28293-204

01/23/2001



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Lee Tharrington Unicorn Laboratories 12385 Automobile Blvd. Clearwater, FL 33762

JAN 2 3 2001

Subject: Chlorpyrifos 44.4% EUP Unicorn Dursban 4E Insecticide EPA Reg. No. 28293-204 Submission date: 8/24/00 & 12/27/00

Dear Mr. Tharrington:

The label referred to above, submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable, provided you incorporate the Agency's conditions as enumerated in this letter below and submit one copy of your final printed label prior to releasing the product for shipment.

1) On page 3 of the revised label, the pharse "Restricted Use Pesticide" must appear under the heading "Directions for Use" [40 CFR 156.10(i)(2)(ii)].

2) On page 5 of the revised label, the subheader "Golf Course Turf and Other Outdoor Uses" must be changed to read:

"Golf Course Turf, Road Medians, and Industrial Plant Sites"

3) Under the subheader "Pest Control on Outside Surfaces and Around Buildings at Industrial Plant Sites/For Outside Surfaces" (page 7 of the label), remove the phrase "firewood, and other materials" in the directions for scorpions.

4) On page 15 of the label, under "Restrictions" add the following sentence directly after "Not for use on trees in residential areas":

"Post-bloom use on apple trees is prohibited."

Submit one copy of the revised final printed label before releasing the product for shipment. If the conditions enumerated above are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e).

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If you have questions regarding this label review, please contact Marianne Lewis at (703) 308-8043 or electronically at Lewis.Marianne@EPA.gov.

Sincerely,

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Dennis McNeilly, Chemist Insecticide-Rodenticide Branch Registration Division (7505C)

#### **RESTRICTED USE PESTICIDE**

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

# UNICORN DURSBAN\* 4E INSECTICIDE

	with COMMENTS In EPA Letter Dated: JAN 2 3 2001
ACTIVE INGREDIENT:	Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide
Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2- pyridinyl) phosphorothioate).	requirement under EPA RCS, NO
INERT INGREDIENTS:	
Total:	100.00%

Contains 4 pounds of chlorpyrifos per gallon.

\* Trademark of DowElanco

# **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 the label, find someone to explain it to you in detail.)

#### See Side/Back Panel for Additional Precautionary Statements

#### NET CONTENTS:

#### MANUFACTURED BY:

Unicorn Laboratories 12385 Automobile Blvd. Clearwater, Florída 33762

NOTICE: Read and understand the entire label before using. Use only according to label directions.

Before buying or using this product, read "WARRANTY LIMITATIONS AND DISCLAIMER" elsewhere on this label. If terms are not acceptable, return **unopened package** at once to seller for full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under WARRANTY LIMITATIONS AND DISCLAIMER.



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Page 1

ACCEPTED

# Do Not Ship or Store with Food, Feeds, Drugs, or Clothing

#### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**WARNING:** May be fatal if swallowed. Excessive absorption through skin may be fatal. Causes substantial but temporary eye injury. Causes skin irritation. Do not get in eyes, on skin or clothing. Avoid breathing vapors and spray mist. Handle concentrate in a ventilated area. Remove contaminated clothing and wash before reuse. Keep away from food, feedstuffs and water supplies.

**Personal Protective Equipment:** Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear: Coveralls over short-sleeved shirt and short pants; Chemical-resistant gloves, such as barrier laminate or viton; Chemical-resistant footwear plus socks; Protective eyewear (goggles, face shield, or safety glasses with front, brow and temple protection); Chemical-resistant headgear for overhead exposure and Chemical-resistant apron when cleaning equipment, mixing, or loading. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS:

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### <u>First Aid</u>

#### Organophosphate

- IF SWALLOWED: Call a physician or Poison Control Center immediately. Do not induce vomiting. Contains an aromatic petroleum solvent. Do not give anything by mouth to an unconscious person.
- IF ON SKIN: Immediately wash with plenty of soap and water. Get medical attention.
- **IF IN EYES:** Flush with plenty of water for 15 minutes. Get medical attention.
- IF INHALED: Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical attention immediately.

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure

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(baseline data is useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

#### Physical or Chemical Hazards

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

#### **Environmental Hazards**

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. For terrestrial uses, 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 adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water by cleaning of equipment or disposal of waste. Do not contaminate water when disposing of equipment washwaters. 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.

#### 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.

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#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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; Chemicalresistant gloves, such as barrier laminate or viton; Chemical-resistant footwear plus socks; protective eyewear and Chemical-resistant headgear for overhead exposure.

Do not apply this product through any type of irrigation system. Do not formulate this product into other end-use products.

#### **GENERAL INFORMATION**

**Dursban 4E** insecticide is an emulsifiable concentrate designed for use as a spray to control various pests injurious to trees, turf and ornamental plants. The pests controlled are listed in the accompanying tables. **Dursban 4E** is compatible with insecticides, miticides, and fungicides commonly recommended 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.

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#### Non-Agricultural Use Requirements

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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.

**GENERAL** 

Do not allow adults, children or pets on treated areas until spray has dried. Keep out of fishpools 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 nor use hay for livestock bedding. Do not use in poultry houses.

### GOLF COURSE TURF AND OTHER OUTDOOR USES

Use **Dursban 4E** to control the pests listed in the following table by applying at the recommended dosages and in accordance with the directions given below.

Dilute **Dursban 4E** in water and apply as a coarse, low-pressure spray using suitable application equipment. Thoroughly water immediately after treatment to wash the insecticide into the turf, except as noted. For best results, the turf should be moist at time of treatment. Spray when pests first appear; retreat when needed.

	Amount of D		-
PESTS +	Water to Make:		Specific Directions
	1 Gal.	100 Gals.	
Ants (including foraging	3/4 fl.oz. 1	qt. (1) Us	e Dursban 4E insecticide for area control officks and
fire ants)		Ch	iggers infesting golf course turf, road medians and
Armyworms (Such as:		ind	lustrial plant sites.
Beet, Fall, Yellow-		Do	not allow public use of treated areas during
striped)		app	plication or until spray has dried. ApplyDursban 4E in
Centipedes		wate	er at the rate of 1/2 pint per acre (equivalent to 1/2 fl. oz.
Chiggers (1)		per 2	2,700 sq. ft.) using a hydraulic sprayer, mist applicator,
Clover mites		knap	sack sprayer, or other suitable hand or power-operated
Cutworms		spray e	quipment. Treat low underbrush, grassy areas, weeds
Crickets		and gr	round surface and debris using enough spray volume
Earwigs		to obtain t	thorough coverage, usually 40 to 100 gallons per acre.
Fiery skipper			
Fire ants (mounds)(2)			, ,
Fleas		(2.)For indiv	vidual fire ant mounds, apply Dursbah 42 as a drench
Gnats		dilu	ited at the rate of 1 fl. oz. (30 ml) per 4 gallons of water.
Grasshoppers			, , , , , , , , , , , , , , , , , , ,
Greenbugs		Gent	tly sprinkle a total of 1 gallcn of the diluted emulsion over
June beetles		the	surface of each mound using a gentle spray (such as
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Leafhoppers Lucerne moths Millipedes Mites (such as: Clover Formula grass, Winter grain)		areas to a in cool weathe hours. Treat sprays ma product e	er can). Thoroughly wet mound 4 ft. diameter (12 sq. ft.). For r, 65-80 deg F, or in early morn new mounds as they appear. ay disturb the ants and cause m effectiveness.	best results, apply ing or late evening Pressurized nigration, reducing
Mosquitoes (3) Sod webworms (4) (lawn moths)		ofturf pests	toes coming to rest on areas to will be killed for varying periods ending on exposure of treated an s.	of time after treat-
Sowbugs Springtails Ticks (1)			<b>vebworms</b> delay watering and n 12 to 24 hours after treatment.	-
European crane fly	1 fl.oz.	1-1/2 qt.		u <del>n</del>
Turfgrass weevil (Hyperodes) (1)	1-1/2 fl.oz.	May or as	ected problem areas in mid-Ap recommended by your local Agr specialist.	-
White grubs (Such as: Black turfgrass ataenius, European chafer, Southern masked chafer and Japanese beetle larvae (1)		gal. feeding ne August o Extensio Immedia 1/2 to 1	grubs, spray when grubs are year the soil surface, usually dur or as recommended by your loon Service specialist. tely after spraying, irrigate the inch of water to wash the inst ing soil.	ring late July and cal Agricultural treated area with
Bluegrass billbugs (1)	3/4 to 1 qt. 3 fl. oz. 1 g		<b>s billbugs</b> spray early in the se ear. Retreat as needed.	ason when adults

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+ Numbers in parentheses refer to Specific Directions.

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**PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS AT INDUSTRIAL PLANT SITES** Apply **Dursban 4E** as a residual spray to outside surfaces of buildings and other areas where pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness.

	Amount of	Dursban 4E	in Water to M	ake:
Pest +	1 gal	10 gal	50 gal	Specific Directions
Ants Bees	For Ban	d Treatment		prevent infestation of buildings treat a band of to 10 feet wide around and adjacent to buildings,
Carpenter ants Clover mites Cockroaches Crickets	1/12 fl.oz.	3/4 fl.oz.	4 fl.oz. a v	also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use fluid ounces of <b>Dursban AE</b> per 50 gallons of water and apply as a coarse spray at the rate of about 10
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Earwigs gallons spray mixture per 1,000 sq. ft. to thoroughly Fleas and uniformly wet the band area. Flies For Outside Surfaces 2. For scorpions treat or remove accumulations of lumber, Hornets firewood, and other materials which serve as insect 1-1/3 fl.oz harborage sites. Millipedes 13-1/2 fl.oz. 2 qt. Mosquitoes Scorpions (2) Silverfish Sowbugs Spiders Ticks Wasps Yellowjackets + Numbers in parentheses refer to Specific Directions.

#### COMMERCIAL NURSERY ORNAMENTALS (SOIL TREATMENT)

Use **Dursban 4E** insecticide to treat potted, containerized, and balled and burlapped nursery stock to control the insects in the soil attached to the roots of these plants. Completely submerge the ball of soil in a tank containing diluted **Dursban 4E** insecticide. Do not remove burlap wrap or plastic containers with drain holes prior to submerging. Keep soil submerged until complete saturation has occurred, normally about 30 seconds. **Note:** Wear rubber gloves, boots, and apron during this operation. Application should be made in a well-ventilated area. **Note:** Environmental factors significantly affect **phytotoxicity**. **Dursban 4E** has been tested on numerous ornamental plants without causing serious phytotoxicity. However, because of the numerous varieties grown, it is recommended that a small group of plants be treated at the recommended rate under the anticipated growing conditions and observed for phytotoxic symptoms for at least 7 days, before a large number of plants are treated.

nts is to dilute er. This dilutior aily schedule e burlap wrap o
ail

Grubs 2/3 fl.oz. 2 qt.

Weevils\_

+ Numbers in parentheses refer to Specific Directions.

#### **ORNAMENTALS (NURSERY, ROAD MEDIANS, INDUSTRIAL PLANT SITES)**

Use Dursban 4E insecticide to treat flowers, shrubs, evergreens, vines, shades and flowering trees found to be infested with pests listed in the following table. DiluteDursban 4E with water according to directions given in the table and apply using suitable hand or power-operated spray equipment in a manner to provide complete and uniform coverage. For best results apply a coarse spray to thoroughly wet both upper and lower leaf surfaces and infested limb and trunk areas. Attempt to penetrate dense foilage but avoid overspraying to the point of excessive

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runoff. Treat when pests appear and repeat at 7 to 10 day intervals, if needed.

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Consult your State Agricultural Experiment Station or Extension Service specialist for application timing and other specific use information. Note: Ornamentals: Environmental factors have significant effects on phytotoxic expression. Dursban 4E has been tested on numerous ornamental plants without causing serious phytotoxicity. However, do not use on azaleas, camellias, poinsettias, rose bushes, or variegated ivy because of possible injury to these plants.

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	nt of Dursban	4E in Wate	- · · · · · · · · · · · · · · · · · · ·		
Pest +	to Make:	100 gala	Specific Directions		
1 gallo	n 3 gallons	100 gals			
Adelgids (Such as: 1/12	fl.oz. 1/4 fl.oz.	8 fl.oz.	1. Forbagworms treat when insects are in the crawler stage		
Cooley and Eastern					
spruce galls, Pine bark)			2. For effective control of <b>leafrollers</b> spray should be applied before leaves are tightly rolled.		
Ants (including foraging					
fire ants)			3. For effective control of maple leafcutter on maple trees		
Aphids (Such as: Apple,			apply spray to larvae as cases are being formed. D		
Chrysanthemum,			not treat sugar maple trees intended for maple syru		
Cottonwood, Elm leaf,			production.		
Peach, Rose, Spirea,					
Woolly)			4. For effective control of <b>spider mites</b> when large numbers		
Armyworms (Such as:			of eggs are present, apply a second spray 3 to 5 day		
Fall, Yellowstriped)			in the South or 7 to 10 days in the North after initia		
Bagworms (1)			treatment to control newly-hatched nymphs		
Boxelder bugs					
Cankerworms					
Catalpa sphinx, Chiggers	5				
Citrus mealybugs			-		
Cockroaches (Such as:			·		
American, Brownbande	ed,				
German, Oriental,					
Smokey brown)					
Elm spanworms					
Fall webworms					
Grasshoppers					
Green fruitworms					
Hornworms					
Jackpine budworms					
Juniper webworms					
Katydids Lace bugs			, , , , , , , , , , , , , , , , , , ,		
Leafhoppers			<b>پ</b> و ډ د و د د		
Leafrollers (2)			د د د د د د		
Maple leafcutters (3)					
Mites (Such as: Clover,					
			8 6 6 69 6 6666		
			۲ به ۲ کی محمد کی		
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Pest +		of Dursban Make:	Specific Directions	
	1 galion	3 gallons	100 gallons	•
Red spider, Southern			· · · · · · · · · · · · · · · · · · ·	
red) (4)				
Dleander caterpillars				
Drange tortrix				
<sup>&gt;</sup> eriodical cicada				
Plant bugs				
Poplar tentmaker				
Psyllids				
Puss caterpillars				
Rose chafers				
Sawflies, exposed (Such				
as: Pine, Pin oak,				
Redheaded)				
Sowbugs				
Spittlebugs				
Spring elm caterpillars Springtails				
Spruce budworms				
Tent caterpillars (Such				
as: Eastern, Forest,				
Western)				
Thornbug				
Nalnut caterpillars				
Nestern spruce budworms				
Whiteflies				
Yellownecked caterpillars				

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+ Numbers in parentheses refer to Specific Directions.

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Pest +	Amount of to M	f Dursban 4I ake:	E in Water	Specific Directions	
	1 gallon	3 gallons	100 gallo	ns	
Armyworms (Beet) Beetles (Fuller rose, Native elm bark)(1) Cutworms	1/6 fl.oz.	1/2 fi.oz.	1 pt.	1. To reduce <b>twig</b> and <b>branch</b> feeding by <b>bark beetle</b> applications should be made in the spring or early summer.	
Leafhoppers Mahogany webworms Mealybugs			2.	To kill migrating and invadinggypsy moth larvae treat trunks and foliage.	
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Mimosa webworms Moths (Such as: Browntail, Cypress tip, Douglas fir tussock, European pine shoot, Gypsy (2), Holly bud, Nantucket pine tip, Pandora, Pitch pine tip, Subtropical pine tip, Tussock) Oakworms (Such as: California, Orangestriped, Redhumped) Redhumped caterpillars Thrips (exposed) Weevils (Such as: Blackvine(3), Yellow Poplar, Pine reproduction)	3. Blackvine weevils are night feeders. Later afternoon spraying will give control in some areas.
Beetles (Such as: 1/8 to 1/2 to 1 pt. Cottonwood leaf(1), 1/3 fl.oz. 1 fl.oz. to 1 qt Elm leaf, Flea, Willow leaf)	<ol> <li>For cottonwood leaf beetles use Dursban 4E in water to control larvae and adults infesting cottonwoods. Make the treatment when field counts indicate damaging beetle populations are developing or present.</li> </ol>
Borers(1): Clearwing 1/3 fl.oz. 1 fl.oz. 1 qt. moths (Such as: Ash, Dogwood, Lesser peachtree, Lilac Oak, Rhododendron). Metallic wood (Such as: Bronze birch, Flatheaded appletree, Twolined chestnut), Longhomed beetles (Such as: Locust, Red oak) Leafminers Needleminers (Such as: Jeffrey pine, Lodgepole pine, Spruce) Scale crawlers (Such	<ol> <li>For borers apply Dursban 4E to the trunks and 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. Apply uniformly as a coarse low-pressure spray.</li> </ol>
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as: Cottonycushion, Cottony maple, Euonymus, Fletcher, Florida wax, Golden oak, Hemispherical, Lecanium, Magnolia Oak kermes, Oystershell, Pine needle, San Jose, Tea, White birch)				
Borers (Such as: Cottonwood, Peachtree	1 fl.oz.	3 fl.oz.	3 qt.	<ol> <li>For peachtree borers apply Dursban 4E in water to flowering trees and shrubs of the genus Prunus as a trunk spray before newly-hatched larvae enter the trees.</li> <li>Apply as a coarse, low-pressure spray. Thoroughly wet all bark areas from ground level to scaffold limbs.</li> </ol>
Beetles (Such as: Ambrosia, Aaanoabidae, Black turpentine, Cottonwood leaf, Elm leaf, European elm bark, Flea, Fuller rose, Japanese, June, Native elm bark, Southern pine, Willow leaf)(1)	2-2/3 fl.oz	. 8 fl.oz.	2 gal.	<ol> <li>For preventive treatment apply the spray to the main trunk of trees in the early spring or when threat of attack exists from nearby infested trees.</li> <li>For remedial treatment apply the spray to the main trunk of infested trees when damage occurs but before adult beetles begin to emerge.</li> </ol>

+ Numbers in parentheses refer to Specific Directions.

#### TREE AND FOREST PESTS (NURSERIES, PLANTATIONS)

Use **Dursban 4E** insecticide to treat shade and flowering trees, plantation trees, transplant trees, and evergreens found to be infested with pests listed in the following table. Felled trees such as elms, should be treated as necessary. Not for use on felled trees in residential areas. Dilute**Dursban 4E** with water according to directions given in the table and apply using suitable hand or power-operated spray equipment in a manner to provide complete and uniform coverage. For best results apply a coarse spray to thoroughly wet both 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. **Attention:** For felled trees, treat after cutting; do not handle until spray has dried or wear suitable protective clothing. **Do not treat bearing fruit and nut trees** with**Dursban 4E** except as indicated in the Dormant Spray section. Treat when pests appear and repeat 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.

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<b>—</b> .			4E in Wate			
Pest +		lake:	400	Specific Directions		
	1 gallon	3 gallons	100 gallor			
Adelgids (Such as		. 1/4 fl.oz.	8 fl.oz.	1. Forbagworms treat when insects are in the crawler stage.		
Cooley and East	ern					
spruce gall,				2. For effective control of leafrollers spray should be applied		
Pine bark)				before leaves are tightly rolled.		
Aphids (Such as:A	•••					
Chrysanthemum,				3. For maple leafcutter on maple trees apply spray to larvae		
Cottonwood, Elm				as cases are being formed. Do not treat sugar maple		
leaf, Peach, Ros	e			trees intended for maple syrup production.		
Spirea, Woolly) Bagworms (1)				A For offective control of <b>chider mitor</b> when large numbers		
Boxelder bugs				4. For effective control of <b>spider mites</b> when large numbers of eggs are present, apply a second spray after 3 to 5		
Cankerworms				days in the South or 7 to 10 days in the North after initial		
Catalpa sphinx				treatment to control newly-hatched nymphs.		
Citrus mealybugs				a calinerate control newly-natched hymphs.		
Elm spanworms						
Fall webworms						
Greenstripped						
mapleworms						
Jackpine budworn	าร					
Juniper webworm	5					
Katydids						
Lace bugs						
Leafhoppers						
Leafrollers (2)	-					
Maple leafcutters(	2)					
Mites (Such as:						
Clover, Red						
spider, Southern						
red (4) Oak skeletonizers						
Poplar tentmakers						
Puss caterpillars	•					
Sawflies, exposed	1					
(Such as: Pine,						
Pin oak)						
Spring elm						
caterpillars				· · · · · · · · · · · · · · · · · · ·		
Spruce budworms	5			· · · ·		
Tent caterpillars				• • • • • • • • • • • • • • • • • • •		
(Such as: Easter				د ورددن د د د د د د		
Forest, Western)				د د رو د دردزز		
Walnut caterpillar	5			د دد در د ددد در		
Western spruce				2 • • 2 • 2 • 2 • 2 • 3 • 3 • 3 • 5 • 5 • 5 • 5 • 5 • 5 • 5		
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budworms Yellownecked caterpillars

# + Numbers in parentheses refer to Specific Directions

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	Amount	of Dursban	4E in Water	
Pest +	to	Make:		Specific Directions
	1 gallon	3 gallons	100 gallor	ns
Beetles (Fuller rose, Native elm bark)(1) Leafhoppers	1/6 fl.oz.	1/2 fl.oz	1 pt. ŕ	<ol> <li>To reduce twig and branch feeding by bark beetles applications should be made in the spring or early summer.</li> </ol>
Mahogany webworms Mealybugs Mimosa webworms Moths (Such as:			2	. To kill migating and invading <b>gypsy moth larvae</b> trea trunk and foliage.
Browntail, Cypress tip, Douglas fir tussock, European pine shoot, Gypsy(2) Holly bud, Nantucket pine tip, Sub- tropical pine tip,			3.	Blackvine weevils are night feeders. Late afternoor spraying will give control in some areas.
Tussock) Oakworms (Such as: California, Orangestriped, Redhumped) Redhumped caterpillar Thrips (exposed)	S			
Weevils (Such as: Blackvine (3), Yellow poplar, Pine reproduction)				
· · · · · · · · · · · · · · · · ·	1/6 to 1/ 1/3 fl.oz.	/2 to 1 p 1 fl.oz. to	1 qt. ta the ti popu 8 to 2	For <b>cottonwood leaf beetles</b> use <b>Dursban 4E</b> in wate o control larvae and adults infesting cottonwoods. Mal reatment when field counts indicate damaging beetle lations are developing or present. For seedlings use 20 gallons of spray volume per acre.
Borers (1): Clearwing moths (Such as: Ash, Dogwood, Lesser peachtree,	1/3 fl.oz	1 fl.oz. 1	lim	or borers apply Dursban 4E to the trunks and lower hbs of trees and shrubs when the adults begin to emerg sult your local State Agricultural Experimental Station or Extension Service specialist for proper time to tre
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Lilac, Oak, Rhododendron),			Apply uniformly as a coarse low-press	ure spray.
Rhododendron), Metallic wood (Such as Bronze birch, Flatheaded appletree, Twolined chestnut), Longhorned beetles Such as: Locust, Red oak) Cranberry girdler larvae (2) Leafminers Needleminers (Such as: Jeffrey pine, Lodgepole pine, Spruce) Scale Crawlers (Such as: Cottonycushion, Cottonymaple, Euonymus, Fletcher, Florida wax, Golden oak, Hemispherical, Lecanium, Magnolia, Oak kermes, Oystershell, Pine needle, San		seedl spray a wate	cranberry girdler larvae infesting Dou ings apply 1 quart of Dursban 4E per a at the lower crown and stems using 50 g er per acre. Irrigate immediately after ap enetration of 1-2 inches. Treat after egg the summer.	cre. Direct allons of plication for
Jose, Tea, White birch)				
Borers (Such as 1 fl.oz Cottonwood, Peachtree (1)	. 3 fl.oz.	3 qt.	<ol> <li>For peach tree borers apply Duwater to flowering trees and shrub.</li> <li>Prunus as a trunk spray before newly larvae enter the trees. Apply as a coapressure spray. Thoroughly wet all b from ground level to scaffold limbs.</li> </ol>	s of the genus -hatched rse low-

+ Numbers in parentheses refer to Specific Directions.

Pest +	Amount of Dursban 4E in to Make:			ter Specific Directions		
	1 gallon	3 gallons	100 gallons			
Beetles (1) (Such as: Cottonwood leaf, Elm leaf, Flea, Fuller rose, Willow leaf) Native elm bark (2)	1-1/2 fl.oz.	4 fl.oz.	1 gal.	1.For preventive 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 when damage occurs but before adult beetles begin to emerge. For plantation trees apply to individual trees using suitable hand or power-operated spray equipment. 2.To prevent native elm bark beetles from overwintering in uninfested trees, apply Dursbar 4E in water to the bottom 9		
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feet 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 the root flare. Application can be made with either a backpack mistblower or a hydraulic pressure sprayer from spring through to early fall. To reduce the twig and branch feeding on uninfested trees deemed to be of high value, apply a water spray to the tree crown. Application should be made in the Spring or early summer using a sprayer that will give thorough coverage to the tree crown.

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of run code on container.

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Pest +	Amount of Dursban 4E in Wate to Make:			er Specific Directions		
	1 gallon	3 gallons	100 gallon	S		
Beetles (Such as: Ambrosia, Anobidae, Black turpentine, Blister European elm bark, Japanese, June, Southern pine, Spruce) (I) Carpenter ants Termites	2-2/3 fl.oz.	8 fl.oz.		<ol> <li>For preventive 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 he spray to the maintrunk of infested trees or logs when amage occurs or before adult beetles begin to emerge. For plantation trees apply to individual trees using suitable hand or power-operated spray equipment.</li> </ol>		
Weevils (Such as: Northern pine, Pales, Pitch- eating, Twig) (1)	5-1/3 fl.oz.	1 pt.	th	1. For Southern pine seedlings treat immediately after ansplanting. Treat each seedling with enough spray to boroughly wet the foliage and stems to the point of runoff o not use more than 6 gallons of spray dilution per acre.		

+ Numbers in parentheses refer to Specific Directions.

#### DORMANT SPRAY (Nurseries, Plantations, Industrial Plant Sites and Road Medians)

Use **Dursban 4E** insecticide as a dormant or delayed dormant spray at the rates indicated to control the listed insects. Spray the entire tree to runoff using suitable ground spray equipment. Use the higher dosage o**Dursban 4E** insecticide for severe infestation. Use oil as recommended by your State Agricultural Experiment Station or Extension Service specialist.

**Restrictions:** Not for use on trees in residential areas. Make only one application during the dormant season. Do not allow meat or dairy animals to graze in treated areas.

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Pest +	Amount of Dursban 4E in Water to Make:			Specific Directions		
	1 gallon	3 gallons	100 gallons			
Aphids (Such as: Mealy plum, Rosy apple, Woolly apple) Borers (Such as: Peach twig) Cutworms (Such as: Climbing) Leafrollers (Such as: Pandemis) Pear psylla adults Plant bugs Scale (such as: San Jose)	1/12 to 1/6 fl.oz.	1/4 to 1/2 fl.oz.	1/2 to 1 pt.	Tank mix with 1 to 2 gallons of a petroleum spray oil recommended for dormant use in 100 gallons of water		

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**MOSQUITOES -** For use only in Public Health Control Programs by State, Local or other Public Health Agency and their contractors.

Apply **Dursban 4E** insecticide to mosquito infested, non-crop areas according to the conditions and rates shown in the following table. Mix **Dursban 4E** insecticide with either water or oil, such as kerosene or No. 2 fuel oil, using sufficient spray volume to give uniform coverage of area treated. Apply the spray using suitable application equipment, such as hand or power ground sprayers, mist applicators, and aerial spray equipment.

**Warning:** Read complete Environmental and Use Precaution sections and consult your State Fish and Game Department before using this product for mosquito control.

		Amount to Us	e Per Acre	Number	of	
Pest	Condition of Acre to be Treated	Dursban 4E (Fl. Oz.)	Chlorpyrifo: (Pounds)	s Acres of Dursba Will Treat	1 Gallon an 4E	Specific Directions
Mosquit	Light to medium vegetative cover	0.8	0.025	160	The higher dose will also give faster knockdown and longer residual con	
adults	Medium to heavy vegetative cover.	1.6	0.05	80	where there is little or no vegetable cover.	ere is little or no vegetable
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Do not contaminate water, food or feed by storage or disposal.

**STORAGE:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100\_F for extended periods of time. Storage below 20\_F may result in formation of crystals. If product crystalizes, store at 50 to 70\_F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**PESTICIDE** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture,

<u>DISPOSAL:</u> 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 METAL DRUM - Triple rinse (or equivalent). Then offer for recycling or

<u>DISPOSAL:</u> reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PLASTIC - Triple rinse (or equivalent). Then 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. REUSABLE PORTABLE CONTAINERS - Do not rinse or put any other material into container. When returning reusable portable container, seal all openings and return to The Dow Chemical Company.

WARRANTY LIMITATIONS AND DISCLAIMER The Manufacturer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions therein under normal conditions of use. This is the only warranty made on this product. No other express and no implied warranty of merchantability or fitness for a particular purpose is made outside of this label. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller.

When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify in writing the manufacturer of any claims to be eligible to receive either remedy given below. Theexclusive remedy of the buyer or user and the limit of liability of the manufacturer or any other seller will be one of the following, at the election of the manufacturer:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

#### The seller will not be liable for consequential or incidental damages or losses.

The terms of this Warranty Limitations and Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations and Disclaimer in any manner.

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