**BITHOR SC**

For foliar and systemic control of insect pests of turfgrass, landscape ornamentals, shrubs and trees in lawns, landscapes, playgrounds, parks and athletic fields.

**Active Ingredient:**
- Imidacloprid .................................................. 5.0%
- Bifenthrin* .......................................................... 4.0%
- Other Ingredients: .................................................. 93.0%
- **TOTAL:** .................................................................. 100.0%

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

Contains 0.45 pounds of imidacloprid and 0.36 pounds of bifenthrin per gallon

EPA Reg. No. 83923-2  EPA Est. 81824-NC-001

**STOP – Read the label before use**

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

(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 (866-367-8487) or visit www.for-thor.com.

**NET CONTENTS:** As marked on container

**Manufactured by:**
ENSYSTEX IV, Inc.
Fayetteville, NC 28303

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**FIRST AID**

- If swallowed: Call 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 to an unconscious person.

**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 1-800-538-0008 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, using the toilet, and handling food. Wash skin thoroughly before using clean clothing. Wash all clothing 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 washer or rinsate. Run-off may be hazardous to aquatic organisms in water adjacent to treated areas.

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

**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.

**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 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 ENSYSTEX IV for decontamination procedures or any other assistance that may be necessary at 1-667-367-8487 or contact Chemtrex at 1-800-24-9300.

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

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

**GENERAL INFORMATION**

BITHOR SC 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 and/or around residential dwellings (single and multi-family), office, commercial, shopping and institutional buildings and complexes, grounds, parks, recreational areas, athletic fields, playgrounds, airports, cemeteries, lawns and interior plantscapes. (Nonbearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.) BITHOR SC is not for use in commercial greenhouses, nurseries, or on grasses grown for seed, golf courses, turfgrass grown for sale (cool 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
Calculating Amounts of BITHOR SC to Mix for Turf Pests

To apply and mix any amount of BITHOR SC 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 = BITHOR SC Use Rate (fluid ounces per 1000 square feet care for) for the target pests(s) from the Use Rate Table. If treated for more than one type of pest, select the highest rate

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

- Ounces BITHOR SC to use = AXB
- Mix this amount of BITHOR SC in the amount of water needed to make the application.
- Mix to apply and mix any amount of BITHOR SC for turf pests based on number of areas, determine:

- A = # of acres of area to be treated / 43,560 (1 acre = 43,560 sq. ft.)
- B = BITHOR SC Use Rate (pints per acre) for the target pests(s) from the Use Rate Table.
- Mix to determine for more than one type of pest, select the highest rate.

- Mix this amount of BITHOR SC to mix for turf pests as follows:

- Mix this amount of BITHOR SC 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 weeds, Agrostis spp., Asiatic garden beetle, Black hortens altemus, Black vine weevil, European chafer, European crane fly, Fire fly, Green June beetle, Imported Fire Ant, Japanese beetle, Mois crickets, Northern masked chafer, Nouront ants, Oriental beetle, Phyllophaga spp., Southern masked chafer, Ticks

Use Rate B: Armyworms, Banes grass grubs, Billbug, Chinch bugs, Crenedes, Crikeworms, Crikeworms, and Sod Webworms, Sowbugs

Application Recommendations Against Specific Turf Pests

Annual Bluegrass Weevils (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 Bowling dogwood (Cornus florida) is in full bloom. Consult your Cooperative Extension Service for more specific information on application timing.

Armyworms, Crikeworms, and Sod Webworms: To ensure optimum control, delay watering (irrigation) for 24 hours before application. Rainfall or irrigation 12 to 16 hours after application may be necessary during periods of highest pest pressure if grass in being maintained at a mowing height of 1 inch or greater.

Billbug adults: Applications should be made when adults first appear in the spring and before hatching of egg stage. Time of the application is critical to optimize application timing. Consult your Cooperative Extension Service for information specific to your region. In late summer or fall, spring applications targeting billbug adults will also provide control over overwintering 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 and high volume applications of soil 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 clover mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days later, may be necessary to achieve acceptable control.

Piera larvae: Piera larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a high volume application when treating these areas to ensure penetration of the insecticide to 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. Yellowjacket and vespid wasps should be applied at 1.5 fluid oz. per 1,000 square feet. Mounds should be treated by diluting 1/3 fluid oz. (2 teaspoons) of BITHOR SC 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 - 90°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 localized 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 reproduced from surrounding areas on host animals. Retreatment may be necessary to achieve and 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.

Deep diron (ludes or spin) have a complicated two year life cycle that involves four life stages. Applications should be made late in the fall and early in the 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, 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 including plants in interior plant areas.

A systemic insecticide meaning it can be translocated by the plant's vascular system from the roots up into the leaves of the plant. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC 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 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 also have local systemic activity against insect pests.

For outdoor ornamentals, broadcast applications cannot exceed a total of 9.0 pounds (0.5 lb. of imidacloprid and 0.4 lb. of thiamethoxam) 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 including plants in interior plant areas.

Application Preparation

BITHOR SC 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 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 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 uptake path. When making foliar applications on hard to wet foliage such as holly, tea, or lo, 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 white application. Begin treatments prior to establishment of high pest populations. Readily as needed.

Foliar Application Use Rates

Use rates for BITHOR SC for foliar application for ornamental pests are stated in fluid ounces per 1000 square feet (lb. of active ingredient) of BITHOR SC per 100 gallons of water. The application rates listed below provide control of the listed pests under normal conditions. Apply BITHOR SC at 6.7 to 21.3 fluid ounces per 100 gallons, depending on the insect pest. Recommended rates for specific pests within this range are given below. Use the higher application rates when maximum residual control is needed.

<table>
<thead>
<tr>
<th>Use Rate</th>
<th>Fluid ounces BITHOR SC per 1000 square feet</th>
<th>Milliliters BITHOR SC per 1000 square feet</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>1.32±0.65</td>
<td>40±20</td>
</tr>
<tr>
<td>B</td>
<td>0.46±0.85</td>
<td>12±26</td>
</tr>
</tbody>
</table>

Ornamental Pests Controlled by Broadcast Application

Use Rate A: White grub larvae (such as Japanese beetle larvae), Chafer, Phyllophaga spp., Asian garden beetle, Oriental beetle, Imported Fire Ants, Naisance Ants
Use Rate B: Ceratopogon, Cicadas, Earwigs, Flies, Spiders, Ants, Spiders, Woodborers, Spiders, Spiders

SOIL INJECTION AND SOIL DRENCH FOR ORNAMENTAL PESTS

BITHOR SC, 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 including plants in interior plant areas. This means optimum effectiveness of BITHOR SC is realized when BITHOR SC 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 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 stresses to the tree caused by the pest infestation.

Adjunct Application

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 including plants in interior plant areas.

Application Preparation

BITHOR SC 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

Adephaga, Aphids, Armored scales (suppression), Black vine weevil larvae, Eurytus longhorned borer, Flatheaded borers (including bronze birch borer and ador borer), Japanese beetles, Lace bugs, Leaf beetles (including birch and viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leaf miners, Mealybugs, Pine tip moth (larvae), Pink bollworm, Sawfly larvae, Sawfly, 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 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 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 following two 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.

Grid injection: Evenly space holes over 2.5 feet 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 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 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 and allow 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

<table>
<thead>
<tr>
<th>Use Rate Table for BITHOR SC for Soil Injection for Shrubs</th>
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</thead>
<tbody>
<tr>
<td>0.45 to 0.9 fluid ounces per foot of shrub height</td>
</tr>
<tr>
<td>14 to 27 milliliters per foot of shrub height</td>
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</table>

Soil Injection Volume and Application Method for Shrubs
Mix the calculated amount of BITHOR SC in the amount of water determined to be adequate for the treatment to be adequately dispersed. Apply to individual plants using dosage 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

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Soil Drench Volumes and Application Method for Shrubs
Mix the calculated amount of BITHOR SC 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

<table>
<thead>
<tr>
<th>Use Rate Table for BITHOR SC for Soil Incorporation Groundcovers for Flowers and Groundcovers</th>
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<tbody>
<tr>
<td>1.32 to 1.65 fluid ounces per 1000 square feet</td>
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<tr>
<td>40 to 50 milliliters per 1000 square feet</td>
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</tbody>
</table>

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

NOTICE: Read the entire Directions for Use, Conditions of Sale, Disclaimer of Warranties and Limitations of 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. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

CONDITIONS OF SALE: The Directions for Use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond the control of ENSYSTEX IV, Inc., it is impossible for ENSYSTEX IV to eliminate all risks associated with the use of this product such as inefficacy or unintended consequences. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ENSYSTEX IV harmless for any claims relating to such factors.

DISCLAIMER OF WARRANTIES: Seller 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 when used in accordance with the directions for use under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ENSYSTEX IV MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, under abnormal conditions or under conditions not reasonably foreseeable by (or beyond the control of) seller or ENSYSTEX IV, Inc., and buyer assumes the risk of any such use. No agent of ENSYSTEX IV, Inc., is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein.

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Revised 10/06