



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg Number

279-4269

Date of Issuance

MAR 16 2006

Term of Issuance Conditional

Name of Pesticide Product:

Biflex NCT Insecticide

NOTICE OF PESTICIDE:

Registration

Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

FMC Corporation  
735 Market Street  
Philadelphia, PA 19103

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of this name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A), provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of you product under FIFRA section 4.
2. **Make the following labeling changes:**
  - a) Revise the EPA Registration Number to read "EPA Reg. No.279-4269"
  - b) Under Environmental Hazards add the following bee toxicity statement. "This product is highly toxic to bees exposed to direct treatment or residues on blooming crops."
  - c) Identify the name of the registered product that is to be used in the treatment of fire ant mounds.
  - d) Move the three "DO not xxx" statements under Directions for Use" to the section under "Attention".

Signature of Approving Official:

*George T. LaRocca*  
George T. LaRocca, Product Manager (13), IB/RD (7505C)

Date:

MAR 16 2006

- e) Add "Do not apply when a temperature inversion exists" and, "Do not apply for surface feeding pests if rain is expected within 12 hours (or what ever time is necessary for the spray to dry). "For turf treatment apply with nozzles not more than 2 feet above the grass". "Do not apply within 25<sup>th</sup> 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).
- f) Many of the items listed under Attention pertain to indoor uses. Aside from interiorscapes the product is limited to outdoor uses. Thus please delete the following statements:
- "Use only in well ventilated areas."
  - "During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material (except where exempt)."
  - "Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product."
  - "Do not treat areas where food is exposed."
  - "During indoor surface applications do not allow dripping or run-off to occur."
  - "Do not apply a broadcast application to interior surfaces of homes."
- g) Add "shall not" to the statement beginning. "To the extend permitted by law .... etc."
- h) Based on the acute toxicity profile for this product it requires PPE for a toxicity category II formulation similar to the PPE requirements under Biflex SFR. Thus revise the PPE for applicators and other handlers to:
- Coveralls worn over short-sleeved shirt and short pants
  - Socks
  - Chemical resistant footwear
  - Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile, rubber, polyvinyl chloride or viton.

Mixers and Loaders must wear:

- Coveralls worn over short - sleeved shirt and short pants
- Socks
- Chemical resistant footwear
- Chemical resistant gloves such as barrier laminate, butyl rubber, nitrite, rubber, polyvinyl chloride or viton
- Chemical resistant apron when mixing and loading and cleaning equipment.

i) Please indicate what NCT represents.

3. Since you do not qualify for the formulators exemption and have chosen the selective method of support you must include in the data matrix environmental fate data requirements appropriate to the use patterns plus membership or offers to pay to the various Industry Task Forces i.e., AHETF, SDTF, ARTP, NDETF, ORETF.
4. Please submit two (2) copies of your final printed label for before you release the product for shipment. Please refer to the A-79 enclosure for a further description of final printed labeling. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing amended labeling constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact BeWanda Alexander of my team at (703) 305-7460.

4811

**RESTRICTED USE PESTICIDE**

**Toxic to fish and aquatic organisms.**

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

# BIFLEX® NCT

## Insecticide

**For Commercial Non-Food Use in Interiorscapes and on Outdoor Ornamentals, Christmas Trees, Nurseries, Lawns, Sod farms, and Golf Courses**

EPA Reg. No. 279-XXXX

EPA Est. 279-

**Active Ingredient: By Wt.**

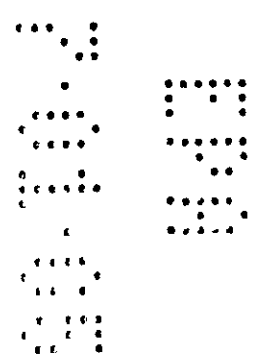
Bifenthrin*	23.4%
Other Ingredients**	76.6%
<b>Total:</b>	<b>100.0%</b>

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

\*\*Contains petroleum distillates.

Biflex NCT Insecticide contains 2 pounds active ingredient per gallon.

U.S. Patent No. 4,238,505



### KEEP OUT OF REACH OF CHILDREN WARNING

See other panels for additional precautionary information.

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>In on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
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)-331-3148 for Emergency Assistance.	
NOTE TO PHYSICIAN	
Pesticide Hotline (800) 858-7378. This product is a pyrethroid. This product also contains aromatic hydrocarbons. Because of the risk of hydrocarbon pneumonitis if even tiny amounts are aspirated into the lung during emesis, consideration should be given to gastric lavage with endotracheal tube in place. Treatment is symptomatic and supportive. Animal and vegetable fats, milk, cream and alcohol may increase absorption and should not be administered.	
For Information Regarding the Use of this Product Call 1-800- 321-1FMC (1362).	

FMC Corporation  
Agricultural Products Group  
Philadelphia PA 19103

Net Contents:

**ACCEPTED**  
with **COMMENTS**  
in EPA Letter Dated  
**MAR 16 2006**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
279-4269

# PRECAUTIONARY STATEMENTS

## Hazards to Humans (and Domestic Animals)

### Warning

May be fatal if swallowed. Causes skin irritation and moderate eye irritation. Do not get on skin or on clothing. Avoid breathing vapors or spray mist, and contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash contaminated clothing before reuse.

### Personnel Protective Equipment:

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

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

- Long-sleeved shirt and long pants
- Water-proof gloves
- Shoes plus socks

**Mixers and Loaders must wear:**

- Long-sleeved coveralls worn over a minimum of short sleeve shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.
- Chemical resistant footwear 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.

## Environmental Hazards

This pesticide 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 by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from treated areas. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

*This product is toxic to bees*

- Do not apply this product or allow it to drift to crops or weeds on which bees are actively foraging. Additional information may be obtained from your Cooperative Extension Service.

## Physical/Chemical Hazards

Do not use or store near heat or open flame. Do not apply this product in or on electrical equipment due to the possibility of shock hazard.

## 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 spray 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 use in greenhouses.

Do not apply this product through any type 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 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 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 Nitrile Rubber or Neoprene Rubber or Viton, and Shoes plus socks.

## Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

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

## STORAGE AND DISPOSAL

### Pesticide Storage

If crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids. Do not use external source of heat for warming container.

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 containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148.

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

**Pesticide Disposal**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal**

Metal or Plastic Container: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Do not cut or weld metal containers.

Returnable/Refillable Containers: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

**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.

**General Information on the Use of this Product**

For use on plants intended for aesthetic purposes or climatic modifications and being grown in interior plantscapes and on outdoor ornamentals, Christmas trees, nurseries, lawns, sod farms and golf courses.

**General Application Instructions**

Biflex NCT Insecticide formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on 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, but not limited to nurseries, residential dwellings, parks, institutional buildings, recreational areas, athletic fields, golf courses, sod farms and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Biflex NCT may be tank-mixed with other products, including insect growth regulators. When tank mixing Biflex NCT 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 Biflex NCT 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. When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation to keep the mixture in solution.

**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.

**APPLICATION RECOMMENDATIONS**

**TRUNK SPRAYS TO ORNAMENTAL TREES (including Christmas trees)**

**Control of bark beetles and boring beetles:**

Consult table below. Application rates and application timing differ according to the target pest and other factors peculiar to each local situation. Consult your local State Extension specialist or other qualified expert for specific recommendations. Do not apply more than 12.8 fl oz (0.2 lbs ai) of this product to trees per acre. Repeat application may be necessary if reinfestation is likely.

Pest	Recommended Rate For Preventive Control	Recommend Spray Volume	Specific Instructions
<i>Dendroctonus</i> bark beetles such as mountain pine beetle, southern pine beetle, western pine beetle and black turpentine beetle.	16-32 fl oz per 100 gallons (0.25 – 0.5 lb ai per 100 gallons)	1-4 gallons of finished spray per tree	Make applications to the trunk of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestation. Apply spray directly to the main trunk from the base of the tree to at least half way into the live crown. Spray until the bark is thoroughly wetted by the spray.
Engraver beetles ( <i>Ips</i> spp.)	16-32 fl oz per 100 gallons (0.25 – 0.5 lb ai per 100 gallons)	10-14 gallons of finished spray per tree	
Other bark beetles such as ambrosia beetles, elm bark beetles and metallic wood borers such as emerald ash borer	16-32 fl oz per 100 gallons (0.25 – 0.5 lb ai per 100 gallons)	2-6 gallons of finished spray per tree	
Clearwing moth borers, such as ash borer, banded ash clearwing, dogwood borer, lesser peachtree borer, lilac borer, oak borer, peachtree borer, rhododendron borer	6.4 to 12.8 fl. oz. per 100 gallons (0.1 – 0.2 lb ai per 100 gallons)	1-4 gallons of finished spray per tree	Apply to the branches and trunks prior to adult emergence. Spray until the bark is thoroughly wetted by the spray. For maximum residual control, use highest recommended rate.
Coleopteran borers, such as bronze birch borer, flatheaded appletree borer	6.4 to 12.8 fl. oz. per 100 gallons (0.1 – 0.2 lb ai per 100 gallons)	1-4 gallons of finished spray per tree	

**Treatment of infested trees to control emerging brood:** Make applications of a spray mixture containing 2.0 pints of Biflex SFR NCT Insecticide per 100 gallons of water to trees that still have beetles in the bark. Apply spray directly to the main trunk from the base of the tree to at least half way into the live crown. Spray until the bark is thoroughly wetted by the spray (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product to trees per acre. Trees on which all needles have turned brown generally have been vacated and should not be sprayed unless infestation is confirmed. To confirm an infestation, scrape off the outer bark to determine if trees are still infested. If live infestations remain in the trunks, fell the trees and cut into sections. Spray the trunk and large limbs and turn sections so that all of the surface area can be treated. Do not apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product to trees per acre.

**FOLIAR SPRAYS TO ORNAMENTALS AND TREES (Including Field and Container Grown Nursery Stock, Christmas Trees, Interiorscapes and Plantscapes, Lawns, Trees and Shrubs, and on Golf Courses and Sod Farms)** For applications to ornamentals (including but not limited to trees, shrubs, ground covers, bedding plants, and foliage plants, conifers (field and container grown), Christmas trees and pine seed orchards) apply 0.04 to 0.32 fluid oz. of Biflex NCT per 1,000 square feet or 1.8 to 14.4 fl. oz. per 100 gallons. Biflex NCT may be diluted and applied in various volumes of water providing that the maximum label rate (0.32 fluid oz. per 1,000 square feet or 14.4 fl. oz. per 100 gallons.) is not exceeded. Biflex NCT may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.32 fluid oz. per 1,000 square feet or 14.4 fl. oz. per 100 gallons) is not exceeded.

Apply the specified application rate as a full coverage foliar spray. Repeat treatment as necessary to achieve control using higher application rates as pest pressure & foliage area increases. Repeat application should be limited to no more than once per seven days. 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. Periodic use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.

**Calculating Dilution Rates using the Ornamental Application Rates Table and the Biflex NCT Ornamental Dilution Chart:** The following steps should be taken to determine the appropriate dilution of this product that is required to control specific pests:

- 1) Identify the least susceptible target pest (the pest requiring the highest application rate for control).
- 2) Select an application rate in terms of fluid oz. of this product.
- 3) Identify your application volume and how much spray mix you want to prepare.
- 4) Use the Ornamental Dilution Chart to determine the appropriate volume of this product that must be mixed in your desired volume of water.

For example, suppose you are trying to control black vine weevil adults on rhododendron. The Ornamental Application Rates table shows that 0.08 to 0.16 fluid oz. of this product should be applied per 1,000 square feet. You select an application rate of 0.16 fluid oz. per 1,000 square feet because maximum residual control is desired. Your application volume is approximately 300 gallons per acre, which is equivalent to 6.9 gallons per 1,000 square feet. Consulting the Ornamental Dilution Chart reveals that you should dilute 0.24 fluid oz. of this product in 10 gallons of water.

Biflex NCT Ornamental Dilution Chart							
Fluid Ounces (ml) of Biflex NCT diluted to the Volumes of Finished Spray							
Application Rate:	1 Gallon		5 Gallons		10 Gallons		100 Gallons
Fl. oz./ 1000 sq. ft.	fl. oz.	ml	fl. oz.	ml	fl. oz.	ml	fl. oz.
0.04	0.018	0.5	0.09	2.6	0.18	5.3	1.8
0.08	0.036	1.1	0.18	5.3	0.36	10.6	3.6
0.16	0.072	2.1	0.36	10.6	0.72	21.3	7.2
0.32	0.144	4.3	0.72	21.3	1.44	42.6	14.4

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

**Ornamental and Tree Foliar 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, this product may be applied at up to 0.32 fluid oz. per 1,000 square feet (14.4 fl. oz. per 100 gallons) to control each of the pest listed in this Table. The higher application rates should be used when maximum residual control is desired.

Pest	Biflex NCT Application Rate	
	Fluid Ounces per 1,000 square feet	Fluid Ounces per 100 gallons
Bagworms <sup>12</sup> Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars Tussock moth	0.04 - 0.08	1.8 - 3.6
Adelgids <sup>1</sup> Ants Aphids Bees Beet Armyworm Beetles <sup>13, 7</sup> Black Vine Weevil (Adults) Scales, such as Brown Soft Scales California Red Scale (Crawlers) <sup>13</sup> Elongated Hemlock Scale Pine Needle Scales (Crawlers) <sup>13</sup> San Jose Scales (Crawlers) <sup>13</sup> Broad Mites Budworms Cicadas <sup>1</sup> Citrus Thrips Clover Mites Crickets Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Glassywinged Sharpshooter Grasshoppers Japanese Beetle (Adult) <sup>1</sup> Leafhoppers Leafrollers Mealybugs Mites Mosquitoes	0.08 - 0.16	3.6 - 7.2



Nantucket pine tip moth Pillbugs Pine sawflies Plant Bugs (Including <i>Lygus spp.</i> ) Psyllids <sup>1</sup> Scorpions Spider Mites <sup>14</sup> Spiders Spittlebugs <sup>1</sup> Thrips Tip Moths Treehoppers <sup>1</sup> Twig Borers <sup>13</sup> Wasps Weevils <sup>13</sup> such as White Pine Weevil Pales Weevil <i>Diaprepes</i> adults Orchid Weevil Whiteflies Zimmerman pine moths		
Imported Fire Ants <sup>**</sup> Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults) Spider Mites <sup>14</sup>	0.16 - 0.32	7.2 - 14.4
<p><sup>12</sup>Bagworms: For best results, apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.</p> <p><sup>13</sup>Beetles<sup>1</sup>, Scale Crawlers, Twig Borers, and Weevils: May treat trunks, stems and twigs in addition to plant foliage.</p> <p><sup>14</sup>Spider Mites: Biflex NCT provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, Biflex NCT applications may be rotated with those of other products that have different modes of action in control programs that are designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.</p> <p><sup>**</sup>For foraging ants.</p> <p><sup>1</sup>Not for use in California.</p>		

**BROADCAST SPRAYS TO TURFGRASS (including lawns, golf courses, sod farms, parks, etc).**

Apply Biflex NCT as a broadcast treatment. Use higher volumes up to 10 gallons of carrier per 1000 square feet to get uniform coverage when treating dense grass foliage.  
For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone based surfactant (0.25% v/v) is recommended. Irrigation to treated area within a few hours following application can improve efficacy to sub-surface pests such as, but not limited to, mole crickets.

**Turfgrass 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, Biflex NCT Insecticide may be applied at up to 0.32 fl. oz. per 1000 square feet to control each of the pests listed in this table. The higher application rates should be used when maximum residual control is desired or heavy pest populations occur.

Pest	Application Rate of Biflex NCT
Amyworms <sup>1</sup> Cutworms <sup>1</sup> Sod Webworm <sup>1</sup>	0.25 - 0.08 fluid oz. per 1000 sq. ft.
Annual Bluegrass Weevil (Hyperodes) (Adult) <sup>2</sup> Banks Grass Mites <sup>3</sup> Billbugs (Adult) <sup>3</sup> Black Turfgrass Ataenius (Adult) <sup>4</sup> Crickets Earwigs Fleas (Adult) Grasshoppers Mealybugs Mites <sup>5</sup>	0.08 - 0.16 fluid oz. per 1000 sq. ft.
Ants Chinch Bugs <sup>6</sup> Fleas (Larvae) <sup>7</sup> Imported Fire Ants <sup>8</sup> Japanese Beetle (Adult) Mole Cricket (Adult) <sup>9</sup> Mole Cricket (Nymph) <sup>10</sup>	0.16 - 0.32 fluid oz. per 1000 sq. ft.

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

**Comments**

**1Armyworms, 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 0.32 fluid oz. per 1000 square feet) may be required during periods of high pest pressure.

**2Annual 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.

**3Billbug 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.

**4Black 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*).

**5Chinch 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 0.32 fluid oz. per 1000 square feet) may be required to control populations that contain both nymphs and adults during the middle of the summer.

**6Mites:** 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.

**7Flea 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 this product at 0.08 fluid oz. per 1000 square feet for adult flea control, then the larval application rate may be achieved by increasing the application volume two- to four-fold.

**8Imported 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 0.32 fluid oz. per 1,000 square feet. Mounds should be treated by diluting 0.05 fluid oz of New Name 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 0.32 fluid oz. per 1,000 square feet of this product in 5 gallons per 1,000 square feet contains the approximate dilution (0.05 fluid oz per gallon) that is required for fire ant mound drenches in the spray tank.

**9Mole 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).

**10Mole 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.

**11Ticks (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.

**Deer ticks (*Ixodes* 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.

		Biflex NCT Lawn Dilution Chart							
		Fluid Ounces (ml) of Biflex NCT diluted to these Volumes of Finished Spray							
Application Volume: Gallons/1,000 sq. ft.	Application Rate: fl. oz./1,000 sq. ft.	1 Gallon		5 Gallons		10 Gallons		100 Gallons	
		fl. oz.	ml.	fl. oz.	ml.	fl. oz.	ml.	fl. oz.	ml.
1	0.05	0.05	1.48	0.25	7.39	0.50	14.8		5.00
1	0.08	0.08	2.37	0.40	11.83	0.80	23.7		8.00
1	0.16	0.16	4.73	0.80	23.66	1.60	47.3		16.00
1	0.32	0.32	9.46	1.60	47.32	3.20	94.6		32.00
2	0.05	0.025	0.74	0.13	3.70	0.25	7.4		2.50
2	0.08	0.040	1.18	0.20	5.91	0.40	11.8		4.00
2	0.16	0.080	2.37	0.40	11.83	0.80	23.7		8.00
2	0.32	0.160	4.73	0.80	23.66	1.60	47.3		16.00
3	0.05	0.017	0.49	0.08	2.46	0.17	4.9		1.67
3	0.08	0.027	0.79	0.13	3.94	0.27	7.9		2.67
3	0.16	0.053	1.58	0.27	7.89	0.53	15.8		5.33
3	0.32	0.107	3.15	0.53	15.77	1.07	31.5		10.67

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4	0.05	0.013	0.37	0.06	1.85	0.13	3.7	1.25
4	0.08	0.020	0.59	0.10	2.96	0.20	5.9	2.00
4	0.16	0.040	1.18	0.20	5.91	0.40	11.8	4.00
4	0.32	0.080	2.37	0.40	11.83	0.80	23.7	8.00
5	0.05	0.010	0.30	0.05	1.48	0.10	3.0	1.00
5	0.08	0.016	0.47	0.08	2.37	0.16	4.7	1.60
5	0.16	0.032	0.95	0.16	4.73	0.32	9.5	3.20
5	0.32	0.064	1.89	0.32	9.46	0.64	18.9	6.40
10	0.05	0.005	0.15	0.03	0.74	0.05	1.5	0.50
10	0.08	0.008	0.24	0.04	1.18	0.08	2.4	0.80
10	0.16	0.016	0.47	0.08	2.37	0.16	4.7	1.60
10	0.32	0.032	0.95	0.16	4.73	0.32	9.5	3.20

### Spray Drift Precautions (For turf & ornamental uses)

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.

Apply using nozzles that provide the largest droplet size compatible with adequate coverage.

### Attention

Do not apply to pets, crops, or sources of electricity.

Firewood is not to be treated.

- Use only in well ventilated areas.
  - During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material (except where exempt).
  - Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.
  - Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.
  - Do not treat areas where food is exposed.
  - Do not apply this pesticide in livestock buildings (barns).
  - During indoor surface applications do not allow dripping or run-off to occur.
  - Do not apply a broadcast application to interior surfaces of homes.
- Keep children and pets off treated areas following application until the spray has dried.

**Vinyl and Aluminum Siding:** Do not spray directly onto vinyl or aluminum siding. If Biflex NCT inadvertently contacts vinyl and aluminum siding (particularly lightly colored, aged, weathered or otherwise damaged), it may result in staining, bleaching or discoloration. Wash off thoroughly with detergent and water. Factors such as extreme heat and direct sunlight can promote damage when using emulsifiable concentrates. Avoid application to vinyl or aluminum siding while exposed to direct sunlight or during the heat of the day.

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