

83923-1

6/16/2010

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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

**NOTIFICATION****JUN 16 2010**

Ross Gilbert  
Ensystex IV, Inc.  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> St. NW  
Gig Harbor, WA 98332

Subject: Label Notification(s) Per Agency Letter Dated June 4, 2009; Environmental  
Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor  
Products Notification

Dear Mr. Gilbert:

The Agency is in receipt of your applications for pesticide notifications, dated May 18, 2010, per Agency letter dated June 4, 2009.

✓ **EPA Registration 83923-1**  
**EPA Registration 83923-2**

**Bithor SC GC**  
**Bithor SC**

The Registration Division (RD) has conducted a review of these requests for applicability under Agency letter dated June 4, 2009, and find that the label changes requested fall within the scope of the letter. The labels have been date-stamped "*Notification*" and will be placed in our records.

If you have any questions, please contact me at (703) 306-0415 or [davis.kable@epa.gov](mailto:davis.kable@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", with a long horizontal flourish extending to the right.

Kable Bo Davis  
Entomologist  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

2087



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 83923-1	2. EPA Product Manager V.Eagle	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) Ensystex IV, Inc / Bithor SC GC	PM# 1	
5. Name and Address of Applicant (Include ZIP Code) Ensystex IV, Inc c/o Pyxis Regulatory Consulting, Inc. 4110 136th St. NW Gig Harbor, WA 98332  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____  Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	<b>NOTIFICATION</b>  JUN 16 2010
<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 June 4, 2009, letter from Environmental Protection Agency. This notification is consistent with the guidance in the June 4, 2009 letter and the requirements of EPA's regulations at 40 CFR part 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 part 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 type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 1 gallon		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
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 Ross Gilbert		Title Agent	Telephone No. (Include Area Code) (253) 853-7369
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received  (Stamped)
2. Signature 		3. Title Agent	
4. Typed Name Ross Gilbert		5. Date 5/18/10	

3067  
PYXIS REGULATORY CONSULTING, INC.

4110 136<sup>th</sup> St. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
www.PyxisRC.com

May 18, 2010

COURIER DELIVERY

Venus Eagle (PM 1)  
Document Processing Desk (**NOTIF-PYRETHROID**)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

RE: Ensystex IV, Inc. – Bithor SC GC (EPA Reg. No. 83923-1)  
Revision to Environmental Hazards and Directions for Use per Environmental Hazard and  
General Labeling for Pyrethroid Non-Agricultural Outdoor Products Notification EPA letter  
dated June 4, 2009

Dear Ms. Eagle,

On behalf of Ensystex IV, Inc. please find the enclosed label notification revising the environmental  
hazards language and directions for use for Bithor SC GC per EPA's letter dated June 4, 2009.

In support of this notification submission, we submit the following documents:

1. Completed Application for Registration (EPA Form 8570-1)
2. One (1) copy of the Bithor SC GC labeling with changes tracked
3. One (1) copy of the Bithor SC GC labeling with changes incorporated
4. Certification with Respect to Label Integrity
5. One (1) copy of the Bithor SC GC labeling on CD

Please contact me by phone (253) 853-7369 or by email at [Ross@PyxisRC.com](mailto:Ross@PyxisRC.com) if you have any questions  
or need any additional information.

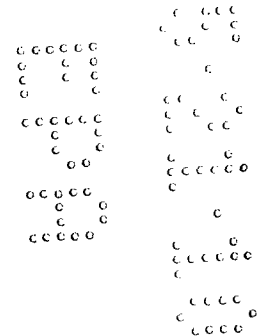
Sincerely,



Ross Gilbert

Enclosures

cc: D. Nimocks; Ensystex IV, Inc.



## RESTRICTED USE PESTICIDE

### Toxic to Fish and Aquatic Organisms

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



NOTIFICATION

JUN 16 2010

## BITHOR SC GC

For foliar and systemic control of insect pests of turfgrass, landscape ornamentals, shrubs and trees on golf courses.

Active Ingredient:	By Wt.
Imidacloprid .....	5.0%
Bifenthrin* .....	2.0%
Other Ingredients: .....	93.0%
TOTAL: .....	100.0%

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

Contains 0.45 pounds of imidacloprid and 0.18 pounds of bifenthrin per gallon

EPA Reg. No. 83923-1 EPA Est. XXXXX-XX-XXX

**STOP – Read the label before use**

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**DO NOT USE THIS PRODUCT ON GOLF COURSES IN NASSAU COUNTY OR SUFFOLK COUNTY, NEW YORK**

(PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.)

(TO THE USER: If you cannot read and understand English, do not use this product until the label has been fully explained to you.)

For product use information call 1-866-FOR-THOR (866-367-8467) or visit [www.for-thor.com](http://www.for-thor.com).

**NET CONTENTS: As marked on container**

Manufactured by:

**ENSYSTEX IV, Inc.**

Fayetteville, NC 28303

## FIRST AID

If swallowed	<ul style="list-style-type: none"><li>• Call poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>
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## HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-(800)-369-4352 for emergency medical treatment information.

## NOTE TO PHYSICIAN

**Note To Physician:** No specific antidote is available. Treat the patient symptomatically. This product contains a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

## PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

## CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment:** Applicators and other handlers must wear long-sleeved shirt, long pants, shoes and socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations:** 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 the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Run-off may be hazardous to aquatic organisms in water adjacent to treated areas.

This product contains a chemical with properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies and drainage systems.

## 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 requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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

Do not water the treated area to the point of run-off.

Do not make applications during rain.

Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

(1) Treatment to soil or vegetation around structures;

(2) Applications to lawns, turf, and other vegetation;

(3) Applications to building foundations, up to a maximum height of 3 feet.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches and structural surfaces (such as windows, doors and eaves) are limited to spot and crack-and-crevice applications only.

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If container is leaking or if material is spilled for any reason or cause, carefully contain any spilled material to prevent non-target contamination. Do not walk through spilled material and dispose of as directed for pesticides below. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. Refer to *Precautionary Statements* on label for hazards associated with the handling of this material. In spill or leak incidents, keep unauthorized people away. You may contact Ensyslex IV for decontamination procedures or any other assistance that may be necessary at 1-866-367-8467 or contact Chemtrec at 1-800-424-9300.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not re-use or refill this container. Triple rinse container (or equivalent) 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## GENERAL INFORMATION

BITHOR SC GC controls or suppresses a wide spectrum of insects and mites on turfgrass, trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants on golf courses. (Nonbearing crops are perennial crops that do not produce a harvestable raw agricultural commodity during the season of application.) BITHOR SC GC mixes readily with water and other aqueous carriers.

BITHOR SC GC is not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. BITHOR SC GC is not for use in commercial greenhouses, nurseries, or on grasses grown for seed, turfgrass grown for sale (sod farms) or on commercial fruit and nut trees.

Some insects can develop resistance to products used repeatedly for their control. Because the development of resistance by an insect to an insecticide cannot be predicted, the use of this product should be according to established resistance management strategies. Consult your local or state pest management authorities for details.

If necessary, consult resources in horticulture in your area (such as your Cooperative Extension Service) to determine appropriate application timing and cultural practices to control different types of pests.

## APPLICATION FOR TURF PESTS

BITHOR SC GC can be used for the control of a wide range of pests of turfgrass on golf courses. Because BITHOR SC GC's active ingredients have long lasting residual activity, applications for control of subsurface feeders can be made before the occurrence of egg laying activity. BITHOR SC GC's active ingredients also have sufficient knockdown and residual activity to provide curative and residual control of surface feeding pests.

Do not apply more than 4.5 pints (0.25 lb imidacloprid, 0.1 lb bifenthrin) per acre or 1.65 fluid ounces per 1000 square feet per application of product to turf. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.2 lb bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet per year of product to turf.

### Application Sites

Permitted sites include turfgrass on golf courses. **New York State only: Do not apply BITHOR SC GC containing solutions to grass or turf within 100 feet of a body of water (lake, pond, river, stream, wetland or drainage ditch).**

### Application Timing

The active ingredients in BITHOR SC GC have sufficiently long-lasting residual activity that applications can be made prior to egg laying by the target pest(s). Optimum control of turf pests will be achieved when application is made prior to egg hatch followed by sufficient irrigation or rainfall to move the active ingredient through the thatch and down into the underlying soil. Applications can be timed based on past experiences at the site or in the area, current results of adult monitoring/trapping or other methods.

### Post Application Watering and Mowing

Optimum control is achieved if irrigation or rainfall occurs within 24 hours after application. Uniformity of application may be adversely affected if turf is mowed prior to irrigation/rainfall occurring.

### Application Precautions and Preparations

Keep children and pets off treated areas until spray has dried.

Application should not be made to turf that is frozen, waterlogged or is saturated with water. Turf in this condition will not allow the necessary vertical distribution of the active ingredient down into the soil.

BITHOR SC GC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

Because certain cultivars may be sensitive to the final spray solution, test the effects of applications of different rates and volumes of mixed solution on a small patch of a type of grass (with observations over one week to detect the occurrence of negative effects) before application of solutions to large areas of that type of grass.

### Application Equipment and Methods

Apply BITHOR SC GC mixed in water (according to the table below) as a spray of uniform, coarse droplets at a pressure low enough to eliminate drift from the target area. Properly calibrated application equipment must be used to apply BITHOR SC GC. Check calibration periodically to ensure that equipment is working properly.

### Reapplication

Reapplications may be necessary particularly in the event of high pest pressure. Reapply as necessary to achieve control using higher application rates as pest pressure and foliage area increases but make reapplications no more often than once every 7 days. **New York State**

only: Do make a single reapplication of BITHOR SC GC if there is renewed insect activity, but not sooner than two weeks after first application.

### Turf Pest Application Use Rates

Use rates for BITHOR SC GC for turf pests are stated in fluid ounces of BITHOR SC GC per 1000 square feet and pints per acre. The application use rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC GC at 0.67 to 1.65 fluid ounces per 1000 square feet or 1.8 to 9.0 pints per acre, depending on the target pest. Recommended rates for specific pests within this range are given below. Use the higher application rates when maximum residual control is needed. However, applications of up to 1.65 fluid ounce per 1000 square feet or 4.5 pints per acre are permitted at the discretion of the applicator to control any pest. Do not apply more than 9 pints (0.5 lb of imidacloprid active ingredient, 0.2 lb bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet of product per year to turf.

### Turf Application Use Rates

Use Rate Table for BITHOR SC GC for Turf Applications		
Use Rate	Fluid ounces BITHOR SC GC per 1,000 square feet (Range)	Pints BITHOR SC GC per acre (Range)
A	1.32⇒1.65	3.6⇒4.5
B	1.32⇒1.65	3.6⇒4.5
B (single annual application)	2.64⇒3.33	7.2⇒9.0
C	0.9⇒1.65	2.3⇒4.5
D	0.67⇒1.65	1.8⇒4.5

1 fluid ounce = 2 tablespoons = 6 teaspoons

Do not use household utensils to measure BITHOR SC GC.

### Turf Application Volumes

Apply the indicated amount of BITHOR SC GC mixed in a volume of water sufficient to adequately distribute the active ingredient to the target area(s) and to wet all foliage.

The calculated amount of BITHOR SC GC can be applied in any volume of water provided the maximum label rate is not exceeded. Do not exceed the maximum label rate by applying solution to an area smaller than intended when it was mixed and diluted unless such under dosing will not result in an application rate in excess of the maximum label rate.

### Calculating Amounts of BITHOR SC GC to Mix for Turf Pests

To mix and apply any amount of BITHOR SC GC for turf pests based on number of square feet, determine:

A = # of Square feet of area to be treated / 1000 (for example 5,500 sq. ft. / 1000 = 5.5)

B = Applicable BITHOR SC GC Use Rate (fluid ounces per 1000 square feet) for the target pest(s) from the Use Rate Table. If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC GC to mix for turf pests as follows:

Ounces BITHOR SC GC to use = A X B

Mix this amount of BITHOR SC GC in the amount of water needed to make the application.

To mix and apply any amount of BITHOR SC GC for turf pests based on number of acres, determine:

A = # of acres of area to be treated = square feet of area to be treated / 43,560 (1 acre = 43,560 sq. ft.)

B = Applicable BITHOR SC GC Use Rate (pints per acre) for the target pest(s) from the Use Rate Table. If treating for more than one type of pest, select the highest rate.

Calculate the amount of BITHOR SC GC to mix for turf pests as follows:

Pints BITHOR SC GC to use = A X B

Mix this amount of BITHOR SC GC in the amount of water needed to make the application.

1 Pint = 16 ounces

### Turf Pests Grouped by Use Rates

**Use Rate A:** Annual bluegrass weevil, *Aphodius* spp., Asiatic garden beetle, Black turfgrass ataenius, Black vine weevil, European chafar, European crane fly, Frit fly, Green June beetle, Japanese beetle, Northern masked chafar, Nuisance ants, Oriental beetle, *Phyllophaga* spp., Southern masked chafar, Ticks

**Use Rate B and Use Rate B (single annual application):** Imported Fire Ant, Mole crickets

**Use Rate C:** Banks grass mites, Billbugs, Chinch bugs, Centipedes, Crickets, Earwigs, Fleas, Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites, Pillbugs, Sowbugs

**Use Rate D:** Armyworms, Cutworms, Sod webworms

### Application Recommendations Against Specific Turf Pests

**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 Cooperative Extension Service for more specific information regarding application timing.

**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. The highest application rate may be necessary during periods of highest pest pressure if the grass is being maintained at a mowing height of 1 inch or greater.

**Billbug adults:** Applications should be made when adults first appear in the spring or when chewed or brown grass indicates damage. Degree day models have been developed to optimize application timing. Consult your Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of overwintered chinch bugs.

**Chinch Bugs:** Because they infest the base of grass plants, chinch bugs are often found in the thatch layer. Irrigation of the grass or high volume applications of solution can increase penetration of the solution to where the chinch bugs are located. Chinch bugs can be one of the most difficult turf pest to control. High application rates may be required to achieve effective control, particularly in the middle of the summer when both nymphs and adults are present.

**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.

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**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.

**Imported Fire Ants:** Combine broadcast treatments to control newly invading ants and mound treatments to eliminate existing ant colonies. If the soil is not moist, irrigate before application or use a high volume application. Broadcast treatments should be applied at 1.65 fluid oz. per 1,000 square feet. Mounds should be treated by diluting 1/3 fluid oz. (2 teaspoons) of BITHOR SC GC 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.

**Mole Cricket adults:** Adult mole cricket control is difficult to attain because of continuous invasion during the early spring. Applications, made as late in the day as possible, should be watered in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Mole Cricket nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch when young nymphs are located near the soil surface. 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, made as late in the day as possible, should be watered in with 0.5 inches of water immediately following treatment. Irrigating dry soil before application will bring crickets closer to the surface.

**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever):** Treat the entire area where exposure to ticks may occur. Avoid spot applications. 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.

Deer ticks (*Ixodes sp.*) have a complicated two year life cycle that 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 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 their larvae, nymphs and adults.

## FOLIAR AND BROADCAST APPLICATION FOR ORNAMENTAL PESTS

BITHOR SC GC, applied to foliage and broadcast on the soil, controls or suppresses a wide range of pests on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants in golf course landscapes. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.) BITHOR SC GC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

BITHOR SC GC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC GC is realized when BITHOR SC GC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC GC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control. Foliar applications of BITHOR SC GC also have local systemic activity against insect pests.

For outdoor ornamentals, broadcast applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.2 lb of bifenthrin) per acre per year.

### Application Sites

For use on ornamental plants including but not limited to trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants in golf course landscapes.

### Application Preparation

BITHOR SC GC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

### Foliar Application

#### Ornamental Application to Control Ants

BITHOR SC GC can be used to indirectly control ants when applied to control aphids, scale insects, mealybugs and other sucking insects on ornamentals thereby limiting the amount of honeydew available.

#### Foliar Application Volumes and Application Methods

BITHOR SC GC mixes readily with water and may be used in many types of application equipment. Mix required amount of product (from the table below) with the amount of water required to uniformly wet foliage and apply as desired dependent upon the selected use pattern. When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended. If concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the area sprayed, as would be used in a dilute application. Begin treatments prior to establishment of high pest populations. Reapply as needed.

#### Foliar Application Use Rates

Use rates for BITHOR SC GC for foliar application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC GC per 100 gallons of water. The application rates listed below provide control of the listed pests under normal conditions.

Fluid ounces BITHOR SC GC per 100 gallons of water	Milliliters BITHOR SC GC per 100 gallons of water
6.7	202

1 fluid ounce = 2 tablespoons = 6 teaspoons

Do not use household utensils to measure BITHOR SC GC.

## Ornamental Pests Controlled by Foliar Application

Adelgids, Aphids, Japanese beetles, Lacebugs, Leaf beetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Mealybugs, Psyllids, Sawfly larvae, Thrips (suppression), Whiteflies

## Broadcast Application

### Broadcast Application Volumes and Application Method

Mix required amount of product in a quantity of water sufficient to uniformly treat area. Use a minimum of 2 gallons of water per 1000 square feet. To achieve optimum control, irrigate treated area in order to incorporate treatment into upper level of soil.

Do not exceed the maximum label rate by applying solution to an area smaller than intended when it was mixed and diluted unless such under dosing will not result in an application rate in excess of the maximum label rate.

For outdoor ornamentals, broadcast applications cannot exceed a total of 9.0 pints (0.5 lb of imidacloprid and 0.2 lb of bifenthrin) per acre or 3.3 fluid ounces per 1000 square feet per year.

### Broadcast Application Use Rates

Use rates for BITHOR SC GC for broadcast application for ornamental pests are stated in fluid ounces (and milliliters) of BITHOR SC GC per 1000 square feet. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC GC at 0.67 to 1.65 fluid ounces per 1000 square feet, depending on the target pest. Recommended rates for specific pests within this range are given below. Use the higher application rates when maximum residual control is needed. However, applications of up to 1.65 fluid ounces per 1000 square feet are permitted at the discretion of the applicator to control any pest.

Use Rate Table for BITHOR SC GC for Broadcast Applications		
Use Rate	Fluid ounces BITHOR SC GC per 1000 square feet	Milliliters BITHOR SC GC per 1000 square feet
A	1.32-1.65	40-50
B	0.9-1.65	27-50
C	0.67-1.65	20.3-50

## Ornamental Pests Controlled by Broadcast Application

**Use Rate A:** Annual bluegrass weevil, *Aphodius spp.*, Asiatic garden beetle, Black turfgrass atenioides, Black vine weevil, European chafer, Green June beetle, Japanese beetle, Northern masked chafer, Oriental beetle, *Phyllophaga spp.*, Southern masked chafer, Ticks

**Use Rate B:** Beetle adults (incl. Diaprepes, flea beetles, Japanese beetle and weevils), Billbugs, Chinch bugs, Centipedes, Crickets, Earwigs, Firebrats, Fleas, Fungus gnats, Grasshoppers, Leafhoppers, Mealybugs, Millipedes, Mites, Nuisance ants, Pillbugs, Scorpions, Sowbugs, Spiders, Springtails, Thrips

**Use Rate C:** Armyworms, Budworms, Cutworms, Leafrollers, Sod webworms

## SOIL INJECTION AND SOIL DRENCH FOR ORNAMENTAL PESTS

BITHOR SC GC, applied as a soil drench or soil injection, controls or suppresses a wide range of insects on trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, foliage plants and ground covers on golf courses. (Non-bearing trees are perennial plants that will not produce a harvestable agricultural commodity within the next 12 months.) BITHOR SC GC is not for use on plants being grown for sale, fruit, nut or commercial seed production or for research purposes.

BITHOR SC GC is a systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the body of the plant. This means optimum effectiveness of BITHOR SC GC is realized when BITHOR SC GC is applied on or near a growing portion of the plant from which it may be translocated to other parts of the plant. Combining BITHOR SC GC with a nitrogen containing fertilizer may accelerate or otherwise enhance the uptake of the active ingredient into the plant. Translocation of soil directed applications made to woody stemmed plants can be delayed by up to 60 days. For this reason, applications should be made prior to anticipated pest infestation to achieve optimum levels of control.

Applications to trees for the control of existing borer infestations may not prevent the eventual loss of the tree due to existing damage already caused by the pest and stress to the tree caused by the pest infestation.

### Application Sites

For use on ornamental plants including but not limited to trees (including non-bearing fruit and nut trees), shrubs, evergreens, flowers, ground covers, bedding plants and foliage plants on golf courses.

### Application Preparation

BITHOR SC GC can be mixed with other insecticides, miticides, fungicides and fertilizers. Follow the label directions of all the products mixed, making sure not to exceed the labeled application rate of any individual product in the mixture. Any tank mixture that has not been tested before should be tested before full scale use by first mixing a small quantity of the mixture to ensure there is no physical or chemical incompatibility.

## Ornamental Pests Controlled by Soil Injection or Drench Application

Adelgids, Aphids, Armored scales (suppression), Black vine weevil larvae, Eucalyptus longhorned borer, Flatheaded borers (including bronze birch borer and alder borer), Japanese beetles, Lace bugs, Leaf beetles (including elm and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leaf miners, Mealybugs, Pine tip moth larvae, Psyllids, Royal palm bugs, Sawfly larvae, Soft scales, Thrips (suppression), White grub larvae, Whiteflies.

## Soil Injection for Trees

Soil Injection is not allowed in Nassau and Suffolk Counties of New York

### Soil Injection Use Rate for Trees

Use Rate Table for BITHOR SC GC for Soil Injection for Trees	
0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /	
14 to 27 milliliters per inch of trunk diameter (D. B. H.)	

## Soil Injection Volumes and Application Method for Trees

Mix the calculated amount of BITHOR SC GC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply at a low pressure according to one of the two following methods. Make a minimum of 4 injection holes per tree. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

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**Grid Injection:** Evenly space holes on 2.5 foot centers in a grid pattern in the soil beneath the tree's branches/foliage out to the tree's drip line.

**Basal Injection:** Evenly space injection holes around the base of the tree no more than 12 inches out from the tree.

### Soil Drench for Trees

#### Soil Drench Use Rate for Trees

##### Use Rate Table for BITHOR SC GC for Soil Drench for Trees

0.45 to 0.9 fluid ounces per inch of trunk diameter (D. B. H.) /
14 to 27 milliliters per inch of trunk diameter (D. B. H.)

#### Soil Drench Volume and Application Method for Trees

Mix the calculated amount of BITHOR SC GC in the amount of water determined to be adequate for the solution to be adequately dispersed. Apply solution at a rate of no less than 10 gallons per 1000 square feet around the base of the tree directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier.

### Soil Injection for Shrubs

Soil Injection is not allowed in Nassau and Suffolk Counties of New York

#### Soil Injection Use Rate for Shrubs

##### Use Rate Table for BITHOR SC GC for Soil Injection for Shrubs

0.45 to 0.9 fluid ounces per foot of shrub height
14 to 27 milliliters per foot of shrub height

#### Soil Injection Volume and Application Method for Shrubs

Mix the calculated amount of BITHOR SC GC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply to individual plants using sage indicated at a low pressure, making a minimum of 4 injection holes per shrub. For optimum control, maintain a high level of soil moisture in the treated area for 7 to 10 days after treatment.

### Soil Drench for Shrubs

#### Soil Drench Use Rate for Shrubs

##### Use Rate Table for BITHOR SC GC for Soil Drench for Shrubs

0.45 to 0.9 fluid ounces per foot of shrub height
14 to 27 milliliters per foot of shrub height

#### Soil Drench Volumes and Application Method for Shrubs

Mix the calculated amount of BITHOR SC GC in the amount of water determined to be adequate for the solution to be adequately dispersed, but at a rate no less than 10 gallons per 1000 square feet around the base of each shrub directed to the root zone. If present, remove any barrier to the movement of the solution into the soil such as a plastic vapor barrier

### Soil Incorporation for Flowers and Groundcovers

Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. If application is made to established plants, optimum control will be attained if area is irrigated thoroughly after application.

#### Soil Incorporation Use Rate for Flowers and Groundcovers

##### Use Rate Table for BITHOR SC GC for Soil Incorporation for Flowers and Groundcovers

1.32 to 1.65 fluid ounces per 1000 square feet
40 to 50 milliliters per 1000 square feet

### ATTENTION

Do not graze treated areas or use clippings from treated areas for feed or forage.

Avoid runoff or puddling of irrigation water following application.

Do not apply by air.

Do not apply by any type of irrigation system.

### IMPORTANT READ BEFORE USE

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