures, when used as instructed, offer insect control equivalent to that provided when using the same rates of Bifenthrin GC Concentrate applied in water.

To impregnate, use a closed rotary-drum mixer or a comparable type of closed blender equipped with appropriate spray equipment. Apply the label rate of Bifenthrin GC Concentrate per acre on at least 100 pounds of dry bulk fertilizer per acre. For thorough coverage, arrange the spray nozzle(s) in a way that will give a complete, fine spray pattern over the tumbling fertilizer. The liquid absorptive capacity and other physical properties of fertilizers vary. A simple spray impregnation of the fertilizer with Bifenthrin GC Concentrate will provide a good dry mixture when absorptivity is adequate. If the fertilizer product will not absorb the necessary amount of liquid it is necessary to use a highly absorptive powder, such as Microcel E (Johns-Manville Products Corporation) to provide a dry, flowable mixture. If Microcel E is needed, usually less than 2% by weight is sufficient.

Straight coated ammonium nitrate or straight limestone will not soak up the insecticide, therefore, **DO NOT** impregnate Bifenthrin GC Concentrate onto these materials. Dry fertilizer blends that contain mixtures of ammonium nitrate or limestone can be impregnated with Bifenthrin GC Concentrate.

Exercise proper care when determining the amount of Bifenthrin GC Concentrate required in the preparation of individual fertilizer mixtures for each production operation so that the amount of pesticide in the mixture applied to the soil represents the label rate. **DO NOT** store bulk fertilizer impregnated with Bifenthrin GC Concentrate. Apply immediately.

The individuals and/or company selling the fertilizer and Bifenthrin GC Concentrate mixture is liable for compliance with all individual Federal and State regulations regarding the blending, registration, labeling, and application of bulk dry fertilizer.

Fertilizer for this use should be turf fertilizers recommended for specific regions.

Use ground application equipment only (and apply with nozzles not more than two feet above the grass) when making turf treatments.

Specific Use Precautions and Restrictions:

- Do not apply when wind conditions favor downwind drift to nearby water bodies.
- Do not apply when wind velocity exceeds 10 miles per hour.
- Avoid treatment when wind gusts approach 10 mph.
- Do not apply when a temperature inversion exists.
- Treat with nozzles that give 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, permanent streams, rivers, reservoirs, estuaries, marshes, or natural ponds, and commercial fish ponds.
- Do not apply when grass areas are water-logged or the soil is saturated with water (i.e., will not accept irrigation).
- Do not apply this pesticide in livestock buildings (barns).

STORAGE AND DISPOSAL

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

Storage and Spill Procedures: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

Container Disposal: *For Containers equal to or less than 5 Gallons:* Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available.

For Containers greater than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available.

For Bulk containers: (Refillable Container) Refill this container with pesticides only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

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.

Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041
EPA Reg. No. 53883-125
EPA Est. No. 53883-TX-002