

# RESTRICTED USE PESTICIDE

For retail sale and use by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

**Nufarm**

# Chlorpyrifos SPC **2**

## Insecticide

For control of listed pests on golf course turf and ornamental plants around industrial sites and road medians, fire ant treatment on nursery stock, and as a non-structural wood treatment.

Nufarm Chlorpyrifos SPC 2 Insecticide contains chlorpyrifos, the active ingredient used in Dursban®.

### ACTIVE INGREDIENT:

Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate) ..... 24.66%

**OTHER INGREDIENTS:** ..... 75.34%

**TOTAL:** ..... 100.00%

Contains 2 pounds of chlorpyrifos per gallon. Contains petroleum distillates.

## KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside label booklet for additional FIRST AID and PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-625

Manufactured for  
Nufarm Americas Inc.  
150 Harvester Drive  
Burr Ridge, IL 60527



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING/AVISO**

Causes skin irritation and moderate eye irritation. Harmful if swallowed. Do not get on skin or on clothing. Avoid contact with eyes.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow the instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical-resistance category selection chart.

All mixers, loaders, other applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**Engineering Controls**

When handlers use closed systems or closed cab motorized ground application equipment in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

<p><b>User Safety Recommendations</b> Users should: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.</p>
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<b>FIRST AID</b>	
<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 <b>any</b> liquid to the person.</li><li>• Do not give anything by mouth to an unconscious person.</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>
<b>If 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 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>HOT LINE NUMBER</b>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

<b>NOTE TO PHYSICIAN</b>
Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine, only by injection, is an antidote. This product is an organophosphorus ester that inhibits cholinesterase. Contains petroleum distillate – vomiting may cause aspiration pneumonia.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

## PHYSICAL AND CHEMICAL HAZARDS

COMBUSTIBLE: Do not use or store near heat or open flame.

### 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.

Aerial applications of this product are not permitted.

### 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), notification to workers, and restricted-entry interval. The requirements in this box 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 24 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 over short-sleeved shirt and short pants
- Chemical-resistant gloves made out of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

### NON-AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow others to enter until sprays have dried.

### SPRAY DRIFT MANAGEMENT

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

### AQUATIC BUFFERS

For ground boom applications, do not apply within 25 feet of rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries and commercial fish ponds. Apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use fine or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

### SENSITIVE SITES BUFFERS

The buffer distances specified in the below table are distances in feet that must exist to separate sensitive areas from the targeted application site. Buffers are measured from the edge of the sensitive site to the edge of the application site.

Sensitive sites are areas frequented by non-occupational bystanders (especially children). These include residential lawns, pedestrian sidewalks, outdoor recreational areas such as school grounds, athletic fields, parks and all property associated with buildings occupied by humans for residential or commercial purposes. Sensitive sites include homes, and hospitals. Non-residential agricultural buildings, including barns, livestock facilities, sheds, and outhouses are not included in this prohibition.

Application rate (lb ai./A)	Nozzle Droplet Type	Required Setback (Buffer Zones) (feet)	
		Airblast	Ground
> 0.5 - 1	coarse or very coarse	10	10
> 0.5 - 1	medium	10	10
>1 - 2	coarse or very coarse	10	10
>1 - 2	medium	10	10
>2 - 3	coarse or very coarse	10	10
>2 - 3	medium or coarse	10	10
>3 - 4	medium or coarse	25	10
>4	medium or coarse	50	10

Only pesticide handlers are permitted in the setback area during application of this product. Do not apply this product if anyone other than a mixer, loader or applicator is in the setback area. Exception: Vehicles and persons riding bicycles that are passing through the setback area on public or private roadways are permitted.

At this time, the above language does not apply to non-agricultural uses such as golf course turf, greenhouses and wood products or as an adult mosquitoicide. The applicator also must use all other measures necessary to control drift.

#### **CHEMIGATION PROHIBITION**

Do not apply this product through any type of irrigation system.

#### **GENERAL PEST CONTROL – EXTERIOR SURFACE AND PERIMETER TREATMENTS**

##### **Perimeter Treatment Applications:**

This product is to be mixed with water and applied outdoors with pressurized sprayers as a general surface spray.

##### **Precautions for Perimeter Treatments:**

- Do not feed treated grass cuttings (hay) or seed screenings to livestock, or use treated hay for livestock bedding.
- Keep out of fish pools and other bodies of water.
- Do not treat vegetable gardens.
- Do not allow livestock to graze in treated areas.

##### **Treatment Sites:**

Apply this product around localized exterior surfaces and as a soil applied perimeter treatment of industrial plant sites, manufacturing plants, food processing plants and warehouses.

**Note:** Phytotoxicity – Environmental factors and varietal differences affects phytotoxic expression. In situations where phytotoxicity potential is of concern, spray a small group of plants and observe them for 7 to 10 days to determine phytotoxic potential before treating large numbers of those plants.

##### **Application Rates:**

Depending on the pest species and application method, product applications of 0.03% to 0.5% can be made. Refer to the “Application Methods” section of this label for additional information.

##### **Mixing Directions:**

To make a 0.03% water based spray, add 1 2/3 fl. oz. of this product per 10 gallons of spray. To make a 0.5% water based spray, add 2 2/3 fl. oz. of this product per each gallon of spray.

A stable emulsion of this product can be formed by first adding approximately one-half the water to the spray tank followed by adding the proper amount of this product. Close the tank and agitate for 5 to 10 seconds. Add the remaining water slowly to avoid excess foaming.

##### **Tank Mixing:**

Unless prohibited by a product's label, tank mix combinations can be used with pesticides labeled for similar use patterns. Always perform a small jar compatibility test using proper proportions of chemicals and water to check for physical compatibility prior to tank mixing. Do not tank mix this product with products containing dichlorvos (DDVP).

##### **Application Methods:**

Apply this product outdoors as a general surface spray. Treat where pests are found or normally occur.

##### **Low Volume Directed Sprays:**

Low volume, high concentration sprays (0.5%) to localized exterior surfaces can quickly reduce localized heavy pest infestations on outside surfaces. Use a low pressure system with a pinpoint or variable pattern nozzle, such as a 1-gallon hand pump sprayer, and apply the spray mixture to specific areas such as cracks and crevices along walkways, patios, under eaves, windows and door frames or other areas where insects congregate or can gain entrance to the structure.

##### **High Volume Broadcast Sprays:**

High volume, low concentration perimeter sprays (0.03% - 0.12%), such as with power spraying equipment, can help prevent infestation of buildings by reducing pests in outdoor areas. Higher rates will provide longer residual control. To make a 0.03% water based spray, mix 8 fl. oz. of this product per 50 gallons. To make a 0.12% dilution, mix 32 fl. oz. of this product per 50 gallons of water. This type of treatment provides more thorough coverage over large areas than low volume directed sprays. Apply spray mixture directly to areas such as junctions of soil and structural walls and along base of fences. To help prevent infestation of buildings, treat a band of soil 6 to 10 feet wide around and adjacent to buildings, also treat the building foundation to a height of 2 to 3 feet, where pests are active and find entrance. Apply as a coarse spray at the rate of about 7 gallons spray mixture per 1,000 sq. ft. Thoroughly and uniformly wet the treated area.

**Pests Controlled by Perimeter Treatments of Product:**

Ants  
 Bees  
 Beetles  
 Boxelder bugs (or other true bugs)  
 Carpenter ants  
 Centipedes  
 Clover mites  
 Cockroaches  
   (American)  
   (Asian)  
   (Brownbanded)  
   (German)  
   (Oriental)  
   (Smokybrown)  
 Crickets  
 Earwigs

Elm leaf beetles (adults)  
 Fire ants<sup>1</sup>  
 Fleas  
 Flies  
 Hornets  
 Millipedes  
 Pillbugs  
 Scorpions<sup>2</sup>  
 Sowbugs  
 Spiders  
 Springtails  
 Ticks  
 Wasps  
 Yellowjackets

<sup>1</sup>Control fire ant mounds by applying this product as a drench. Dilute 2 fl. oz. of this product per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2-foot diameter. For best results, apply in cool weather (65°F to 80°F), or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays disturb the ants and cause migration, reducing product effectiveness.

<sup>2</sup>To control scorpions, remove accumulations of lumber, firewood and other materials serving as harborage sites. Prior to stacking firewood or lumber, apply this product as a localized spray to surfaces immediately below such materials.

**GENERAL CONTROL OF WOOD-INFESTING INSECTS****Directions for General Use to Control Wood-Infesting Insects:**

Mix this product with water and apply as a general surface or localized injection treatment with pressurized sprayers or other equipment suitable for applying insecticides to localized areas.

**Treatment Sites:**

When used according to label directions, this product can be applied to non-residential outdoor areas for control of wood-infesting insects. Apply this product to:

Fence posts	
Utility poles	
Railroad ties	Poles
Landscape timbers	Posts
Logs	

**Application Rates:**

Depending on the pest species and application method, product applications of up to 0.5% can be made. Increased residual control can be expected at higher rates (but not to exceed 0.5%). Refer to the "Specific Use Directions for Control of Wood-Infesting Insects" section of this label for additional information.

**Mixing Directions:**

To make a 0.5% water based spray, add 2 2/3 fl. oz. of this product per each gallon of spray mixture. To mix, add approximately one-half the required amount of water to the spray tank followed by the proper amount of this product. Close the tank and shake vigorously for 5 to 10 seconds. Slowly add the remaining water.

**Tank Mixing:**

Unless prohibited by a product's label, tank mix combinations can be used with pesticides labeled for similar use patterns. Always perform a small jar compatibility test using proper proportions of chemicals and water to check for physical compatibility prior to tank mixing. Do not tank mix this product with products containing dichlorvos (DDVP).

**Application Methods:**

Apply this product either as a coarse spray or by brushing onto targeted surfaces. Use equipment capable of delivering a coarse, low-pressure (approximately 20 psi) spray for treatment of large or overhead areas. Use sufficient spray to cover the area to the point of wetness but avoid applying to the point of runoff.

**Wood-Infesting Insects Controlled by This Product:**

Beetles (including Anobiidae, Bostrichidae, Cerambycidae, and Lyctidae)  
 Carpenter ants and other wood-infesting ants  
 Carpenter bees  
 Termites

**Specific Use Directions for Control of Wood-Infesting Insects:**

**Beetles** – Beetles are controlled by applying spray mixture to infested areas, or areas where infestations are likely to occur. Use the following guidelines to determine the appropriate rates of application:

- New Wood (typically less than 10 years of age) – Apply 1 gallon of dilution per 150 sq. ft.
- Old Wood (typically greater than 10 years of age) – Apply 1 gallon of dilution per 100 sq. ft.

**Wood-Infesting Ants** – Control wood-infesting ants by applying spray mixture around cracks or crevices, doors and windows, or other areas where ants enter, crawl, or hide on the exterior of industrial plants, manufacturing plants, food processing plants and warehouses. Primary colonies are typically found outside through an exterior inspection. Make landscape modifications or correction of sanitation and structural deficiencies for effective control.

**Termites** – This product will kill workers and/or winged reproductive forms of termites present at the time of application only. Application of this product will not provide structural protection nor substitute for mechanical alteration, soil or foundation treatment with termiticide. This product is not to be used as sole protection against termites, as it is not intended for use for elimination of termite infestations nor for protection against future infestations. A professional inspection is recommended.

**GENERAL PEST CONTROL**

**Golf Course Turf, Turf and Ornamentals in Industrial Plant Sites and Road Medians**

Use this product to control injurious pests to 1) golf course turf and 2) turf and ornamentals in industrial plant sites and road medians that are not used for human or livestock consumption. This product is compatible with commonly used insecticides, miticides and fungicides except for alkaline materials such as Bordeaux mixture and lime. A small amount of spray mixture should be prepared to check for compatibility before a large volume of spray is mixed.

**Precautions for Golf Course Turf, Road Medians and Industrial Plant Sites:**

- Do not treat vegetable gardens.
- Do not allow livestock to graze in treated areas.
- Keep out of fish pools and other bodies of water.
- Do not feed treated grass cuttings (hay) or seed screenings to livestock or use hay for livestock bedding.
- Do not apply more than 1 lb. a.i./acre.
- Test in a small jar using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing.

**Turf in Golf Courses, Industrial Plant Sites, and Road Medians (Not for use in California):**

Use this product to control the pests listed in the following table. Dilute this product in water and apply using suitable application equipment. Turf should be moist at the time of treatment.

PEST	Amount of Product per	
	1,000 sq. ft.	Acre
Ants	1 ½ fl. oz.	2 qts.
Armyworms (Beet, Fall, Yellowstriped)		
Centipedes		
Chiggers <sup>1</sup>		
Chinch bugs		
Crickets		
Cutworms		
Deer ticks <sup>2</sup>		
Earwigs		
European crane fly larvae		
Fiery skipper		
Fire ants (foraging workers)		
Fire ants (mounds) <sup>3</sup>		
Fleas		
Gnats		
Grasshoppers		
Greenbug aphids		
Green June beetle grubs		
Leafhoppers		
Lucerne moth		
Millipedes		
Mites (Bermudagrass stunt, Clover, Winter grain)		
Pillbugs		
Sod webworms (lawn moths) <sup>4</sup>		
Sowbugs		
Ticks <sup>1</sup>		

(Continued)

PEST	Amount of Product per	
	1,000 sq. ft.	Acre
Billbug adults (Bluegrass, Denver, Hunting) <sup>5</sup>	1 ½ fl. oz.	2 qts.
Annual bluegrass weevil (Hyperodes) <sup>6</sup> Black turfgrass ataeenius adults <sup>7</sup> Mole crickets <sup>8</sup>	1 ½ fl. oz.	2 qts.
Mole crickets <sup>9</sup>	1 ½ fl. oz.	2 qts.
White grubs (Black turfgrass ataeenius, European chafer, Japanese beetle larvae, and Northern and Southern masked chafers) <sup>10</sup>	1 ½ fl. oz.	2 qts.

**Specific Directions:**

- <sup>1</sup>Use this product for area control of ticks and chiggers infesting non-cropland areas such as golf course turf and grassy areas where these pests are present and create a nuisance or a possible public health problem. Do not allow public use of treated areas during application or until spray has dried. Apply this product in water at the rate of 1 pint per acre (1/3 fl. oz. per 1,000 sq. ft.) using a hydraulic sprayer, mist applicator, backpack sprayer, or other suitable hand or power operated spray equipment.
- <sup>2</sup>Apply this product at the rate of 2 quarts per acre or 1 ½ fl. oz. per 1,000 sq. ft. for control of deer ticks. Treat turf, grassy areas, low underbrush, weeds, ground surface and debris using enough spray volume to obtain thorough coverage.
- <sup>3</sup>Apply this product as a drench for individual fire ant mounds. Dilute 2 fl. oz. per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2-foot diameter. Apply in cool weather (65°F -80°F), or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays disturb the ants causing migration and reducing effectiveness of the product.
- <sup>4</sup>For sod webworms, watering or mowing of the treated area should be delayed for 12 to 24 hours after treatment.
- <sup>5</sup>Spray early in the season just prior to, or coinciding with first appearance of adult billbugs as specified by your local Agricultural Extension Service specialist.
- <sup>6</sup>For control of annual bluegrass weevil, spray suspected problem areas in mid-April and again in mid-May, or as specified by your local Agricultural Extension Service specialist.
- <sup>7</sup>For black turfgrass ataeenius adults, spray early in the season as specified by your local Agricultural Extension Service specialist. Make a repeat application 1 to 2 weeks later, if needed.
- <sup>8</sup>For control of mole crickets in turfgrass, apply this product through high-pressure injection or other suitable subsurface placement application equipment. Follow the manufacturer's instructions for calibration and the volume of spray per acre needed to provide control or as specified by your local Agricultural Extension Service specialist. Apply when young nymphs are active.
- <sup>9</sup>For control of mole crickets in turfgrass, apply this product using broadcast or suitable hand-held application equipment. Make application in a minimum of 50 gallons of water per acre. Golf course turf must be irrigated within 24 hours after treatment to wash the insecticide into the area of insect activity. Apply when early stage nymphs are active. Effectiveness is enhanced by spraying late in the afternoon or early evening and irrigating the turf within 24 hours prior to and following application to move mole crickets near the soil surface and wash the insecticide into the zone of insect activity.
- <sup>10</sup>For white grubs, spray when grubs are young and actively feeding near the soil surface, usually during late July and August or as specified by your local Agricultural Extension Service specialist. Soil should be moist prior to treatment. Immediately after spraying, irrigate the treated areas with ½ to 1 inch of water to wash the insecticide deep into the thatch or underlying soil.

**ORNAMENTALS (For industrial plant site and road median use only):** Use this product to treat evergreens, flowers, shrubs, vines, shade and flowering trees infested with the types of pests listed in the following tables. Dilute this product with water according to directions given in the tables and apply using suitable hand or power-operated spray equipment. Ensure complete and uniform coverage. Uniform coverage is critical for effective insect and mite control. Attempt to penetrate dense foliage but avoid over-spraying to the point of excessive runoff.

Consult your State Agricultural Experiment Station or Extension Service specialist for application timing and other specific use information for your area.

Note: Phytotoxicity – Environmental factors and varietal differences affect phytotoxic expression. Where phytotoxicity potential is of concern, treat a small group of plants and observe for 7 to 10 days to determine phytotoxic potential before treating large numbers of those plants.

**SUCKING INSECTS AND MITES**

Do not exceed 1 lb. ai/acre.



PEST	Amount of Product per	
	1 Gallon	100 Gallons
Adelgids (Cooley and Eastern spruce galls, Pine bark) Aphids (Apple, Balsam twig, Black pecan, Chrysanthemum, Cottonwood, Crape myrtle, Elm leaf, Melon, Peach, Rose, Spirea, White pine, Woolly, Woolly apple, Yellow pecan) Boxelder bugs Lace bugs (Hawthorn) Periodical cicada Plant bugs Psyllids Spittlebugs Thornbug Whiteflies	1/6-1/3 fl. oz.	1 pt.-1 qt.
Leafhoppers Mealybugs (Citrus, Taxus) Mites (Clover, Red spider, Southern Red, Spruce spider, Two spotted spider) <sup>1</sup> Thrips (exposed)	1/3 fl. oz.	1 qt.
Scale insects (Cottony cushion, Cottony maple, Dearness, Euonymus, Fletcher, Florida wax, Golden oak, Hemispherical, Lecanium, Magnolia, Oak kermes, Oak lecanium, Oystershell, Pine needle, San Jose, Tea, White birch) <sup>2</sup>	2/3 fl. oz.	2 qts.

**Specific Directions:**

<sup>1</sup>For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days in the South or 7 to 10 days in the North after initial treatment to control newly hatched nymphs.

<sup>2</sup>Time application for control of scale insects when crawlers or first two stages of settled nymphs are present.

**DEFOLIATORS AND LEAFMINERS**

PEST	Amount of Product per	
	1 Gallon	100 Gallons
Armyworms (Fall, Yellowstriped) Bagworms <sup>1</sup> Cankerworms Catalpa sphinx Elm spanworms Fall webworms <sup>2</sup> Grasshoppers Greenstriped mapleworms Green fruitworms Hornworms Jackpine budworms Juniper webworms Katydid Leafrollers <sup>3</sup> Maple leafcutters <sup>4</sup> Oak skeletonizers Oleander caterpillars Orange tortrix Poplar tentmaker Puss caterpillars Rose chafers Sawflies, exposed (European pine, Pine, Pin oak, Redheaded) Spring elm caterpillars	1/6-1/3 fl. oz.	1 pt.-1 qt.

(Continued)



PEST	Amount of Product per	
	1 Gallon	100 Gallons
Springtails Spruce budworms (Eastern, Western) Tent caterpillars (Eastern, Forest, Western) Walnut caterpillars Yellownecked caterpillars		
Balsam gall midge Beet armyworms Beetles (Fuller rose) <sup>5</sup> Browntail moth Cutworms Cypress tip moth Douglas-fir tussock moth European pine shoot moth Gypsy moth <sup>6</sup> Holly bud moth Mahogany webworms Mimosa webworms Nantucket pine tip moth Oakworms (California, Orangestriped, Redhumped) Pandora moth Pitch pine tip moth Redhumped caterpillars Subtropical pine tip moth Tussock moth	1/3-2/3 fl. oz.	1-2 qts.
Beetles (Cottonwood leaf <sup>7</sup> , Elm leaf, Flea, Willow leaf)	1/3-2/3 fl. oz.	1-2 qts.
Leafminers Needleminers (Jeffrey pine, Lodgepole pine, Spruce) Pine needle midge Rhododendron gall midge	2/3 fl. oz.	2 qts.

**Specific Directions:**

<sup>1</sup>For bagworms, treat when larvae are small and actively feeding.

<sup>2</sup>Direct spray into web and immediately surrounding foliage for effective control of fall webworms.

<sup>3</sup>For effective control of leafrollers, apply spray before leaves are tightly rolled.

<sup>4</sup>For maple leafcutter on maple trees, apply spray to larvae as cases are being formed. Do not treat sugar maple trees intended for maple syrup production.

<sup>5</sup>Make applications in the spring or early summer to reduce foliar feeding on twigs and branches by beetles.

<sup>6</sup>To control migrating and invading gypsy moth larvae, treat trunks and foliage.

<sup>7</sup>For cottonwood leaf beetles, spray larvae and adults infesting cottonwoods. Applications should be made when damaging beetle populations are developing or present.

**BORERS, BARK BEETLES, and WEEVILS**

PEST	Amount of Product per	
	1 Gallon	100 Gallons
Weevils (Black vine <sup>1</sup> , Cranberry girdler <sup>2</sup> , Pine reproduction, Yellow poplar)	1/3 fl. oz.	1 qt.
Borers: Clearwing moths (Ash, Dogwood, Lesser peachtree, Lilac, Oak, Peachtree, Rhododendron) Longhorned beetles (Cottonwood, Locust, Red oak) Metallic wood (Bronze birch, Flatheaded appletree, Twolined chestnut) <sup>3</sup> Pales weevil adults Zimmerman pine moth	2/3 fl. oz.	2 qts.
Northern pine weevil <sup>4</sup> Pales weevil <sup>4</sup>	2 fl. oz.	6 qts.

(Continued)

PEST	Amount of Product per	
	1 Gallon	100 Gallons
Beetles <sup>5</sup> (Ambrosia, Anobiidae, Black turpentine, Blister, Cottonwood leaf, Elm leaf, European elm bark, Fuller rose, Japanese, June, Mountain pine, Native elm bark <sup>6</sup> , Southern pine, Spruce, Western pine, Willow leaf)	5 1/3 fl. oz.	4 gals.
Weevils (Northern pine, Pitch eating, Twig) <sup>7</sup>	10 2/3 fl. oz.	8 gals.

**Specific Directions:**

<sup>1</sup>Black vine weevils are night feeders. Late afternoon spraying will maximize control.

<sup>2</sup>For cranberry girdler larvae infesting Douglas fir seedlings, direct spray at lower crown and stems following egg laying during summer and irrigate immediately after application to move the insecticide into the top 1 to 2 inches of soil.

<sup>3</sup>For borers, spray trunks and lower limbs of trees and shrubs when adults begin to emerge. For peachtree borers, spray flowering trees and shrubs of the genus *Prunus* as a trunk spray before newly-hatched larvae enter the trees and thoroughly wet all bark areas from ground level to scaffold limbs. Pheromone traps aid in detection of adult clearwing moths. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat for your area.

<sup>4</sup>Apply as a cut stump spray or drench in winter or early spring for control of northern pine and pales weevil larvae.

<sup>5</sup>For preventative treatment, spray the main trunk of trees in the early spring or when threat of attack exists from nearby infested trees. For remedial treatment, spray the main trunk of infested trees or logs before adult beetles begin to emerge.

<sup>6</sup>To prevent native elm bark beetles from over-wintering in uninfested trees, apply using a dilution of 2 gallons per 100 gallons of water (2 2/3 fl. oz. of this product per gallon) as a spray to the bottom 9 feet of trunk. Wet the trunk thoroughly but do not spray to runoff. Apply the spray to the base of the root flare. Applications can be made from spring to early fall. To reduce twig and branch feeding on trees deemed to be of high value, apply as a spray to the tree crown using a dilution of 2 gallons per 100 gallons of water (2 2/3 fl. oz. of this product per gallon). Make applications in the spring or early summer using a sprayer that will give thorough coverage to the tree crown.

<sup>7</sup>For pine seedlings, treat immediately after transplanting. Treat each seedling with enough spray to thoroughly wet the foliage and stem to the point of runoff.

**ANTS and OTHER LISTED PESTS**

PEST	Amount of Product per	
	1 Gallon	100 Gallons
Ants Cockroaches (American, Asian, Brownbanded, German, Oriental, Smokybrown, Wood) Fire ants (foraging workers) Fire ants (mounds) <sup>1</sup> Sowbugs Springtails	1/3 fl. oz.	1 qt.
Carpenter ants <sup>2</sup>	5 1/3 fl. oz.	4 gals.

**Specific Directions:**

<sup>1</sup>For individual fire ant mounds, apply this product as a drench. Dilute 2 fl. oz. of this product in 4 gallons of water. Sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2-foot diameter circle. Apply in cool weather (65°F -80°F), or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays disturb the ants and cause migration, reducing effectiveness of the product.

<sup>2</sup>If possible, locate carpenter ant nests and drench thoroughly.

**Imported Fire Ant:**

**NOTE:** USDA quarantine use only.

Treatment of potted, containerized and balled burlapped nursery stock: Use this product to control imported fire ants in soil attached to roots of these plants by completely submerging the ball of soil in a tank containing this product diluted at the rate of 8 fl. oz. per 100 gallons of water. Do not remove the burlap wrap or plastic containers with drain holes prior to submerging. Keep soil submerged until complete saturation has occurred, normally about 30 seconds. An alternate treatment to submerging potted plants is to apply a solution containing this product (8 fl. oz. per 100 gallons of water) as a substitute for plain water during routine watering activities. Apply this solution to the point of run-off, twice daily for three consecutive days. Do not remove the burlap wrap or container from plants prior to treatment. Make applications in a well-ventilated area.

**ORNAMENTALS (Dormant Spray of Tree Pests):**

Apply this product as a dormant or delayed dormant spray at the rates indicated to control the listed insects. Use this product without oil; however, use oil to control additional pests such as European red mites.

For high volume (dilute) sprays (200 to 600 gallons of spray mixture per acre), tank mix the specified dosage with 1 to 2 gallons of a petroleum spray oil for dormant use in 100 gallons of water. Spray the entire tree to runoff using suitable ground spray equipment.

For low volume (concentrate) sprays (less than 200 gallons of spray mixture per acre), use the same amount of this product as for a dilute spray and apply in a manner that will ensure thorough coverage of the trees. Use oil as specified by your State Agricultural Experiment Station or Extension Service specialist.

Precautions: Do not apply until rain or irrigation have replenished soil moisture such that bark and twigs are not desiccated since cold dry conditions causes this product plus oil to infuse trees resulting in bud damage or drop.

Restrictions: Make only one application during the dormant season. Do not allow meat or dairy animals to graze in treated areas.

PEST	Amount of Product per	
	1 Gallon	100 Gallons
Aphids (Mealy plum, Rosy apple, Woolly apple) Borers (Peach twig) Cutworms (Climbing) Leafrollers (Obliquebanded, Pandemis) Pear psylla adults Scale insects (San Jose)	1/6-1/3 fl. oz.	1 pt.-1 qt.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in a secure dry storage area. Do not store above 122°F for extended periods of time. Preferred storage is above 32°F. Storage below 32°F may result in solidification. If warmed to above 32°F product will return to original form. Freezing does not adversely affect this product. Dilutions of this product are sensitive to crystal formations when exposed to freezing, or near freezing temperatures (i.e. temperatures below 35°F for extended periods of time). Dilutions allowed to stand overnight should be stored at temperatures above 40°F.

**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 [HANDLING]:**

**[Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **“NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable “No refillable” or “Refillable” designation. Follow the container disposal [handling] instructions below that apply to your container type / size.”

**[Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

**[Non-refillable Containers 5 Gallons or Less:]** Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. 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 or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Non-refillable containers larger than 5 gallons:]** Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**[Refillable containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**[Refillable Container:]** Refill this container with pesticide only. Do not reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm’s Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

#### WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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