Harrell's
Professional Fertilizer Solutions

14-0-14

Inventory #: 300658 Batch #: 0907-0947

TURF POLYON MIX W/ Bifenthrin .069%

GUARANTEED ANALYSIS

*** Total Nitrogen (N)..... 14.0000%**

10.0000% Ammoniacal Nitrogen

4.0000% Urea Nitrogen

Soluble Potash (K20)..... 14.0000%

Derived From: Muriate of Potash, Polymer Coated Urea, Sulfate of Ammonia

*** 3.2% slow release NITROGEN derived from Polymer Coated Urea**

Chlorine, Not more than..... 14.0000%

EPA #'s	Active Ingredients -	
	.	.00000%
53883-160-52287	Bifenthrin: (2-methyl(1,1'-biphenyl)-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate*	.06900%
	Inert Ingredients.....	99.93100%
	E.P.A. Est. 52287-FL-001 Total.....	100.0000%

Density - 63 lb./(cu. ft.)

Contains Hydro Gro micronutrients package. Will not stain concrete.

Directions for Use

Use in accordance with recommendations of a qualified indiviual or institution, such as, but not limited to, a certified crop advisor, agronomist, university crop extension publication, or apply according to recommendations in your approved nutrient management plan.

MANUFACTURED BY HARRELL'S LLC (F352) 720 KRAFT ROAD, LAKELAND, FL 33801 - (863) 687-2774 - (800) 282-8007
DISTRIBUTED BY HARRELL'S LLC. (F352) 720 KRAFT ROAD, LAKELAND, FL 33801 - (863) 687-2774 - (800) 282-8007

NET WEIGHT 50 LBS

0907-0947 051002

Bifen GC Bifen GC

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.

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.

Concentrate

Active Ingredient: By Wt.
Bifenthrin* **7.9%**
Other Ingredients: **92.1%**
Total **100.0%**
* isomers 97% minimum, isomers 3% maximum.
Bifen GC Concentrate contains 2/3 pound active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See attached booklet for additional Precautionary Statements, First Aid and complete Directions for Use.
EPA Reg. No. 53883-125 EPA Est. No. 53883-TX-002

NET CONTENTS: 1 GALLON

Control Solutions, Inc.
5903 Genoa-Red Bluff • Pasadena, TX 77507-1041
Cis trans

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Bifen GC Concentrate contains 2/3 pound active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside booklet for additional Precautionary Statements, First Aid and complete Directions for Use.

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

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

FIRST AID

If swallowed • 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 inhaled • 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.
If on skin • Take off contaminated clothing.
or clothing • Rinse skin immediately with plenty of water for 15-20 minutes.
• Call a poison control center or doctor for treatment advice.
If in eyes • Hold eye open and rinse slowly and gently with water 15-20 minutes.
• Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye.
• Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Poison Control Center 800-222-1222.
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, 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:
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
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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.

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 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 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 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.
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AGRICULTURAL USE REQUIREMENTS *(continued)*

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
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.

STORAGE AND DISPOSAL

Prohibitions: Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink container.
In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.
To Confine Spill: If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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 waste and pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the 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 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.
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IMPREGNATION AND APPLICATION OF BIFEN GC CONCENTRATE ON DRY BULK FERTILIZERS

Bifen GC Concentrate may be impregnated on dry bulk fertilizers. When applied as directed, Bifen GC Concentrate/dry bulk fertilizer mixtures provide insect control equal to that provided by the same rates of Bifen GC Concentrate applied in water.
Impregnation: Apply using a minimum of 100 pounds of dry bulk fertilizer per acre with the recommended amount of Bifen GC Concentrate per acre. Use a closed rotary-drum mixer or a similar type of closed blender equipped with suitable spray equipment. The spray nozzle(s) should be positioned to provide a uniform, fine spray pattern over the tumbling fertilizer for thorough coverage. The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with Bifen GC Concentrate provides a satisfactory, dry mixture. If the absorptive capacity is inadequate, use of a highly absorptive powder is required to provide a dry, flowable mixture. Microcel E (Johns-Manville Products Corporation) is a recommended absorbent powder. Generally less than 2% by weight of Microcel E is required. **DO NOT** impregnate Bifen GC Concentrate onto straight coated ammonium nitrate or straight limestone because these materials will not absorb the insecticide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with Bifen GC Concentrate.
The amount of Bifen GC Concentrate actually required in the preparation of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amount of pesticide actually contained in the mixture applied to the soil represents the correct rate of use. Bulk fertilizer impregnated with Bifen GC Concentrate should be applied immediately, not stored.
All individual Federal and State regulations relating to bulk dry fertilizer blending, registration, labeling, and application of the mixtures are the responsibility of the individual and/or company selling the fertilizer and Bifen GC Concentrate mixture.
Fertilizer for this use should be Turf fertilizers recommended for specific regions.

General Applications Instructions

Bifen GC Concentrate formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on ornamentals, trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interiorscapes including hotels, shopping malls, office buildings, etc., and, outdoor plantscapes, such as around residential dwellings, parks, institutional, public, commercial and industrial buildings, recreational, athletic fields, home lawns, 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.
Bifen GC Concentrate may be tank-mixed with other products, including insect growth regulators. When tank mixing Bifen GC Concentrate with other products, observe all precautions and limitations on each separate product label. The physical compatibility of Bifen GC Concentrate may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.
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The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: 1) Add wettable powders to tank water, 2) Agitate, 3) Add liquids and flowables, 4) Agitate, 5) Add emulsifiable concentrates, and 6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water.
Note: If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.
Maximum rates: Do not apply more than 0.1 lb. ai/acre (20 fl. ozs. Bifen GC Concentrate) in a single application, no more than 0.2 lb. ai/acre (40 fl. ozs. of Bifen GC Concentrate) for outdoor applications.
Note: For larger infestations of ants, imported fire ants, and mole crickets, a single application of 0.2 lb. ai/acre (40 fl. ozs. of Bifen GC Concentrate) may be applied once per year.
Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.
If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and suspect that resistance is a reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Bifen GC Concentrate Turf Dilution Chart

Application Volume: Rate: 1,000 sq. ft.	**Application Fluid Ounces* of Bifen GC Concentrate Diluted to these Volumes of Finished Spray Gallons per Acre**				
Pounds Al/Acre	**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

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(continued)

Bifen GC Concentrate Turf Dilution Chart *(continued)*

Application Volume: Rate: 1,000 sq. ft.	**Application Fluid Ounces* of Bifen GC Concentrate Diluted to these Volumes of Finished Spray Gallons per Acre**				
Pounds Al/Acre	**1 Gallon**	**10 Gallons**	**25 Gallons**	**50 Gallons**	**100 Gallons**
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
[a]100 gallons per acre
1 fl. oz. = 29.57 ml = 2 tablespoons = 6 teaspoons
Do not use household utensils to measure Bifen GC Concentrate.

APPLICATION RECOMMENDATIONS

Grass Areas (Including golf courses, sod farms, home lawns, lawn areas around parks, institutional, public, commercial and industrial buildings, recreational and athletic fields).
Apply Bifen GC Concentrate as a surface or sub-surface treatment. Use application volumes of up to 10 gallons per 1000 square feet to get uniform coverage when treating dense and or long grass foliage.
For low volume applications, less than 2 gallons/1000 square feet, immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of subsurface pests such as, but not limited to, Mole Crickets, is recommended.

GRASS APPLICATION RATES

The application rates listed in the following table will provide control of the respective pests under typical conditions. However, at the discretion of the applicator, Bifen GC Concentrate may be applied at up to 0.1 lb. ai/A (20 fl.ozs.) to control each of the pests listed in this table. (0.2 lb Al/A or 40 fl. ozs. for ants, imported fire ants and mole crickets). See comment #11 for more details.
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Pest Active Ingredient Application Rate
lbs. per Acre Bifen GC Concentrate
Armyworms[1] 0.05 lbs. ai 10 fl. oz. 0.25 fl. oz.
Cutworms[1] per acre per acre per 1000 sq. ft.
Sod Webworm[1]
Annual Bluegrass 0.05 - 0.1 10 - 20 0.25 - 0.5
Weevil (Hyperodes) (Adult)[2] lbs. ai fl. oz. fl. oz.
Ants per acre per acre per 1000 sq. ft.
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
Fleas (Larvae)[9] 0.1 lbs. ai 20 fl. oz. 0.5 fl. oz.
Imported Fire Ants per acre per acre per 1000 sq. ft.
Japanese Beetle (Adult)
Ticks[10]
Ants 0.2[11] lbs ai 40[11] fl. oz. 1 fl. oz.[11]
Imported Fire Ants[12] per acre per acre per 1000 sq. ft.
Mole Crickets
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 Bifen GC Concentrate if there are signs of renewed insect activity, but not sooner than two weeks after the first application.
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Comments:
[1]**Armyworms, Cutworms, and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (Up to 0.1 lb ai/A or 20 fl. ozs. of Bifen GC Concentrate) may be required during periods of high pest pressure.
[2]**Annual Bluegrass Weevil (Hyperodes) adults:** Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when *Forsythia* is in full bloom and concludes when flowering dogwood *(Cornus florida)* is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.
[3]**Billbug adults:** Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.
[4]**Black Turfgrass Ataenius adults:** Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spirae *(Spirae vanhouttei)* and horse chestnut *(Aesculus hippocastanum)*. The July application should be timed to coincide with the blooming of Rose of Sharon *(Hibiscus syriacus)*.
[5]**Chinch Bugs:** Chinch bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch Bugs can be one of the most difficult pests to control in grasses and the higher application rates (Up to 0.1 lb ai/A or 20 fl. ozs. of Bifen GC Concentrate) may be required to control populations that contain both nymphs and adults during the middle of the summer.
[6]**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first, may be necessary to achieve acceptable control.
[7]**Mole Cricket adults:** Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. 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 after treatment. If the soil is not moist,

then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).
[8]**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging,
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nymphs late in the year may require both higher application rates and more frequent application to maintain acceptable control. 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 after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.
[9]**Flea Larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil.
[10]**Ticks:** Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain adequate control. Do not allow public use of treated areas during application or until sprays have dried.
Deer Ticks *(Ixodus sp.)* have a complicated life cycle that ranges over a two year period and involves four life stages. Applications should be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.
American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.
[11]**Note:** For larger infestations of ants, imported fire ants, and mole crickets, a single application of 0.2 lb. ai/acre (40 fluid ounces of Bifen GC Concentrate) may be applied once per year.
[12]**Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will eliminate existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments should apply 0.2 lb ai/A (40 fl. ozs. of Bifen GC Concentrate). Mounds should be treated by diluting 1 teaspoon of Bifen GC Concentrate per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65-80°F) or in early morning or late evening hours. Note: a spray rig that is calibrated to apply 0.2 lb. ai/A (40 ozs.) of Bifen GC 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.
ORNAMENTALS AND TREES: For ornamental applications, apply 0.125 to 1.0 fluid ounce of Bifen GC Concentrate per 1,000 square feet. Bifen GC Concentrate may be diluted and applied in various volumes of water providing that the maximum label rate (1.0 fluid ounce per 1,000 square feet) is not exceeded (refer to Dilution Chart for specific instructions). Bifen GC Concentrate may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (1.0 fluid ounce per 1,000 square feet) is not exceeded.
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Bifen GC Concentrate Ornamental Dilution Chart

Application Volume: 1,000 sq. ft.	**Application Rate: per 1,000 sq. ft.**	**Fluid Ounces* of Bifen GC Concentrate Diluted to these Volumes of Finished Spray Gallons per Fluid Ounces 1 Gallon**	**5 Gallons**	**10 Gallons**
1.0	0.125	0.125	0.63	1.25
1.0	0.25	0.25	1.25	2.5
1.0	0.5	0.5	2.5	5.0
1.0	1.0	1.0	5.0	10.0
2.0	0.125	-	0.31	0.63
2.0	0.25	0.13	0.63	1.25
2.0	0.5	0.25	1.25	2.5
2.0	1.0	0.5	2.5	5.0
2.3[a]	0.125	-	0.27	0.54
2.3[a]	0.25	0.11	0.54	1.08
2.3[a]	0.5	0.22	1.09	2.17
2.3[a]	1.0	0.44	2.17	4.35
3.0	0.125	-	0.21	0.42
3.0	0.25	-	0.42	0.83
3.0	0.5	0.17	0.83	1.67
3.0	1.0	0.33	1.67	3.33
4.0	0.125	-	0.15	0.31
4.0	0.25	-	0.31	0.63
4.0	0.5	0.13	0.63	1.25
4.0	1.0	0.25	1.25	2.5
4.6[b]	0.125	-	0.14	0.27
4.6[b]	0.25	-	0.27	0.54
4.6[b]	0.5	0.11	0.54	1.09
4.6[b]	1.0	0.22	1.09	2.17
5.0	0.125	-	0.13	0.25
5.0	0.25	-	0.25	0.5
5.0	0.5	0.1	0.5	1.0
5.0	1.0	0.2	1.0	2.0
6.9[c]	0.125	-	-	0.18
6.9[c]	0.25	-	0.18	0.36
6.9[c]	0.5	-	0.36	0.72
6.9[c]	1.0	0.15	0.72	1.45
10.0	0.125	-	-	0.13
10.0	0.25	-	0.13	0.25
10.0	0.5	-	0.25	0.5
10.0	1.0	0.1	0.5	1.0

11 *(continued)*
*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 Bifen GC Concentrate.

ORNAMENTAL APPLICATION RATES

The application rates listed in the following table will provide control of the respective pests under

typical conditions. However, at the discretion of the applicator, Bifen GC Concentrate may be applied at up to 1 fluid ounce per 1,000 square feet to control each of the pests listed in this table.

Pest	Application Rate Fluid Ounces per 1,000 square feet
Aphids	0.125 - 0.25
Bagworms[13]	
Cutworms	
Elm Leaf Beetles	
Fall Webworms	
Lace Bugs	
Leaf Feeding Caterpillars	
Plant Bugs (Including *Lygus* spp.)	
Tent Caterpillars	
Beet Armyworm	0.25 - 0.5
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	

12 *(continued)*

Pest	Application Rate Fluid Ounces per 1,000 square feet
Millipedes	0.25 - 0.5
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	
Ants	0.5 - 1.0
Imported Fire Ants**	
Japanese Beetle (Adult)	
Leafminers	
Pecan Leaf Scorch Mite	
Pine Shoot Beetle (Adults)	

[13]**Bagworms:** Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.

[14]**Scale Crawlers and Twig Borers**: Treat trunks, stems and twigs in addition to plant foliage.

**For foraging ants.

Apply the specified application rate as a full coverage foliar spray. Typical application volume is 100 gallons per acre. Repeat treatment as necessary to achieve control using higher application rates as pest pressure & foliage area increases.

Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting.

Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.

Pest Control on Outside Surfaces and Around Buildings

For control of 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.

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Apply Bifen GC Concentrate using a 0.03 to 0.06% emulsion as a residual spray to outside surfaces of buildings including, but not limited to, 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 congregate or have been seen. Use a spray volume of 2 to 10 gallons of emulsion per 1,000 square feet.

Mixing Directions: For 0.03% emulsion, mix 0.5 fluid ounces of Bifen GC Concentrate per gallon of water. For 0.06% emulsion, mix 1 fluid oz. Bifen GC Concentrate per gallon of water (1 fluid oz. = 2 tablespoons). Do not use household utensils to measure Bifen GC Concentrate. Use the higher rate for heavy pest infestation, quicker knockdown or longer residual control. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat applications are permitted providing that the maximum label rate is not exceeded.

Perimeter Treatment: Treat a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Apply 0.5 to 1.0 fluid ounces of Bifen GC Concentrate per 1,000 square feet in sufficient water to provide adequate coverage (refer to Dilution Chart).

For Ant and Fire Ant Mounds use Bifen GC Concentrate 0.06% emulsion as Drench Method: Apply 1-2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound. Use the higher volume for mounds larger then 12”. For best results, apply in cool weather, such as in early morning or late evening hours, but preferably not in the heat of the day.

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

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 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 adequate coverage.
Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).
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 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).
14
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: Control Solutions, Inc. makes not 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: Control Solutions, Inc.'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.
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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.

Bifen 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.

Active Ingredient: By Wt.

Bifenthrin*	**7.9%**
Other Ingredients:	**92.1%**
Total	**100.0%**

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

See attached booklet for additional Precautionary Statements, First Aid and complete Directions for Use.

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

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

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.

Harrell's
Custom Fertilizers Worldwide

BIFENTHRIN SC LAWN AND NURSERY INSECTICIDE/MITICIDE

For Commercial Non-Food Use on Indoor and Outdoor Ornamentals, Greenhouses, Nurseries, Turf on Golf Courses, Sod Farms, 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.

DO NOT USE THIS PRODUCT ON GOLF COURSES IN NASSAU COUNTY OR SUFFOLK COUNTY, NEW YORK. NOT FOR USE ON SOD FARMS IN THE STATE OF NEW YORK.

Active Ingredient:	**By Wt.**
Bifenthrin*	7.9%

Inert Ingredients:	92.1%
TOTAL	100.0%

Bifenthrin SC Lawn and Nursery Insecticide/Miticide contains 2/3 pound active ingredient per gallon.
*Cis isomers 97% minimum, trans isomers 3% maximum.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID Have the product container or label with you when calling a poison control center or doctor, or going for treatment	
If swallowed	• 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 inhaled	• 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.
If on skin or clothing	• 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 in eyes	• 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.
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.	

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

Manufactured for:
Harrell's, Inc.
P. O. Box 807 • Lakeland, FL 33802
1-800-282-8007 www.harrells.com

EPA Reg. No. 70506-23-52287
EPA Est. No. 37429-FL-01

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 spray mist. Wash thoroughly with soap and water after handling.

Personal Protective Equipment:
Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for 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.

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

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 applications. 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.
Do not apply by air.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. 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 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.

California Specific Requirements for Greenhouse Applicators and Harvesters
In addition to following all applicable precautionary statements, 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 regular-length gloves plus a long sleeved shirt or elbow-length (gauntlet type) gloves during the 30 days following application.

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.

STORAGE AND DISPOSAL

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

Pesticide Storage: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink container.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To Confine Spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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 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.

Index to Uses Listed on this Label

General Application Instructions

Bifenthrin SC Lawn and Nursery Insecticide/Miticide formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on ornamentals, trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses and outdoor nurseries, and interiorscapes including hotels, shopping malls, office buildings, etc., and outdoor plantscapes such as around residential dwellings, parks, institutional, public, commercial and industrial buildings, recreational, athletic fields, home lawns, 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 SC Lawn and Nursery Insecticide/Miticide may be tank-mixed with other products, including insect growth regulators. When tank mixing Bifenthrin SC with other products, observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of Bifenthrin SC may vary with different sources of pesticide products and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar) using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. **Note:** If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.

Do not apply more than 0.1 lb ai/acre (20 fl. ozs. of Bifenthrin SC Lawn and Nursery Insecticide/Miticide) in a single application, and no more than 0.2 lb ai/acre/year (40 fl. ozs.) for outdoor applications.

Note: For large infestations of ants, imported fire ants, and mole crickets, a single application of 0.2 lb. ai/acre (40 fl. ozs.) may be applied once per year.

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and suspect that resistance is a reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Bifenthrin SC Lawn and Nursery Insecticide/Miticide Dilution Chart for Turf and Ornamental Uses

- **Rate in amount of <u>Active Ingredient per acre</u>.**
- **Application Volume in <u>Gallons per acre</u>**

Application Volume: Gallons Per Acre	Application Rate: lb. a.i./Acre	Fluid Ounces* of Bifenthrin SC Lawn and Nursery Insecticide/Miticide Diluted to These Volumes of Finished Spray			
		1 Gallon	25 Gallons	50 Gallons	100 Gallons
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	0.13	3.33	6.67	13.3
150	0.2	0.27	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

*To convert to milliliters, multiply by 29.57

1 fluid oz. = 29.57 ml = 2 tablespoons = 6 teaspoons. Do not use household utensils to measure Bifenthrin SC Lawn and Nursery Insecticide/Miticide.

Bifenthrin SC Lawn and Nursery Insecticide/Miticide Dilution Chart for Turf and Ornamental Uses

- **Rate in amount of <u>Active Ingredient per acre</u>.**
- **Application Volume in <u>Gallons per 1,000 SqFt</u>**

		Fluid Ounces* of Bifenthrin SC Lawn and Nursery Insecticide/Miticide Diluted to these Volumes of Finished Spray				
Application Volume: Gallons Per 1,000 sq. ft.	**Application Rate: lb. a.i./Acre**	**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	0.1	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	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	1.09	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

[a]100 gallons per acre

1 fluid oz. = 29.57 ml = 2 tablespoons = 6 teaspoons. Do not use household utensils to measure Bifenthrin SC Lawn and Nursery Insecticide/Miticide.

Bifenthrin SC Lawn and Nursery Insecticide/Miticide Dilution Chart for Turf and Ornamental Uses

- **Rate in Fluid Ounces of Product per 1,000 SqFt.**
- **Application Volume in Gallons per 1,000 SqFt**

Application Volume:	Application Rate:	Fluid Ounces* of Bifenthrin SC Diluted to these Volumes of Finished Spray			
Gallons Per 1,000 Sq. Ft.	**Fluid Ounces per 1,000 Sq. Ft.**	**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
Do not use household utensils to measure Bifenthrin SC Lawn and Nursery Insecticide/Miticide.

Formula for Determining the Active Ingredient Content of the Finished Spray Mixture: The following formula may be used to determine the percent active ingredient that is in the spray tank after mixing Bifenthrin SC:

$$\frac{(7.9)(\text{Fl. Oz of Bifenthrin SC added to tank})}{(\text{Gallons of finished spray mix})(128)} = \text{Percent Active Ingredient of spray mix}$$

ORNAMENTALS IN GREENHOUSES, LATH HOUSES, SHADE HOUSES AND OUTDOOR NURSERIES, INCLUDING NON-BEARING FRUIT AND NUT TREES

APPLICATION RECOMMENDATIONS

Apply 0.025 to 0.2 lb. a.i./A (5 to 40 fl. ozs.) or 0.125 to 1.0 fluid ounce per 1,000 square feet of Bifenthrin SC. Bifenthrin SC may be diluted and applied in various volumes of water providing that the maximum label rate (0.2 lb. a.i./A or 40 fl. ozs.; 1.0 fluid ounce per 1,000 square feet) is not exceeded (refer to Dilution Chart for specific instructions). Bifenthrin SC may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.2 lb. a.i./A or 40 fl. ozs.; 1.0 fluid ounce per 1,000 square feet) is not exceeded.

ORNAMENTAL APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, Bifenthrin SC may be applied at up to 0.2 lb. a.i./A (40 fl. oz.) or 1 fluid ounce per 1,000 square feet to control each of the pests listed in this Table.

Application Rate of Bifenthrin SC Lawn and Nursery Insecticide/Miticide				
Pest	**Fluid Ounces per 1,000 Square Feet**	**lb. a.i./Acre**	**Fluid Ounces per Acre**	**Other Use Precautions and Restrictions**
Aphids Bagworms[1] Cutworms Elm Leaf Beetles Fall Webworms Lace Bugs Leaf Feeding Caterpillars Plant Bugs (including Lygus spp.) Tent Caterpillars	0.125 – 0.25	0.025 – 0.05	5 - 10	Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting. Apply with ground equipment only. Do not apply when wind direction favors downwind drift towards near-by water bodies. Do not apply when wind velocity exceeds 10 mph. Avoid application when wind gusts approach 10 mph.
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] Wasps Weevils Whiteflies	0.25 – 0.5	0.05 – 0.1	10 – 20	Do not apply when a temperature inversion exists. Apply the specified application rate as a full coverage foliar spray. Typical application volume is 100 gallons per acre. Repeat treatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat applications are permitted provided that the maximum label rate is not exceeded. Apply using the largest nozzle size compatible with adequate coverage. Do not apply if rain is expected within 12 hours (or whatever time is necessary for the spray to dry). 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. When treating tall trees (>15 feet) from the ground with high pressure sprays or during any application with air assisted equipment (mist blower) do not apply within 150 feet of aquatic areas. Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.
Ants Imported Fire Ants** Japanese Beetle (Adults) Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults)	0.5 – 1.0	0.1 - 0.2	20 – 40	

[1]**Bagworms:** Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.

[2]**Scale Crawlers and Twig Borers:** Treat trunks, stems and twigs in addition to plant foliage.

**For foraging ants.

TURF (GOLF COURSES AND SOD FARMS) AND GRASS AREAS (INCLUDING GOLF COURSES, SOD FARMS, HOME LAWNS, LAWN AREAS AROUND PARKS, INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL BUILDINGS, RECREATIONAL AND ATHLETIC FIELDS).

APPLICATION RECOMMENDATIONS

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

Apply Bifenthrin SC Lawn and Nursery Insecticide/Miticide as a surface or sub-surface treatment. Use application volumes of up to 10 gallons per 1,000 square feet to get uniform coverage when treating dense and or long turf foliage.

For low volume applications, less than 2 gallons/1,000 square feet, immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests such as, but not limited to, Mole Crickets, is recommended.

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

APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator[1], Bifenthrin SC may be applied at up to 0.1 lb. a.i./A (20 fl. oz.) to control each of the pests listed in this Table (0.2 lb. a.i./A or 40 fl. ozs. of Bifenthrin SC for ants, imported fire ants and mole crickets) [13].

[1] During periods of high pest pressure or for maximum residual control.

Pests	lb. Active Ingredient /Acre	Application Rate Bifenthrin SC Lawn and Nursery Insecticide/Miticide		Other Use Precautions and Restrictions
Armyworms[3] Cutworms[3] Sod Webworm[3]	0.05	10 fl. oz. per acre	0.25 fl. oz. per 1,000 sq. ft.	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 towards near-by water bodies.
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	10 - 20 fl. oz. per acre	0.25 – 0.5 fl. oz. per 1,000 sq. ft.	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 the largest droplet size compatible with adequate coverage. Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry). 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.
Fleas (Larvae)[11] Imported Fire Ants Japanese Beetle (Adult) Ticks[12]	0.1	20 fl. oz. per acre	0.5 fl. oz. per 1,000 sq. ft.	Do not apply when turf areas are water-logged or soil is saturated with water (i.e., will not accept irrigation).
Ants Imported Fire Ants[14] Mole Crickets	0.2[13]	40[13] fl. oz. per acre	1[13] fl. oz. per 1,000 sq. ft.	

Footnotes:

[3]**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (up to 0.1 lb. a.i./A or 20 fl. oz. of Bifenthrin SC) may be required during periods of high pest pressure.

[4]**Annual Bluegrass Weevil *(Hyperodes)* adults**: Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when *Forsythia* is in full bloom and concludes when flowering dogwood *(Cornus florida)* is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

[5]**Billbug adults:** Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

[6]**Black Turfgrass Ataenius adults:** Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea *(Spiraea vanhouttei)* and horse chestnut *(Aesculus hippocastanum).* The July application should be timed to coincide with the blooming of Rose of Sharon *(Hibiscus syriacus).*

[7]**Chinch Bugs:** Chinch Bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch Bugs can be one of the most difficult pests to control in grasses and the higher application rates (up to 0.1 lb. a.i./A or 20 fl. oz.) may be required to control populations that contain both nymphs and adults during the middle of the summer.

[8]**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first, may be necessary to achieve acceptable control.

[9]**Mole Cricket adults:** Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. 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 after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

[10]**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. 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 after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

[11]**Flea larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: if the lawn area is being treated with Bifenthrin SC at 0.05 lb. a.i./A (10 fl. oz.) for adult flea control, then the larval application rate may be achieved by doubling the application volume.

[12]**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted Fever):** Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity.

Repeat application should be limited to no more than once per seven days. Do not allow public use of treated areas during application or until sprays have dried.

Deer ticks *(Ixodes spp.)* have a complicated life cycle that ranges over a two year period and involves four life stages. Applications should be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

[13]**Note:** For large infestations of ants, imported fire ants and mole crickets, a single application of 0.2 lb. a.i./A (40 fl. oz. of Bifenthrin SC) may be applied once per year.

[14]**Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments should apply 0.2 lb. a.i./A (40 fl. oz. of Bifenthrin SC). Mounds should be treated by diluting 1 teaspoon of Bifenthrin SC Insecticide per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65 – 80 °F) or in early morning or late evening hours. Note: a spray rig that is calibrated to apply 0.2 lb. a.i./A (40 fl. oz.) of Bifenthrin SC 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.

IMPORTED FIRE ANT QUARANTINE TREATMENT

Against Imported Fire Ants (IFA) in Potting Media (including balled and containerized nursery grown ornamental trees, shrubs, plants, flowers, conifers, bushes, Christmas trees, and non-bearing fruit and nut-trees). Bifenthrin SC Lawn and Nursery Insecticide/Miticide can be used in accordance with the USDA Imported Fire Ant Quarantine Program. Bifenthrin SC may be applied either soil incorporated, as a topical application or as a high volume drench treatment.

Soil Incorporation: Incorporate the appropriate volume of Bifenthrin SC Lawn and Nursery Insecticide/Miticide (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. The applications are based on the dry bulk density of the potting media. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

Recommended Soil Incorporation Rate of Bifenthrin SC Lawn and Nursery Insecticide/Miticide for Control of IFA In Potting Media

Potting Media Bulk Density (lbs. per cubic yard)	Fluid ounces of Bifenthrin SC Lawn and Nursery Insecticide/Miticide in one cubic yard
200	1.9
400	3.8
600	5.7
800	7.6
1000	9.5
1200	11.4
1400	13.3

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

Topical Application: Mix Bifenthrin SC Lawn and Nursery Insecticide/Miticide in 1,000 ounces of water based on container size and bulk density of the potting media (see table below). Apply one (1) ounce of the mix to each container evenly distributed over the surface of the potting media. Irrigate all treated containers

with 1.5 inches of water following application. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

Recommended Topical Drench Application Rate of Bifenthrin SC Lawn and Nursery Insecticide/Miticide for Control of IFA In Potting Media

	Fluid ounces of Bifenthrin SC Lawn and Nursery Insecticide/Miticide per 1,000 ounces of water	
Potting Media Bulk Density (lbs. per cubic yard)	**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

Use proportional amounts of Bifenthrin SC Lawn and Nursery Insecticide/Miticide for potting media with bulk densities not listed.

High Volume Drench: Apply Bifenthrin SC Lawn and Nursery Insecticide/Miticide as a high volume drench by mixing the appropriate amount of product based on the bulk density in 100 gallons of water (see table below). Apply mix to individual containers to the point of saturation. The amount of mix used for each plant is generally 1/5th the volume of the container. When used in accordance with USDA guidelines, this application will provide a 6 month certification period.

Recommended High Drench Application Rate of Bifenthrin SC Lawn and Nursery Insecticide/Miticide for Control of IFA In Potting Media

Potting Media Bulk Density (lbs. per cubic yard)	**Fluid ounces of Bifenthrin SC Lawn and Nursery Insecticide/Miticide 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 Fluid ounces of Bifenthrin SC for potting media with bulk densities not listed.

LARVAL CONTROL IN POTTING MEDIA OF CONTAINERIZED PLANTS

Black Vine Weevil Larval Control - Preventative Treatment - Topical Drench: For preventative control of black vine weevil larvae in containerized plants, dilute Bifenthrin SC Lawn and Nursery Insecticide/Miticide at the rate of 10 to 40 fl. ozs (0.05 to 0.2 1b. a.i.) per 100 gallons and apply as a drench at the rate of 4 to 8 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container. Diluting 10 fluid ounces of Bifenthrin SC per 100 gallons and applying 8 fluid ounces of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for one growing season when the application is made in the spring. Diluting 20 to 40 fluid ounces of Bifenthrin SC per 100 gallons and applying 8 fluid ounces of finished spray per 6 inch (diameter) container will provide black vine weevil larval control for two growing seasons when the application is made in the spring.

White Grub Control - Preventative Treatment - Topical Drench: For preventative control of white grubs (including, but not limited to, Japanese beetle, oriental beetle and European chafer) in containerized plants, dilute Bifenthrin SC at the rate of 40 to 80 fluid ounces (0.2 to 0.4 lb. a.i.) per 100 gallons and apply as a drench at the rate of 4 to 8 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, 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.

Black Vine Weevil and White Grub Larval Control - Preventative Treatment - Media Incorporation: For preventative control of black vine weevil and white grub larvae in containerized plants, incorporate the appropriate volume of Bifenthrin SC (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. Use the higher application rates for longer periods of control.

Potting Media	**Fluid ounces of Bifenthrin SC Lawn and Nursery Insecticide/Miticide in one cubic yard**			
Bulk Density (lbs. per 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 listed above are based on the dry bulk density of the potting media.
Use proportional volumes of Bifenthrin SC for potting media with dry bulk densities that are not listed above.

Black Vine Weevil Larval Control - Curative Treatment - Topical Drench: To control black vine weevil larvae infesting containerized plants, dilute Bifenthrin SC at the rate of 10 to 40 fl. ozs. (0.05 to 0.2 lb. a.i.) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

Bare-root Treatment for Preventative Root Weevil Larvae - Control: To protect treated roots of field grown nursery stock from feeding by root weevil larvae, dilute one gallon of Bifenthrin SC in 100 gallons of water and treat the bare roots of plants that are being transplanted into the field either by dipping the roots into the insecticide solution for ten seconds or by spraying the insecticide solution onto the roots.

***Diaprepes* Weevil Larval Control - Curative Treatment - Topical Drench:** To control *Diaprepes* weevil larvae infesting containerized plants, dilute Bifenthrin SC at the rate 10 to 40 fl. ozs. (0.05 to 0.2 lb. a.i.) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

Fungus Gnat Larval Control - Preventative Treatment - Topical Drench: For preventative control of fungus gnat larvae in containerized plants, dilute Bifenthrin SC at the rate of 20 to 40 fl. ozs. (0.1 to 0.2 lb. a.i.) per 100 gallons and apply as a drench at the rate of 4 to 8 fl. ozs. of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, 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.

Fungus Gnat Larval Control - Curative Treatment - Topical Drench: To control fungus gnat larvae infesting containerized plants, dilute Bifenthrin SC at the rate of 10 to 40 f1. ozs. (0.05 to 0.2 lb. a.i.) per 100 gallons and apply as a drench at the rate of 8 to 16 fluid ounces of finished spray per 6 inch (diameter) container. Use a proportional volume of finished spray for containers less than or greater than 6 inches in diameter. Ideally, the media should be treated to the point of saturation, which generally requires 1/5 the volume of the container.

IMPREGNATION AND APPLICATION OF BIFENTHRIN SC ON DRY BULK TURF FERTILIZERS

Bifenthrin SC Lawn and Nursery Insecticide/Miticide may be impregnated on dry bulk fertilizers. When applied as directed, Bifenthrin SC/dry bulk fertilizer mixtures provide insect control equal to that provided by the same rates of Bifenthrin SC applied in water.

Impregnation: Apply using a minimum 100 pounds of dry bulk fertilizer per acre with the recommended amount of Bifenthrin SC per acre. Use a closed rotary-drum mixer or a similar type of closed blender equipped with suitable spray equipment. The spray nozzle(s) should be positioned to provide a uniform, fine spray pattern over the tumbling fertilizer for thorough coverage. The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with Bifenthrin SC provides a satisfactory dry mixture. If the absorptive capacity is inadequate, use of a highly absorptive powder is required to provide a dry, flowable mixture. Microcel E (Johns Manville Products Corporation) is a recommended absorbent powder. Generally less than 2% by weight of Microcel E is required. **DO NOT** impregnate Bifenthrin SC onto straight coated ammonium nitrate or straight limestone because these materials will not absorb the insecticide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with Bifenthrin SC.

The amount of Bifenthrin SC Lawn and Nursery Insecticide/Miticide actually required in the preparation of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amount of pesticide actually contained in the mixture applied to the soil represents the correct rate of use. Bulk fertilizer impregnated with Bifenthrin SC should be applied immediately, not stored.

All individual Federal and State regulations relating to bulk dry fertilizer blending, registration, labeling, and application of the mixtures are the responsibility of the individual and/or company selling the fertilizer and Bifenthrin SC mixture.

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

PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS

For control of Ants, Bees, Biting Flies, Boxelder Bugs, Centipedes, Crickets, Earwigs, Elm leaf beetle, Fleas, Flies, Millipedes, Mosquitoes, Roaches (including Cockroaches), Silverfish, Sowbugs, (Pillbugs), Spiders (including Black Widow Spiders), Ticks (including Brown Dog Ticks), and Wasps.

Apply Bifenthrin SC using a 0.03 to 0.06% emulsion as a residual spray to outside surfaces of buildings including, but not limited to, 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 congregate or have been seen. Use a spray volume of 2 to 10 gallons of emulsion per 1,000 square feet.

Mixing Directions: For 0.03% emulsion, mix 0.5 fluid oz. of Bifenthrin SC per gallon of water. For 0.06% emulsion, mix 1 fluid oz. Bifenthrin SC per gallon of water (1 fluid oz. = 2 tablespoons). Do not use household utensils to measure Bifenthrin SC. Use the higher rate for heavy pest infestation, quicker knockdown or longer residual control. Repeat treatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat applications are permitted provided that the maximum label rate is not exceeded.

Perimeter Treatment: Treat a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Apply 0.5 to 1.0 fluid oz. of Bifenthrin SC per 1,000 square feet in sufficient water to provide adequate coverage (refer to Dilution Chart).

For Ant and Fire Ant Mounds use Bifenthrin SC 0.06% emulsion as Drench Method: Apply 1 to 2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound. Use the higher volume for mounds larger than 12". For best results, apply in cool weather, such as in early morning or late evening hours, but not in the heat of the day.

GENERAL PRECAUTIONS

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

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 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 adequate coverage.
Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).
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 grass areas are water-logged or the soil is saturated with water (i.e., will not accept irrigation).

DEALERS SHOULD SELL IN ORIGINAL PACKAGES ONLY.

IMPORTANT INFORMATION
READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus Inc. and Seller harmless for any claims relating to such factors.

United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. UNITED PHOSPHORUS, INC. MAKES NEITHER WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent allowed by law United Phosphorus, Inc. or Seller be not liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT, OR COMPENSATION LIMITED TO DAMAGES NOT EXCEEDING THE FAIR MARKET PURCHASE PRICE, AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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