

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

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Ms. Lizbeth Rea Registration Manager Etigra 501 Cascade Pointe Lane Suite 103 Cary, NC 27513

JUL 16 2008

RE: Notification of the a statement required by a state added to the label per PRN 98-10

EPA Reg. No.: 79676-9

Date of Submission: June 3, 2008

Dear Ms. Rea:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated June 3, 2008, for the product Chlorpyrifos E-Pro 4 Insecticide. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-5479.

Sincerely,

Linda Arrington

Notifications & Minor Formulations Team Leader

Registration Division (7505P)

Office of Pesticide Programs



June 3, 2008

John Hebert (PM 7)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: Chlorpyrifos E-Pro 4 Insecticide (EPA Reg. No. 79676-9)

Dear Mr. Hebert,

The following documents are attached in support of the statement "(Except in Florida)" required by the Florida regulatory authorities added to the OUTSIDE SURFACES AND AROUND INDUSTRIAL PLANT SITES (SUCH AS AROUND WAREHOUSES, FOOD PROCESSING AND FOOD MANUFACTURING SITES) section of the label via notification consistent with PR Notice 98-10.

- Application for a New Product Registration (EPA Form 8570-1)
- One copy of the revised label with the change tracked.
- One copy of the revised label with the change incorporated.

Please call me at 919/655-0701 if you have any questions and/or comments regarding this submission.

Sincerely,

Lizbeth A Rea

Etigra-Registration Manager

**ENCLOSURES** 

<b>≎EPA</b>	United States						OPP Identifier Number
·			· · · · · · · · · · · · · · · · · · ·	de - Section	Other		
1. Company/Product Numbe		Application.	2. EPA	Product Manager		3. Pro	posed Classification
79676-9				Hebert		- [1]	None Restricted
<ol> <li>Company/Product (Name)</li> <li>Chlorpyrifos E-Pro 4 In:</li> </ol>			PM#	7			
5. Name and Address of App	plicant (Include ZIP Cod	de)	6. Exp	edited Reveiw	. In accordance	e with	FIFRA Section 3(c)(3)
Etigra 501 Cascade Pointe Lar Cary, NC 27513	ne, Suite 103		to:	ny product is sin			nposition and labeling
Check if this	s is a new address		Produ	uct Name		IUL 1	6 2008
	<del></del>		Section -	ii			
Amendment - Explain  Resubmission in resp  Notification - Explain	onse to Agency letter	dated		Final printed labo Agency letter da "Me Too" Applic Other - Explain b	cation.	)	·
98-10 and EPA regulation of this product. I understathat if this notification is not be subject to enforcemen	and that it is a violatio ot consistent with the	n of 18 U.S.C. Sterms of PRN 9	Sec. 1001 to wi 98-10 and 40 C	llfully make any fa FR 152.46, this p RA.	alse statement t	o EPA.	I further understand
1. Material This Product Wil	Be Packaged In:						
Child-Resistant Packaging Yes No * Certification must	Unit Packaging Yes No If "Yes" Unit Packaging wgt.	No. per	Water Soluble I Yes No If "Yes" Package wgt	Packaging  No. per container	F	ntainer Metal Mastic Glass Paper Other (S)	pecify)
be submitted	Office Concepting Trees		Tookeyo				
3. Location of Net Contents	Information Container	4. Size(s) Retail	Container	5. L	ocation of Label On Label On Labeling acc		
6. Manner in Which Label is		Lithograp Paper glu Stenciled	oh ued	Other			
	· ·		Section - I	V			
1. Contact Point (Complete	items directly below fo	or identification o			cessary, to proce	ss this	appliပ်ခြော်တို့ကျွဲ
Name Lizbeth Rea	,	'	tle Registration M	anager		laptone 19/655	No. (Include Area Code)
I certify that the state I acknowledge that an both under applicable	ments I have made on ly knowlinglly false or r law.	Certification this form and all misleading states	attachments th	ereto are true, acc nishable by fine or	curate and compl imprisonment or		6. Date Application Received (Stamped)
2. Signature	0-	-	3. Title  Registration Manager				
Cuziua		5 Date					

### NOTIFICATION

JUL 16 2008

#### 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.

### **Chlorpyrifos E-Pro 4 Insecticide**

For control of various pests in the following areas: Commercial Nursery/Commercial Greenhouse (Soil treatment, Dormant Spray of Tree Pests, Pre-Plant Incorporation of Field Grown Nursery Stock); Golf Course Turf, Turf and Ornamentals Around Industrial Buildings; Turf and Ornamentals in Road Medians.

#### ACTIVE INGREDIENT:

Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate)	44.70%
OTHER INGREDIENTS:	
TOTAL:	100.00%

Contains 4 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).

	FIRST AID
If swallowed:	Immediately call a poison control center or doctor.
•	Do not induce vomiting unless told to do so by a poison control center or doctor.
	Do not give any liquid to the person.
	Do not give anything by mouth to an unconscious person.
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Call a poison control center or doctor for treatment advice.
If on skin or	Take off contaminated clothing.
clothing:	• Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.
If inhaled:	Move person to fresh air.
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably
	by mouth-to-mouth, if possible.
`	Call a poison control center or doctor for further treatment advice.
	HOT LINE 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 1-800-424-9300 for emergency medical treatment information.

#### NOTE TO PHYSICIAN

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.

#### See inside label booklet for additional PRECAUTIONARY STATEMENTS

#### EPA Reg. No. 79676-9

EPA Est. No.

Manufactured for: Etigra<sup>TM</sup> 501 Cascade Pointe Lane Suite 103 Cary, NC 27513 www.etigra.com

Chlorpyrifos E-Pro 4 Insecticide contains chlorpyrifos, the active ingredient used in Dursban®.

**Net Contents:** 

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

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 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.

#### **User Safety Recommendations**

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.

#### 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 may be hazardous to aquatic organisms in water adjacent to treated sites. 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### 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.

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.

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.

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 INFORMATION**

#### TURF AND OTHER NONRESIDENTIAL OUTDOOR USES

Chlorpyrifos E-Pro 4 Insecticide is an emulsifiable concentrate for control of pests located around industrial buildings (turf and ornamentals), road medians (turf and ornamentals), and golf course turf only. Do not apply more than 1 lb. a.i./acre (1 qt./acre of Chlorpyrifos E-Pro 4 Insecticide) to golf course turf. Pests controlled by Chlorpyrifos E-Pro 4 Insecticide are listed in the following tables. Chlorpyrifos E-Pro 4 Insecticide is compatible with fungicides, insecticides and miticides commonly recommended except for alkaline materials such as Bordeaux mixtures and lime. A small jar compatibility test should

always be conducted using proper proportions of chemicals and water to check for physical compatibility prior to tank mixing.

Precautions and Restrictions: Keep out of fish pools and other bodies of water. Do not treat vegetable gardens. Do not allow livestock to graze in treated areas. Do not feed treated grass cuttings (hay) or seed screenings to livestock or use hay for livestock bedding. Do not use Chlorpyrifos E-Pro 4 Insecticide in poultry houses.

### ORNAMENTALS IN NURSERIES, AROUND INDUSTRIAL BUILDINGS AND ROAD MEDIANS

Chlorpyrifos E-Pro 4 Insecticide may be used to treat evergreens, vines, flowers, shrubs, shade and flowering trees, non-bearing fruit, nut and citrus trees found in nurseries, around industrial buildings and road medians infested with pests listed in the following table. Dilute Chlorpyrifos E-Pro 4 Insecticide with water according to the directions given in the table 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. Apply a coarse spray to thoroughly wet both upper and lower leaf surfaces and infested limb and trunk areas. Attempt to penetrate dense foliage but avoid over-spraying to the point of excessive runoff. Treat when pests appear and repeat at 7 to 10 day intervals, if needed. For application timing and other specific use information, consult your State Agricultural Experiment Station or Extension Service specialist.

For nurseries, when using spray equipment delivering less than 200 gallons of finished spray per acre, use the rate recommended in the "per acre" column.

Note: Environmental factors have significant effects on phytotoxic expression. Chlorpyrifos E-Pro 4 Insecticide has been tested on numerous ornamental plants without causing serious phytotoxicity at recommended use rates. Some varieties of azaleas, camellias, poinsettias, rose bushes, or variegated ivy have shown varying degrees of phytotoxicity following treatment with Chlorpyrifos E-Pro 4 Insecticide. Before treating large numbers of plants (especially those previously listed), treat a small block of plants and observe for 7 to 10 days to determine phytotoxic potential.

Note: The user assumes responsibility for determining if Chlorpyrifos E-Pro 4 Insecticide is safe to treated plants under commercial growing conditions.

PEST*	Amount of Chlo 4 Insecticide in V		Specific Directions	
	Per Acre	100 Gallons		
Adelgids (Cooley)	1 pt. – 1 qt.	8-16 fl. oz.	Treat when bagworm larvae are small and actively feeding.	
(Eastern spruce galls)			_	
(Pine bark)			<sup>2</sup> Locate carpenter ant nest, if	
Ants (including foraging fire			possible and drench thoroughly.	
ants)				
Aphids			<sup>3</sup> Directly spray into web and	
(Apple)			immediately adjacent foliage for	
(Chrysanthemum)			control of fall webworms.	
(Cottonwood)				
(Elm leaf)			<sup>4</sup> For effective control of leafrollers,	
(Peach)			spray before leaves are tightly	
(Rose)			rolled.	
(Spirea)			·	
(Woolly)			<sup>5</sup> Apply spray to maple leafcutter	
Armyworms			larvae as cases are being formed	
(Fall)			for effective control. Do not treat	

PEST*	Amount of Chlor 4 Insecticide in V		Specific Directions		
	Per Acre	100 Gallons			
(Yellowstriped)	Tel Acre	100 Ganons	sugar maple trees intended for		
Bagworms <sup>1</sup>			maple syrup production.		
Boxelder bugs			mapre syrap production.		
Cankerworms			<sup>6</sup> For effective control of spider		
Carpenter ants <sup>2</sup>			mites when large numbers of eggs		
Catalpa sphinx			are present, apply a 2 <sup>nd</sup> spray 3-5		
Chiggers			days in the South or 7-10 days in		
Citrus mealy bugs			the North after initial treatment to		
Cockroaches		-	control newly hatched nymphs.		
(American)		·	control newly nationed hymphs.		
(Brownbanded)					
(German)		·			
(Oriental)					
(Smokey brown)					
Elm spanworms					
Fall webworms <sup>3</sup>					
Grasshoppers					
Green fruitworms					
Hornworms					
Jackpine budworms					
Juniper webworms					
Katydids					
Lace bugs					
Leafhoppers			·		
Leafrollers <sup>4</sup>					
Maple leafcutters <sup>5</sup>					
Mites <sup>6</sup>		]			
(Clover)					
(Red spider)			•		
(Southern red)					
(Spruce spider)					
(Twospotted spider)					
Oleander caterpillars					
Orange tortrix					
Periodical cicada					
Plant bugs		}			
Poplar tentmaker					
Psyllids					
Puss caterpillars					
Rose chafers					
Sawflies, exposed					
(Pin oak)					
(Pine)					
(Redheaded)					
Sowbugs			·		
Spittlebugs					
Spring elm caterpillars					
Springtails					
Spruce budworms	1		·		

PEST*	Amount of Chlo 4 Insecticide in		Specific Directions	
	Per Acre	100 Gallons	, , , , , , , , , , , , , , , , , , ,	
(Eastern)				
(Western)			·	
Tent caterpillars				
(Eastern)				
(Forest)		*		
· (Western)		İ		
Thornbug				
Walnut caterpillars				
Whiteflies				
Yellownecked caterpillars				
Armyworms	1 qt.	1 pt.	<sup>1</sup> Make applications in the spring or	
(Beet)			early summer to reduce twig and	
Beetles			branch feeding by bark beetles.	
(Fuller rose)				
(Native elm bark) <sup>1</sup>	,		<sup>2</sup> To kill migrating and invading	
Browntail moth			gypsy moth larvae, treat trunks and	
Cutworms	1		foliage.	
Leafhoppers				
Mahogany webworms			<sup>3</sup> Blackvine weevils are night	
Mealybugs			feeders. Late afternoon spraying	
Mimosa webworms			will maximize control.	
Moths				
(Browntail)				
(Cypress tip)				
(Douglas fir tussock)			<u>.</u>	
(European pine shoot)			ſ	
(Gypsy) <sup>2</sup>				
(Holly bud)				
(Nantucket pine tip)				
(Pandora)	,			
(Pitch pine tip)				
(Subtropical pine tip)			· -	
(Tussock)				
Oakworms				
(California)				
(Orangestriped)				
(Redhumped)				
Redhumped caterpillars				
Thrips (exposed)	,			
Weevils			•	
(Blackvine) <sup>3</sup>			·	
(Pine production)				
(Yellow poplar)				

PEST*			Specific Directions	
	4 Insecticide in V			
	Per Acre	100 Gallons		
Foliar feeding Beetles	1 qt.	1 pt.	Use Chlorpyrifos E-Pro 4	
(Blister leaf)			Insecticide in water to control	
(Cottonwood leaf)	,		cottonwood leaf beetle larvae and	
(Elm leaf)			adults infesting cottonwoods.	
(Flea)		1	Make the treatment when field	
(Fuller rose)		,	counts indicate damaging beetle	
(Japanese)		·	populations are developing or	
(June)	•		present.	
(Willow leaf)				
Borers	1 qt.	1 qt.	For borers, apply Chlorpyrifos E-	
Clearwing moths		,	Pro 4 Insecticide to the trunks and	
(Ash)			lower limbs of trees and shrubs	
(Dogwood)			when the adults begin to emerge.	
(Lesser peachtree)			Consult your State Agricultural	
(Lilac)			Experiment Station or Extension	
(Oak)			Service specialist for proper time	
(Rhododendron)			to treat. Apply uniformly as a	
Metallic wood			coarse low-pressure spray.	
(Bronze birch)			Pheromone traps may aid in	
(Flathead appletree)			detection of adult clearwing moths.	
(Twolined chestnut)		,	2	
Longhorned beetles		:	<sup>2</sup> Apply 1 qt. of Chlorpyrifos E-Pro	
(Locust)			4 Insecticide for cranberry girdler	
(Red oak)			larvae. Direct spray at the base of	
Cranberry girdler larvae <sup>2</sup>			tree using 50 gallons of water per	
Leafminers		,	acre. Irrigate immediately after	
Needleminers			application for soil penetration of	
(Jeffrey pine)	1		1-2 inches. Treat after egg laying	
(Lodgepole pine)			during the summer.	
(Spruce)			2	
Scale insects <sup>3</sup>			<sup>3</sup> Time applications for control of	
(Cottonycushion)			scale insects when crawlers or first	
(Cottony maple)			two stages of settled nymphs are	
(Euonymus)			present.	
(Fletcher)				
(Florida wax)				
(Golden oak)				
(Hemispherical)				
(Lecanium)	,			
(Magnolia)				
(Oak kermes)			· · · · · · · · · · · · · · · · · · ·	
(Oak lacanium)				
(Oystershell)				
(Pine needle)				
(San Jose)				
(Tea)				
(White birch)				
(White peach)				
Rorers	1 at.	3 ats.**	For peachtree borers, apply	

PEST*	Amount of Chlo		Specific Directions	
	4 Insecticide in	.,		
	Per Acre	100 Gallons		
(Cottonwood)			Chlorpyrifos E-Pro 4 Insecticide in	
(Peachtree) <sup>1</sup>			water to flowering trees and shrubs	
			of the genus Prunus as a trunk	
			spray before newly-hatched larvae	
			enter the trees. Apply as a coarse,	
			low-pressure spray. Thoroughly	
			wet all bark areas from ground	
			level to scaffold limbs.	
			**When using the 3 qt. per 100	
			gallon dilution, do not exceed 1 qt.	
·			of Chlorpyrifos E-Pro 4 Insecticide	
			1	
D-41-1	1 1	21- ***	per acre.	
Beetles (L. alandar Wand L. Gardina)	1 qt.	2 gals.***	For preventative treatment, apply	
(Includes Wood Infesting)			the spray to the main trunk of trees	
(Ambrosia)			in the early spring or when threat	
(Anobiidae)			of attack exists from nearby	
(Black turpentine)			infested trees. For remedial	
(Cottonwood leaf)		,	treatment, apply the spray to the	
(Elm leaf) •			main trunk of infested trees when	
(European elm bark)			damage occurs but before adult	
(Flea)			beetles begin to emerge.	
(Fuller rose)				
(Japanese)			<sup>2</sup> To prevent native elm bark beetles	
(June)			from overwintering in uninfested	
(Native elm bark) <sup>2</sup>			trees, apply Chlorpyrifos E-Pro 4	
(Southern pine)			Insecticide in water to the bottom 9	
(Willow leaf)			ft. of the trunk. Wet the trunk	
			thoroughly but do not spray to	
			runoff. Care should be taken to	
			apply the spray right to the base of	
<u>'</u>	1		the root flare. Application can be	
•			made with either a backpack	
			mistblower or a hydraulic pressure	
·			sprayer from spring through early	
			fall.	
			**************************************	
•			***When using the 2-gallon per	
			100-gallon dilution, do not exceed	
	1	·	1 qt. of Chlorpyrifos E-Pro 4	
		<u> </u>	Insecticide per acre.	

<sup>\*</sup>Superscripts refer to Specific Directions

#### ORNAMENTALS IN NURSERIES AND GREENHOUSES (SOIL TREATMENT)

Chlorpyrifos E-Pro 4 Insecticide may be used to treat containerized, potted, or balled and burlapped nursery stock to control the insects in the soil attached to the roots of these plants. Completely submerge the container with drain holes or root ball stabilized by burlap in a tank containing diluted Chlorpyrifos E-Pro 4 Insecticide. Do not remove burlap wrap or plastic containers with drain holes prior to submerging.

Keep the container or root ball submerged until complete soil saturation has occurred, normally about 30 seconds.

Precautions: During all operations (submerging, drenching, injecting), wear a chemical-resistant apron in addition to other PPE listed for applicators and other handlers. Make applications in a well-ventilated area.

Note: Environmental factors have significant effects on phytotoxic expression. Chlorpyrifos E-Pro 4 Insecticide has been tested on numerous ornamental plants without causing serious phytotoxicity at recommended use rates. However, because of the numerous varieties grown, treat a small group of plants at the recommended rate under the anticipated growing conditions and observe for at least 7 days to determine phytotoxic potential before treating a larger number of plants.

Note: The professional user assumes responsibility for determining if Chlorpyrifos E-Pro 4 Insecticide is safe to treated plants under commercial growing conditions.

PEST*	Amount of Chlorpyrifos E-Pro 4 Insecticide in Water to Make		Specific Directions		
	1 Gallon	100 Gallons			
Fire Ants <sup>1</sup>	1/25 fl. oz.	4 fl. oz.	As an alternative to submerging potted plants, dilute 4 oz. of Chlorpyrifos E-Pro 4 Insecticide in 100 gallons of water. Apply this dilution to the point of runoff twice daily for 3 consecutive days. Do not remove burlap wrap or container from plants prior to treatment.		
White Grubs <sup>2</sup> Weevils <sup>3</sup> (such as Blackvine)	2/3 fl. oz.	2 qts.**	<sup>2</sup> An alternative treatment to submerging containerized plants is to drench the container with the diluted insecticide solution applying		

PEST*		Chlorpyrifos secticide in	Specific Directions
		to Make	
·	1 Gallon	100 Gallons	
Coffee root mealybug <sup>2</sup>	1/6 fl. oz.	1 pint	approximately 10 to 12 fl. oz. of diluted insecticide solution per gallon of container size (4-5 fl. oz./100 cubic inches of container). The container media should be pre-moistened by irrigation or rainfall before drenching. Do not remove container from plants prior to treatment.
			<sup>3</sup> An alternate treatment to submerging balled and burlapped plants is to inject Chlorpyrifos E-Pro 4 Insecticide into the root ball. Equally distribute 1 to 3 quarts of the dilute Chlorpyrifos E-Pro 4 Insecticide solution per cubic foot of soil volume through an injection rod inserted into the soil ball surrounding the plant roots. Uniform distribution of the insecticide throughout the soil of the root ball is critical for effective control. It is recommended that the injection rod be inserted in at least 4 equally spaced locations around the stem of the plant at a 30-45 degree angle from the plant between the stem and the upper, outer perimeter of the ball. This technique has been shown to be most effective with small root balls (up to 1.5 ft. in diameter). Larger root balls may require more injection points to ensure thorough soil distribution of the insecticide. The injection rod should be coupled to a flow meter to monitor the correct volume applied per root ball using an injection pressure of at least 30 psi. The application should be made such that splashback and runoff are minimized.
			**Do not exceed more than 1 quart of Chlorpyrifos E-Pro 4 Insecticide per acre.

<sup>\*</sup>Superscripts refer to Specific Directions.

## ORNAMENTAL IN NURSERIES, GREENHOUSES, INDUSTRIAL PLANT SITES AND ROAD MEDIANS (DORMANT SPRAY OF TREE PESTS)

Chlorpyrifos E-Pro 4 Insecticide may be used as a dormant or delayed dormant spray at the rates indicated to control the listed insects. Chlorpyrifos E-Pro 4 Insecticide may be used without oil; however, oil is recommended to control additional pests such as the European red mite.

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 recommended 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 Chlorpyrifos E-Pro 4 Insecticide as for a dilute spray and apply in a manner that will ensure

thorough coverage of the trees. Use oil as recommended 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 may cause Chlorpyrifos E-Pro 4 Insecticide plus oil to infuse trees resulting in bud damage or drop.

For nurseries: Do not use more than 2 pints of Chlorpyrifos E-Pro 4 Insecticide per acre.

Restrictions: Make only one application during the dormant season except for the control of the apple ermine moth. Do not allow meat or dairy animals to graze in treated areas.

PEST	Amount of Chlorpyrifos E-Pro 4			Specific Directions
	Insecticide in Water to Make			
	1 Gallon	3 Gallons	100 Gallons	
Aphids	1/12-1/6 fl.	1/4-1/2 fl. oz.	½-1 pt.	Tank mix with 1-2 gallons of a
(Mealy plum)	OZ.			petroleum spray oil recommended
(Rosy apple)		:	•	for dormant use in 100 gallons of
(Woolly apple)				water.
Borers				
(Peach twig)				
Cutworms				
(Climbing)				,
Leafrollers				
(Pandemis)				
Pear psylla adults				
Plant bugs		-		
Scale			•	
(San Jose)				
Apple ermine moth	1/12 fl. oz.	¼ fl. oz.	½ pt.	For control on Malus species,
,			•	make 2 applications at a 7-14 day
				interval in combination with a
·				petroleum spray oil at the rate of
,				2-4% (v/v) in a spray to wet
		]		application to ensure thorough
				coverage of all stems and
				branches. When using tank
				mixtures, follow all label
)				directions for the mixing partner
				(oil). Use appropriate application
·		.		equipment and spray volumes to
		.		ensure complete coverage of the
				plant(s) or control will be
				compromised.

## ORNAMENTALS IN NURSERIES AND GREENHOUSES (PREPLANT INCORPORATION TREATMENT OF FIELD GROWN NURSERY STOCK)

#### White Grubs and White Fringed Beetles:

To control white grubs and white fringed beetles during transplant or seedling establishment, apply Chlorpyrifos E-Pro 4 Insecticide to soil and incorporate before transplanting or planting. Apply to the soil surface as a broadcast spray at a rate of 1 quart per acre using sufficient water to obtain adequate coverage. Do not make aerial applications. On the same day of treatment, incorporate the insecticide into

the top 2 to 4 inches of the soil using a tandem disc, field cultivator or equivalent incorporation equipment capable of thorough soil mixing.

Precaution: Environmental factors and varietal variation can significantly affect the potential for phytotoxicity from pesticide use. Chlorpyrifos E-Pro 4 Insecticide has been evaluated at the above indicated rate on loblolly pine without phytotoxic effects. Prior to making large-scale applications, growers should prepare and observe a small test plot as above in order to determine the potential phytotoxicity in species or varieties other than loblolly pine. Use the following procedure: (1) Treat a small test block as above; (2) Seed or transplant the test species or variety and observe for symptoms of phytotoxicity for a minimum of 14 days following emergence or transplanting.

Note: The professional user assumes responsibility for determining if Chlorpyrifos E-Pro 4 Insecticide is safe to treated plants under commercial growing conditions.

#### Garden Symphylans:

Apply Chlorpyrifos E-Pro 4 Insecticide as a preplant incorporated treatment to suppress garden symphylans on land to be planted to field grown ornamentals. Apply as a broadcast application to the soil surface at the maximum rate of 1 quart per acre in at least 10 gallons of water per acre. On the same day of treatment, incorporate the insecticide to a depth of up to 8 inches using a disc, rotovator or other suitable equipment. Use the higher rate range for longer residual control or where deeper incorporation is necessary.

Precaution: Environmental factors significantly affect phytotoxicity. Chlorpyrifos E-Pro 4 Insecticide has been tested on numerous ornamental plants without causing serious phytotoxicity. However, because of the numerous varieties grown, treat a small group of plants at the recommended rate under the anticipated growing conditions and observe for phytotoxic symptoms for at least 7 days, before a large number of plants are treated. Do not blend Chlorpyrifos E-Pro 4 Insecticide with dry bulk fertilizer materials.

Note: The professional user assumes responsibility for determining if Chlorpyrifos E-Pro 4 Insecticide is safe to treated plants under commercial growing conditions.

#### TREE PESTS IN NURSERIES AND GREENHOUSES

Chlorpyrifos E-Pro 4 Insecticide may be used to treat shade and flowering trees, and evergreens infested with pests listed in the following table. Dilute Chlorpyrifos E-Pro 4 Insecticide with water according to the directions given in the table and apply using suitable hand- or power-operated spray equipment in a manner to provide complete and uniform coverage. Apply a coarse spray to thoroughly wet both the upper and lower leaf surfaces and to infested limb and trunk areas. Attempt to penetrate dense foliage, but avoid overspraying to the point of excessive runoff. Treat when pests appear and repeat application at 7 to 10 day intervals, if needed. Consult your State Agricultural Experiment Station or Extension Service specialist for application timing and other specific use information applicable to your area.

PEST*	1	of Chlorpyrifo ide in Water t	Specific Directions	
	1 Gallon	3 Gallons	100 Gallons	
Adelgids	1/12 fl. oz.	¼ fl. oz.	8 fl. oz.	Treat when bagworm larvae are
(Cooley)				small and actively feeding.
(Eastern spruce gall)				
(Pine bark)				<sup>2</sup> For effective control of fall
Aphids				webworms, direct spray into web
(Apple)				and immediately surrounding
(Chrysanthemum)				foliage.
(Cottonwood)			,	
(Elm leaf)				<sup>3</sup> For control of leafrollers, apply
(Peach)				spray before leaves are tightly

PEST*	Amount of Chlorpyrifos E-Pro 4			Specific Directions
•	Insecticide in Water to Make			
	1 Gallon	3 Gallons	100 Gallons	11 1
(Rose)				rolled.
(Spirea)				4.
(Woolly)			•	<sup>4</sup> Apply spray to maple leafcutter
Bagworms				larvae as cases are being formed.
Boxelder bugs				Do not treat sugar maple trees
Cankerworms				intended for maple syrup
Catalpa sphinx			1	production.
Citrus mealybugs				
Elm spanworms				<sup>5</sup> For effective control of spider
Fall webworms <sup>2</sup>				mites, when large numbers of eggs
Greenstriped				are present, apply a second spray
mapleworms				3-5 days after the initial treatment
Jackpine budworms		•		in the South and 7-10 days in the
Juniper webworms				North to control newly hatched
Katydids				nymphs.
Lace bugs				
Leafhoppers		1		
Leafrollers <sup>3</sup>				· .
Maple leafcutters <sup>4</sup>				
Mites <sup>5</sup>				
(Clover)		e*	,	
(Red spider)				
(Southern red)				
Oak skeletonizers			.*	
Poplar tentmakers				
Puss caterpillars		Ε		
Sawflies, exposed				
(Pin oak)				
(Pine)				
Spring elm caterpillars				
Spruce budworms				
Tent caterpillars				
(Eastern)			:	
(Forest)				
(Western)				
Walnut caterpillars			j	
Western spruce				
budworms	,			
Yellownecked caterpillars				
	1/6 ft	1/41 05	14	To reduce felice feelings to
Beetles	1/6 fl. oz.	½ fl. oz.	1 pt.	<sup>1</sup> To reduce foliar feeding on twigs
(Fuller rose)				and branches by beetles, apply in
(Native elm bark)				the spring or early summer.
Leafhoppers				<sup>2</sup> To Irill microsting and it and it
Mahogany webworms				<sup>2</sup> To kill migrating and invading
Mealybugs				gypsy moth larvae, treat trunk and
Mimosa webworms				foliage.
Moths		•		3p1=1=i=================================
(Browntail)				<sup>3</sup> Blackvine weevils are night
(Cypress tip)	1	t e	l ·	feeders. Late afternoon spraying

PEST*	Amount of Chlorpyrifos E-Pro 4			Specific Directions
	Insecticide in Water to Make			
	1 Gallon	3 Gallons	100 Gallons	
(Douglas fir tussock)				will maximize control.
(European pine shoot)	:			
(Gypsy) <sup>2</sup>				
(Holly bud)				
(Nantucket pine tip)				
(Pandora)				
(Pitch pine tip)		  -		
(Subtropical pine tip)				
(Tussock)				·
Oakworms		,	,	
(California)				·
(Orangestriped)				
(Redhumped)				
Redhumped caterpillars				
Thrips (exposed)				:
Weevils				
(Blackvine) <sup>3</sup>		!		
(Pine reproduction)		,	,	
(Yellow poplar)				
Beetles	1/6-1/3 fl. oz.	$\frac{1}{2}$ -1 fl. oz.	1 pt1 qt.	For cottonwood leaf beetles, use
(Cottonwood leaf) <sup>1</sup>				Chlorpyrifos E-Pro 4 Insecticide in
(Elm leaf)				water to control larvae and adults
(Flea)				infesting cottonwoods. Apply
(Willow leaf)				when field counts indicate
			,	damaging beetle populations are
·				developing or are present. For
				seedlings, use 8-20 gallons of
				spray volume per acre.
Borers	1/3 fl. oz.	1 fl. oz.	1 qt.	For borers, apply Chlorpyrifos E-
Clearwing moths				Pro 4 Insecticide to the trunks and
(Ash)				lower limbs of trees and shrubs
(Dogwood)		,		when the adults begin to emerge.
(Lesser peachtree)				Consult your State Agricultural
(Lilac)				Experiment Station or Extension
(Oak)				Service specialist for proper time
(Rhododendron)		·		to treat in your area. Apply
Metallic wood				uniformly as a coarse low-pressure
(Bronze birch)				spray. Pheromone traps may aid
(Flatheaded appletree)				in detection of adult clearwing
(Twolined chestnut)				moths.
Longhorned beetles				
(Locust)				<sup>2</sup> Apply 1 quart of Chlorpyrifos E-
(Red oak)				Pro 4 Insecticide per acre to
Cranberry girdler larvae <sup>2</sup>				cranberry girdler larvae infesting
Leafminers				Douglas fir seedlings. Direct
Needleminerş				spray at the lower crown and
(Jeffrey pine)				stems using 50 gals. of water per
(Lodgepole pine)				acre. Irrigate immediately after
(Spruce)				application for soil penetration of
(Pine reproduction) (Yellow poplar)  Beetles (Cottonwood leaf) (Elm leaf) (Flea) (Willow leaf)  Borers Clearwing moths (Ash) (Dogwood) (Lesser peachtree) (Lilac) (Oak) (Rhododendron) Metallic wood (Bronze birch) (Flatheaded appletree) (Twolined chestnut) Longhorned beetles (Locust) (Red oak) Cranberry girdler larvae² Leafminers Needleminers (Jeffrey pine) (Lodgepole pine)				Chlorpyrifos E-Pro 4 Insecticide water to control larvae and adult infesting cottonwoods. Apply when field counts indicate damaging beetle populations at developing or are present. For seedlings, use 8-20 gallons of spray volume per acre.  The borers, apply Chlorpyrifos Pro 4 Insecticide to the trunks a lower limbs of trees and shrubs when the adults begin to emerge Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat in your area. Apply uniformly as a coarse low-pressing spray. Pheromone traps may as in detection of adult clearwing moths.  Apply 1 quart of Chlorpyrifos Pro 4 Insecticide per acre to cranberry girdler larvae infesting Douglas fir seedlings. Direct spray at the lower crown and stems using 50 gals. of water pacre. Irrigate immediately after

PEST*	Amount of Chlorpyrifos E-Pro 4			Specific Directions
	Insecticide in Water to Make			
	1 Gallon	3 Gallons	100 Gallons	
Scale insects <sup>3</sup>				1-2 inches. Treat after egg laying
(Cottonycushion)				during the summer.
(Cottony maple)				
(Euonymus)				<sup>3</sup> Time applications for control of
(Fletcher)				scale insects when crawlers or first
(Florida wax)	•			two stages of settled nymphs are
(Golden oak)				present.
(Hemispherical)				
(Lecanium)				
(Magnolia)				
(Oak kermes)				
(Oystershell)				,
(Pine needle)	•			·
(San Jose)				·
(Tea)	·		•	
(White birch)				·
	1 fl. oz.	3 fl. oz.	3 qts.**	Apply as a out stump aprover
Northern pine weevil Pales weevil	1 11. 02.	<i>3</i> 11. UZ.	o qus.	Apply as a cut stump spray or drench in winter or early spring.
Pales weevii				
•		e.		**Do not exceed 1 quart of
				Chlorpyrifos E-Pro 4 Insecticide
	1 0	2.0	2 , **	per acre.
Borers	1 fl. oz.	3 fl. oz.	3 qts.**	For peachtree borers, apply
(Cottonwood)	·			Chlorpyrifos E-Pro 4 Insecticide in
(Peachtree) <sup>1</sup>				water to flowering trees and
			·	shrubs of the genus <i>Prunus</i> as a
				trunk spray before newly hatched
				larvae enter the trees. Apply as a
				coarse low-pressure spray.
				Thoroughly wet all bark areas
				from ground level to scaffold
				limbs.
		•		
			•	**Do not exceed more than 1
				quart of Chlorpyrifos E-Pro 4
·				Insecticide per acre.
Beetles	1 1/3 fl. oz.	4 fl. oz.	l gal.**	For preventative treatment, apply
(Cottonwood leaf)	·			spray to the main trunk of trees in
(Elm leaf)				the early spring or when threat of
(Flea)				attack exists from nearby infested
(Fuller rose)		•		trees. For remedial treatment,
(Native elm bark) <sup>2</sup>				apply the spray to the main trunk
(Willow leaf)				of infested trees or logs when
				damage occurs but before adult
				beetles begin to emerge.
			,	-
				<sup>2</sup> To prevent native elm bark
				beetles from overwintering in
				uninfested trees, apply a dilution
				of 1 gallon per 100 gals. of water

PEST*		of Chlorpyrifo cide in Water t		Specific Directions
	1 Gallon	3 Gallons	100 Gallons	
				(1 1/3 fl. oz. per gallon) as a spray to the bottom 9 ft. of the trunk. Wet the trunk thoroughly but do not spray to runoff. Care should be taken to 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 dilution of 1 gallon per 100 gals. of water (1 1/3 fl. oz. per gallon). Applications should be made in the spring or early summer using a sprayer that will give thorough coverage to the tree crown.
· · · · · · · · · · · · · · · · · · ·				**Do not exceed more than 1 quart of Chlorpyrifos E-Pro 4 Insecticide per acre.
Beetles  (Ambrosia)  (Anobiidae)  (Bark)  (Black turpentine)  (Blister)  (European elm bark)  (Ips)  (Japanese)	2 2/3 fl. oz.	8 fl. oz.	2 gals.**	For preventative treatment, apply the spray to the main trunk of trees in the early spring or when threat of attack exists from nearby infested trees. For remedial treatment, apply the spray to the main trunk of infested trees or logs or before adult beetles begin to emerge.
(June) (Southern pine) (Spruce) Carpenter ants Termites				**Do not exceed more than 1 quart of Chlorpyrifos E-Pro 4 Insecticide per acre.
Weevils (Such as Northern pine, Pitch eating, Twig)	5 1/3 fl. oz.	16 fl. oz.	4 gals.**	Treat pine seedlings immediately after transplanting. Treat each seedling with enough spray to thoroughly wet the foliage and stem to the point of runoff. For nurseries, do not use more than 6 gals. of spray dilution per acre.
				**Do not use more than 1 quart of Chlorpyrifos E-Pro 4 Insecticide per acre.

#### TURF, INDUSTRIAL PLANT, AND ROAD MEDIAN OUTDOOR USES

Apply Chlorpyrifos E-Pro 4 Insecticide to control the pests listed in the following table at the recommended dosages and in accordance with the directions given below or as recommended by your local Agricultural Extension Service specialist. Dilute Chlorpyrifos E-Pro 4 Insecticide in water and apply as a coarse, low-pressure spray using suitable application equipment. Except as noted, thoroughly water immediately after treatment to wash the insecticide into the turf. The area to be treated should be moist at the time of treatment. Spray when pests first appear, retreat when needed.

PEST* Amount of Chlorpyrifos E-		Specific Directions		
Pro 4 Insecticide per		<u></u>		
	1,000 sq. ft.	Acre		
Ticks <sup>1</sup>	¼ fl. oz.	1 ½ pts.	For control of ticks, treat soil and other areas likely	
(American dog)			to serve as harborage sites for ticks that have	
(Cattle fever)			removed themselves from their host. Spray surface	
(Gulf coast)			to be treated until wet but do not create excessive	
(Lone star)			runoff. Note: This application is intended as a	
		•	premise spray only.	
			Do not use as a direct spray on livestock or any site	
		·	that may come in contact with livestock.	
Ants (including foraging	<sup>3</sup> / <sub>4</sub> fl. oz.	1 qt.	Apply Chlorpyrifos E-Pro 4 Insecticide for area	
fire ants)	, , , , , ,		control of ticks and chiggers infesting golf course	
Armyworms			turf, turf in road medians and industrial plant sites	
(Beet)			where these pests are present and create a nuisance	
(Fall)			or a possible public health problem. Do not allow	
(Yellowstriped)			public use of treated areas during application or	
Centipedes			until spray has dried. Apply Chlorpyrifos E-Pro 4	
Chiggers <sup>1</sup>			Insecticide in water at the rate of ½ pint/acre	
Chinch bugs		:	(equivalent to 1/6 fl. oz. per 1,000 sq. ft.) using a	
Clover mites			hydraulic sprayer, mist applicator, knap sack	
Cutworms			sprayer, or other suitable hand- or power-operated	
Crickets			spray equipment. Treat low underbrush, grassy	
Deer ticks <sup>2</sup>			areas, weeds, and ground surface and debris using	
Earwigs			enough spray volume to obtain thorough coverage,	
Fiery skipper			usually 40-100 gals./acre.	
Fire ants (mounds) <sup>3</sup>	·		gasany to 100 gais/ruote.	
Fleas	1		<sup>2</sup> Apply Chlorpyrifos E-Pro 4 Insecticide in water at	
Gnats			the rate of 1 quart per acre or $\frac{3}{4}$ fl. oz. per 1,000 sq.	
Grasshoppers		1	ft. for control of deer ticks. Treat low underbrush,	
Greenbug aphids			turf, grassy areas, weeds, and ground surface and	
June beetles			debris, using enough spray volume to obtain	
Leafhoppers			thorough coverage.	
Lucerne moths			more or grid of total go.	
Millipedes			<sup>3</sup> For individual fire ant mounds, apply Chlorpyrifos	
Mites			E-Pro 4 Insecticide as a drench, diluted at the rate of	
(Clover)			1 fl. oz. per 4 gals. of water. Gently sprinkle a total	
(Bermudagrass stunt)			of I gallon of the diluted emulsion over the surface	
(Formula grass)			of each mound using a gentle spray (such as a	
(Winter grain)			sprinkler can). Thoroughly wet mound and	
Pillbugs			surrounding areas to a 4 ft. diameter (12 sq. ft.).	
Sod webworms <sup>4</sup>			Apply in cool weather (65°F-80°F), or in early	
(Lawn moths)			morning or late evening hours. Treat new mounds	
Sowbugs			as they appear. Pressurized spray may disturb the	
oowougs		1	as and appear. Tressurized spray may disturb the	

PEST*	PEST* Amount of Chlorpyrifos E-		Specific Directions		
	Pro 4 Insect		France Laborations		
	1,000 sq. ft.	Acre	1		
Ticks	•		ants and cause migration, reducing product effectiveness.		
			<sup>4</sup> For sod webworms, watering or mowing of the treated area should be delayed for 24 hours after treatment.		
European crane fly	1 fl. oz.	1 qt.	· · · · · · · · · · · · · · · · · · ·		
Turfgrass weevil (Hyperodes) <sup>1</sup>	1 ½ fl. oz.	1 qt.	<sup>1</sup> Make application to problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service specialist.		
White grubs¹ (Black turfgrass ataenius) (European chafer) (Japanese beetle larvae) (Southern and Northern masked chafer)	1 ½-3 fl. oz.	1 qt.	Spray when white grubs are young and actively feeding near the soil surface, usually during late July and August or as recommended by your local Agricultural Extension Service specialist.  Immediately after spraying, irrigate the treated area with ½ to 1 inch of water to wash the insecticide deep into the thatch or into the underlying soil.		
Billbug adults, such as: (Bluegrass) (Denver) (Hunting)	¾-3 fl. oz.	· 1 qt.	Spray early in the season when adult billbugs first appear.		
Mole Crickets	1 ½ fl. oz.	1 qt.	For mole crickets in golf course turf, turf in road medians, and industrial plant site turfgrass, apply through high-pressure injection or other suitable subsurface placement application equipment.  Depending on the application equipment used, follow the manufacturer's recommendation for calibration and the volume of spray per acre needed to provide control or as recommended by your local Agricultural Extension Service specialist. Apply when young nymphs are active.		
Imported Fire Ants in commercial sod		1 qt.	Apply Chlorpyrifos E-Pro 4 Insecticide as a spray to the area of sod to be cut. Immediately after application, irrigate treated area with at least ½ acreinch of water or a sufficient volume to thoroughly soak below the cut line. Do not apply a volume or rate of water to cause runoff. Sod can be cut when vegetation has dried and when soil is moist, but not wet.		

<sup>\*</sup>Superscripts refer to Specific Directions.

# OUTSIDE SURFACES AND AROUND INDUSTRIAL PLANT SITES (SUCH AS AROUND WAREHOUSES, FOOD PROCESSING AND FOOD MANUFACTURING SITES)

Chlorpyrifos E-Pro 4 Insecticide may be applied as a residual spray to and around outside surfaces of nonresidential buildings and structures. Permitted areas of use include, but are not limited to: fences, pre-construction foundations (Except in Florida), refuse dumps, outside of walls, and other areas where pests congregate or have been seen. Do not allow adults, children or pets to contact treated surfaces until sprays have dried. Keep out of fish pools and other bodies of water. Do not feed treated grass cuttings (hav) or seed screenings to livestock, or use treated hav for livestock bedding. Do not treat vegetable

gardens. Repeat treatment as needed to maintain effectiveness. Unless prohibited by a product's label, users, at their own discretion can tank mix pesticides currently labeled for similar use patterns. Always perform a small jar compatibility test using proper proportions to check for physical compatibility prior to tank mixing. Do not tank mix this product with products containing dichlorvos (DDVP).

PEST*	Amount of Chlorpyrifos E-Pro 4 Insecticide in Water to Make			Specific Directions
				<u>'</u>
	1 Gallon	10 Gallons	50 Gallons	
		<b>Band Treatme</b>		
Ants	⅓ tsp.	¾ fl. oz.	4 fl. oz.	To help prevent infestation of
Bees		•		non-residential buildings, treat a
Beetles				band of soil 6-10 ft. wide around
Boxelder bugs (or other				and adjacent to buildings including
true bugs)				the building foundation to a height
Carpenter ants				of 2-3 ft. where pests are active
Centipedes				and may find entrance. Use 4 fl.
Clover mites		•	'	oz. of Chlorpyrifos E-Pro 4
Cockroaches			·	Insecticide per 50 gals. of water
(American)				and apply as a coarse spray at the
(Asian)			ļ	rate of about 10 gals. of spray
(Brownbanded)				mixture per 1,000 sq. ft. to
(German)				thoroughly and uniformly wet the
(Oriental)				band area.
(Smokey brown)		·		
Crickets				<sup>2</sup> For scorpions, treat or remove
Earwigs				accumulations of lumber,
Elm leaf beetles (adults)				firewood, and other materials that
Firebrats		•	•	serve as insect harborage sites.
Fleas				Make a thorough perimeter
Flies				treatment around the structure
Hornets				using directions for band treatment
Millipedes				above.
Pillbugs				
Scorpions <sup>2</sup>				
Silverfish		,		
Sowbugs	•			·
Spiders				
Springtails				
Ticks				
Wasps				
Yellowjackets				<u> </u>
	For	Outside Surfa	ces	** Do not exceed 1 quart of
_	1 1/3 fl. oz.	13 1/3 fl. oz.	2 qts.**	Chlorpyrifos E-Pro 4 Insecticide
				per acre.

<sup>\*</sup>Superscripts refer to Specific Directions.

#### ANTS, TERMITES AND MISCELLANEOUS PESTS

PEST*	Amount of Chlorpyrifos E-Pro 4 Insecticide in Water to Make			Specific Directions
	1 Gallon	3 Gallons	100 Gallons	
Ants	1/6 fl. oz.	½ fl. oz.	1 pt.	For fire ant mound treatment,
Cockroaches				apply as a drench. Dilute 1 fl. oz.

PEST*	1	Amount of Chlorpyrifos E-Pro 4 Insecticide in Water to Make		Specific Directions
	1 Gallon	3 Gallons	100 Gallons	
(American)				per 4 gallons of water. Gently
(Asian)	•			sprinkle 1-2 gallons of the diluted
(Brownbanded)				insecticide over the surface of
(German)			:	each mound and surrounding areas
(Oriental)				to a 2-foot diameter. Apply in
(Smokey brown)				cool weather (65°F-80°F), or in
(Wood)				early morning or late evening
Fire ants (foraging	,			hours. Treat new mounds as they
workers)				appear. Pressurized sprays may
Fire ants (mounds) <sup>1</sup>				disturb the ants and cause
Sowbugs				migration, reducing product
Springtails	· · · · · · · · · · · · · · · · · · ·			effectiveness.
Carpenter ants <sup>2</sup>	2 2/3 fl. oz.	8 fl. oz.	2 gals.**	<sup>2</sup> Locate carpenter ant nests and
Termites				drench thoroughly.
			,	**Do not exceed 1 quart of
				Chlorpyrifos E-Pro 4 Insecticide
				per acre.

<sup>\*</sup>Superscripts refer to Specific Directions.

#### GENERAL CONTROL OF WOOD-INFESTING INSECTS

Mix Chlorpyrifos E-Pro 4 Insecticide 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. Avoid contact with treated surfaces until spray has dried. Cover or remove exposed foods before treatment. Do not apply where electrical short circuits could occur. Permitted areas of use include, but are not limited to: wood surfaces, voids and channels in damaged wood, junctions between wood and foundation, gaps between wooden members. Not for use in wood treatment in residential areas.

Mixing Directions: To make a 0.5% water based spray, mix 1 1/3 fl. oz. of Chlorpyrifos E-Pro 4 Insecticide per each gallon of spray mixture. A stable emulsion can be formed by first adding approximately one-half of the required amount of water to a spray tank followed by adding the proper amount of Chlorpyrifos E-Pro 4 Insecticide, then the remaining water. Close the tank and shake vigorously for 5 to 10 minutes.

Tank Mixing: Unless prohibited by a product's label, users, at their own discretion can tank mix pesticides currently labeled for similar use patterns. Always perform a small jar compatibility test using proper proportions to check for physical compatibility prior to tank mixing. Do not tank mix this product with products containing dichlorvos (DDVP).

Application Methods: This product may be applied either by brushing onto targeted surfaces or as a coarse spray. Equipment capable of delivering a coarse, low-pressure (about 25 psi) spray is recommended for treatment of large or overhead areas. Use sufficient amount of spray dilution to cover the area to the point of wetness but avoid spraying to the point of runoff.

PEST*	Specific Directions		
Beetles	<sup>1</sup> Beetles may be controlled by applying spray		
(Anobiidae)	mixture to infested areas, or areas where		
(Bostrichidae)	infestations are likely to occur. These areas		
(Cerambycidae)	include, but are not limited to wood surfaces, voids		
(Lyctidae)	and channels in damaged wood, in spaces between		
Carpenter ants <sup>2</sup> (and other wood infesting ants)	wooden members of a structure, and junctions		
Carpenter bees	between wood and foundations. Use the following		

Termites<sup>3</sup>

guidelines to determine appropriate rates of application: New wood (typically less than 10 years of age), apply at about 1 gallon of dilution per 150 sq. ft. Old wood (typically greater than 10 years of age), apply at about 1 gallon of dilution per 100 sq. ft.

<sup>2</sup>Control wood-infesting ants by applying spray mixture around doors and windows, cracks or crevices, or other areas where ants may enter, crawl, or hide. Primary colonies are typically found outside through an exterior inspection. Correction of sanitation and structural deficiencies or landscape modifications may be necessary for effective control.

<sup>3</sup>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.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in a secured dry storage area.

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

#### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Etigra or Seller. All

<sup>\*</sup>Superscripts refer to Specific Directions.

such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Etigra and Seller harmless for any claims relating to such factors.

Etigra warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Etigra, and Buyer and User assume the risk of any such use. ETIGRA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall Etigra or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ETIGRA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ETIGRA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Etigra and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Etigra.

Chlorpyrifos E-Pro 4 Insecticide is not manufactured or distributed by Dow AgroSciences, seller of Dursban®

Dursban® is a registered trademark of Dow AgroSciences LLC.

Etigra<sup>TM</sup> is a trademark of Etigra.