

655-499

1-24-2001

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

JAN 24 2001

Richard A. Miller
Prentiss Incorporated
C.B. 2000
Floral Park, NY 11002-2000

Subject: Prentox ® Chlorpyrifos 4E Insecticide
EPA Registration Number 655-499
Submission dated 11/22/00

Dear Mr. Miller:

The product labeling referred to above, submitted in connection with 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). Regarding our request for clarification of product name, per a 12/12/00 conversation with Judy Loranger of the Product Reregistration Branch of the Special Review and Reregistration Division and Nancy Cave, of your office, I understand that you wish to change the product name to Prentox® *Dursban* 4E Insecticide, the name appearing on the draft label.

The registration record for the product named above has been amended to change the product name to:

Prentox ® *Dursban* 4E Insecticide

The additional brand name listed below is also being accepted under this registration:

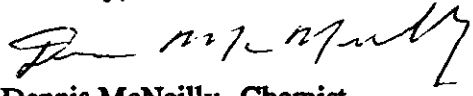
Prentox ® Chlorpyrifos 4E Insecticide

2). Per our 11/16/00 letter, the text "Do not allow meat or dairy animals to graze in treated areas" still remains on the label (bottom of Page 9) and should be deleted.

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).

A stamped copy of the label is enclosed for your records. If you have questions about this label review, please contact me at (703) 308-6742 or electronically at McNeilly.Dennis@EPA.gov. You may also contact Judy Loranger at (703)-308-8056 if you have specific questions regarding this letter.

Sincerely,



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

Enclosure: stamped label

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ACCEPTED
with COMMENTS
In EPA Letter Dated:

JAN 24 2001

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.

Prentox Dursban 4E
EPA Registration No. 655-499

Front Panel

655-499

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.



DURSBAN® 4E INSECTICIDE

CONTAINS 4 POUNDS OF CHLORPYRIFOS PER GALLON

ACTIVE INGREDIENTS:

Chlorpyrifos [O,O-diethyl O-(3,5,6-trichloro-2-pyridyl)
phosphorothioate] 44.8%

INERT INGREDIENTS*: 55.2%
TOTAL: 100.0%

PRENTOX® - Registered Trademark of Prentiss Incorporated
DURSBAN® - Registered Trademark of Dow AgroSciences LLC

KEEP OUT OF REACH OF CHILDREN
WARNING - AVISO
ORGANOPHOSPHATE
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)
See inside of booklet for additional precautionary statements including First Aid Statement, Personal
Protective Equipment (PPE), User Safety Recommendations, and Directions for Use including Storage and
Disposal.

E.P.A. Reg. No. 655-499

12/00

E.P.A. EST. NO. 655-GA-1

Manufactured by:

PRENTISS INCORPORATED

Plant: Kaolin Road, Sandersville, GA 31082
Office: C.B. 2000, Floral Park, NY 11002-2000

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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.

PRENTOX® DURSBAN® 4E INSECTICIDE

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PRENTOX® - Registered Trademark of Prentiss Incorporated
DURSBAN® - Registered Trademark of Dow AgroSciences LLC
E.P.A. Reg. No. 655-499

E.P.A. EST. NO. 655-GA-1

KEEP OUT OF REACH OF CHILDREN
WARNING - AVISO
ORGANOPHOSPHATE
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 ORGANOPHOSPHATE An organophosphate insecticide/miticide. Have label with you when obtaining treatment advice.	
If swallowed	<ul style="list-style-type: none"> • Call a physician, Poison Control Center, or the National Pesticide Telecommunications Network at 1-800-858-7378 immediately for treatment advice. • Do not induce vomiting. Contains an aromatic petroleum solvent. • Do not give anything by mouth to an unconscious person.
If on skin	<ul style="list-style-type: none"> • Immediately wash with plenty of soap and water. • Call a physician, Poison Control Center, or the National Pesticide Telecommunications Network at 1-800-858-7378 immediately for treatment advice.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a physician, Poison Control Center, or the National Pesticide Telecommunications Network at 1-800-858-7378 immediately for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Remove victim to fresh air if symptoms of cholinesterase inhibition appear. • Call a physician, Poison Control Center, or the National Pesticide Telecommunications Network at 1-800-858-7378 immediately for treatment advice.
<p>Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are 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.</p> <p>SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS</p>	

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS**

Keep Out of Reach of Children

WARNING – AVISO

May be Fatal If Swallowed. 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. Keep away from food, feedstuffs and water supplies.

Personal Protective Equipment (PPE): 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.

WPS Uses: Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) – in general, agricultural-plant uses are covered – 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 such as goggles, face shield, or safety glasses with front, brow and temple protection, chemical-resistant headgear for overhead exposure, and a chemical-resistant apron when cleaning equipment, mixing or loading. Non-WPS Uses: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) – in general, only agricultural-plant uses are covered by the WPS – must wear: long-sleeved shirt and long pants, chemical-resistant gloves such as barrier laminate or viton, chemical-resistant footwear plus socks and protective eyewear such as goggles, face shield, or safety glasses with front, brow and temple protection. 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 Recommendation

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. Do not apply directly to water, 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 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.

PHYSICAL & CHEMICAL HAZARDS

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

DIRECTIONS FOR USE

Restricted Use Pesticide

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

Do not formulate this product into other end-use products.

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 the 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 no less than the following:

REIs for all crops is 24 hours except:

Tree nuts: 2 days

Fruit trees: 4 days

Citrus trees: 5 days

Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early re-entry requirement pursuant to 40 CFR Part 170.

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, such as barrier laminate, or viton, chemical-resistant footwear plus socks, protective eyewear such as goggles, face shield, or safety glasses with front, brow and temple protection, chemical-resistant headgear for overhead exposure.

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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, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried. Keep out of fish pools and other bodies of water. Do not treat vegetable gardens. Do not feed treated grass cuttings (hay) or seed screenings to livestock nor use hay for livestock bedding. Do not use in poultry houses, or greenhouses.

Directions For Use Cont'd.

General Information

Dursban 4E Insecticide is an emulsifiable concentrate designed for use as a spray to control various pests. This product may only be used on fruit, nut and citrus trees, golf course turf only and commercial nursery plants. The pests controlled are listed in the accompanying tables. Prentox Dursban 4E Insecticide is compatible with insecticides, miticides, and fungicides commonly recommended except for alkaline materials such as Bordeaux mixture and lime. It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing.

Golf Course Turfgrass, Road Medians and Industrial Plant Sites Only

Use Dursban 4E Insecticide to control the pests listed in the following table by application at the recommended dosages. Dilute Dursban 4E Insecticide in water and apply using suitable application equipment. For best results, turf should be moist at time of treatment.

Pest ⁺		Amount of Dursban 4E Insecticide per	
		1000 Sq Ft.	Acre
Ants	Fleas	3/4 fl. oz.	1 qt.
Armyworms (Such as: Beet, Fall, Yellowstriped)	Gnats		
Centipedes	Grasshoppers		
Chiggers ¹	Greenbug aphids		
Chinch bugs	Green June beetle grubs		
Crickets	Leafhoppers		
Cutworms	Lucerne moth		
Deer ticks ²	Millipedes		
Earwigs	Mites (Such as: Clover, Bermudagrass stunt, Winter grain)		
European crane fly larvae	Pillbugs		
Fiery skipper	Sod webworms ⁴ (lawn moths)		
Fire ants (foraging workers)	Ticks ¹		
Fire ants (mounds) ³			
Billbugs adults (Such as: Bluegrass, Denver, Hunting)		3/4 fl. oz.	1 qt.

Specific Directions:

1. Use Dursban 4E for area control of ticks and chiggers infesting golf course turf (only), road medians, and the exterior of industrial plant sites where these pests are present and create a nuisance or a possible public health problem. Do not allow public use of treated areas during application or until spray has dried. Apply Dursban 4E in water at the rate of 1/2 pint per acre (equivalent to 1/6 fl. oz. per 1,000 sq. ft.) using a hydraulic sprayer, mist applicator, backpack sprayer, or other suitable hand- or power-operated spray equipment.
2. For control of deer ticks apply Dursban 4E in water at the rate of 1 quart per acre or 3/4 fl. oz. per 1000 sq ft. Treat low underbrush, turf, grassy areas, weeds, and ground surface and debris, using enough spray volume to obtain thorough coverage.
3. For individual fire ant mounds, apply Dursban 4E as a drench. Dilute 1 fl oz. per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2 foot diameter. For best results, apply in cool weather, 65° - 80° F, or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness. This use is allowed around residences.
4. For sod webworms, delay watering or mowing the treated area for 12 to 24 hours after treatment.
5. For billbugs, spray early in the season just prior to or coinciding with first appearance of adults as recommended by your local Agricultural Extension Service specialist.

Pest Control on the Exterior of Industrial Plant Buildings

Apply Dursban 4E by application as a residual spray to outside surfaces of buildings including window frames, eaves, patios, garages, refuse dumps and other areas where pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness, but not more often than once every 7 days.

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Pest ⁺	Amount of Dursban 4E in Water to Make			Specific Directions
	1 Gallon	10 Gallons	50 Gallons	
ants	For Perimeter Treatment ¹			<p>1. To help prevent infestation of industrial plant buildings treat a band of soil 6 -10 ft wide around and adjacent to buildings, also the building foundation to a height of 2 - 3 ft where pests are active and may find entrance. Use 4 fl oz of Dursban 4E per 50 gal of water and apply as a coarse spray at the rate of about 10 gal spray mixture per 1,000 sq ft to thoroughly and uniformly wet the band area.</p> <p>2. For scorpions remove accumulations of lumber, firewood, and other materials which serve as insect harborage sites. Make a thorough perimeter treatment around the structure using directions in (1) above.</p>
bees	1/12 fl oz	3/4 fl oz	4 fl oz	
boxelder bugs	For Outside Surfaces			
carpenter ants	1 1/3 fl oz	13 1/3 fl oz	2 qts.	
clover mites				
cockroaches				
crickets				
earwigs				
elm leaf beetles (adults)				
firebrats				
fleas				
flies				
hornets				
millipedes				
pillbugs				
silverfish				
scorpions ²				
sowbugs				
spiders				
springtails				
ticks				
wasps				
yellowjackets				

Superscripts refer to "Specific Directions".

Pest ⁺	Amount of Dursban 4E per		Specific Directions
	1000 Sq Ft	Acre	
Ants (including foraging fire ants)	3/4 fl oz	1 qt	<p>1. Use Dursban 4E for area control of ticks and chiggers infesting golf course turf, road medians and the exterior of industrial plant sites where these pests are present and create a nuisance or a possible public health problem. Do not allow public use of treated areas during application or until spray has dried. Apply Dursban 4E in water at the rate of 1/2 pint/acre (equivalent to 1/2 fl oz per 2,700 sq ft) using a hydraulic sprayer, mist applicator, knapsack sprayer, or other suitable hand- or power-operated spray equipment. Treat low underbrush, grassy areas, weeds, and ground surface and debris using enough spray volume to obtain thorough coverage, usually 40 -100 gal/acre. Do not apply more than 1 qt of Dursban 4E per acre.</p> <p>2. For individual fire ant mounds, apply Dursban 4E as a drench, diluted at the rate of 1 fl oz (30 ml) per 4 gal of water. Gently sprinkle a total of 1 gal of the diluted emulsion over the surface of each mound using a gentle spray (such as a sprinkler can). Thoroughly wet mound and surrounding areas to a 4 ft diameter (12 sq ft). For best results, apply in cool weather, 65°-80° F, or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.</p> <p>3. For sod webworms, delay watering and mowing the treated area for 12-24 hours after treatment.</p>
Armyworms (Beet, Fall Yellow-striped)			
Centipedes			
Chiggers ¹			
Chinch bugs			
Clover mites			
Cutworms			
Crickets			
Earwigs			
Fiery skipper			
Fire ants (mounds) ²			
Fleas			
Gnats			
Grasshoppers			
Greenbugs			
June beetles			
Leafhoppers			
Lucerne moths			
Millipedes			
Mites (Clover, Formula grass, Winter grain)			
Sod webworms ³ (lawn moths)			
Sowbugs			
Springtails			
Ticks ¹			

Superscripts refer to "Specific Directions"

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Fruit, Nut and Citrus Trees

Use Dursban 4E to treat **almond, apple, cherry, filbert, nectarine, peach, pecan, walnut and citrus trees or tree fruit** (such as: **grapefruit, lemon, orange**) not grown for commercial consumption of fruit by spraying to the point of runoff. When treating citrus trees only, a petroleum spray oil recommended for use on citrus trees may be added to spray mixtures only at rates of up to 1.8 gallons per 100 gallons of water to improve control of aphids, mealybugs, scale insects, and thrips. Treat when insects become a problem or in accordance with the local spray schedule recommended by your State Extension Service Specialist.

Restricted-entry intervals for fruit, nut and citrus trees are as follows:

- Tree nuts: 2 days
- Fruit trees: 4 days
- Citrus trees: 5 days

Precautions:

Do not apply as a foliar spray to **sweet cherries** because contact of spray solution with leaves may result in premature leaf drop. Observe local use directions for tank mix combinations especially with applications of Dursban 4E plus spray oil. Do not apply Dursban 4E in combination with oil to **walnuts**. Dry or cold conditions may cause Dursban 4E plus oil to infuse trees resulting in bud damage or drop; do not apply until rain or irrigation has replenished soil moisture such that bark and twigs are not desiccated. Do not apply when trees are stressed by drought.

Restrictions:

Almonds, Filberts, Walnuts: Make only one dormant/delayed dormant spray application and no more than three foliar spray applications on **almonds** per season, one dormant/delayed dormant spray application and no more than two foliar spray applications on **walnuts** per season, and no more than three foliar spray applications on **filberts** per season. Do not apply within 14 days of harvest.

Apples: Rate applied must not exceed 1/3 fl. oz. per gallon or 1 qt. per 100 gallons. Make no more than 8 applications per season. Do not apply last two treatments closer than 21 days apart. Post bloom use is prohibited.

Citrus (Such as: Grapefruit, Lemon, Orange): Rate applied must not exceed 1/6 fl oz per gallon or 1 pt per 100 gallons. Do not apply to flowering trees. Do not apply when temperature exceeds 95° F. Do not apply more than 2 applications per fruit year. Do not make a second application within 30 days of the first application. Do not pick fruit for consumption until 21 days after application.

Nectarines, Peaches, (trunk sprays only): Do not allow spray to contact fruit. Make only one application per season. Do not apply within 14 days of harvest.

Pecans: Rate applied must not exceed 1/3 fl oz per gallon or 1 qt per 100 gallons. Make no more than 5 applications per season. Do not apply within 28 days of harvest.

Sour cherries: Make no more than 8 applications per season. Do not apply within 14 days of harvest.

Sweet cherries (trunk and lower limb sprays only): Rate applied must not exceed 1/3 fl oz per gallon or 1 qt per 100 gallons. Avoid spray contact with foliage (leaves) since premature leaf drop may result. Make only three applications per year. Do not apply within 6 days of harvest.

Pest		Amount of Dursban 4E per		
		1 gallon	100 gallons	Acre
Aphids (Such as: Apple, Black cherry, Black pecan, Filbert, Rosy apple, Woolly apple, Yellow pecan)	Lygus sp.	1/6 oz†	1 pt†	1 qt
Apple maggot	Mealybugs			
Borers (Such as: American plum, Dogwood, Lesser peachtree, Pacific flatheaded, Peach twig, Peachtree, Shothole)	Mineola moth			
Cherry fruit fly	Mites (Such as: Citrus rust, European red, Pecan leaf scorch, Twospotted spider)†			
Climbing cutworm	Navel orangeworm			
Codling moth	Oriental fruit moth			
European apple sawfly	Pecan nut casebearer			
European corn borer	Pecan weevil			
Eyespotted bud moth	Periodical cicada			
Fall webworm	Phyloxera spp.			
Filbert worm	Plum curculio			
Grasshoppers (Such as: Lubber)†	Potato Leafhopper			
Green fruitworm	Rose chafer			
Hickory shuckworm	Scale insects (Such as: European fruit lecanium, San Jose, Walnut)			
Katydid	Spittlebug			
Leaf rollers and tiers (Such as: Avocado leafroller, Filbert leafroller, Fruittree leafroller, Obliquebanded leafroller, Omnivorous leaflier, Orange tortrix, Pandemis leafroller, Redbanded leafroller, Variegated leafroller)	Spotted tentiform leafminer			
Lepidopterous larvae	Stinkbug			
Lesser appleworm	Tarnished plant bug			
	Thrips (Such as: Citrus)			
	Tufted apple budmoth			
	Walnut husk fly			
	Western tussock moth			
	White apple leafhopper			
	Winter moth			

† Note: Rate applied to citrus must not exceed 1/6 fl oz per gallon or 1 pt per 100 gallons. Rate applied to apples, pecans, or sweet cherries must not exceed 1/3 fl oz per gallon or 1 qt per 100 gallons.

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Specific Directions:

1. Lubber grasshoppers must be controlled when they are small (less than 1 inch in length) by direct contact with spray.
2. For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days in the South or 7 to 10 days in the North after initial treatment to control newly hatched nymphs.

Ornamentals Grown Outdoors in Commercial Nurseries Only

Use Dursban 4E to treat flowers, shrubs, evergreens, vines, shade and flowering trees and non-bearing fruit, nut and citrus trees found to be infested with the types of pests listed in the following tables.

Dilute Dursban 4E with water according to directions given in the tables and apply using suitable hand- or power-operated spray equipment in a manner to provide complete and uniform coverage. Attempt to penetrate dense foliage but avoid over-spraying to the point of excessive runoff. 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. Uniform coverage is critical for effective insect and mite control.

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

Note: Phytotoxicity: Environmental factors and varietal differences have significant effects on phytotoxic expression. Dursban 4E has been tested on numerous ornamental plants without causing serious phytotoxicity at recommended use rates. Some varieties of azaleas, camellias, poinsettias, roses and variegated ivy have shown varying degrees of phytotoxicity following treatment with Dursban 4E. Before treating large numbers of plants (especially those above), it is recommended that a small block of plants be treated and observed for 7 to 10 days to determine phytotoxic potential. Note: The professional user assumes responsibility for determining if Dursban 4E is safe to treated plants under commercial growing conditions.

Sucking Insects and Mites

Pest	Amount of Dursban 4E per		
	1 gallon	100 gallons	Acre
Adelgids (Such as: Cooley and Eastern spruce galls, Pine bark) Aphids (Such as: Apple, Balsam twig, Black pecan, Chrysanthemum, Cottonwood, Crape myrtle, Elm leaf, Melon, Peach, Rose, Spiraea, White pine, Woolly, Woolly apple, Yellow pecan) Boxelder bugs Lace bugs (Such as: Hawthorn) Periodical cicada Plant bugs Psyllids Spittlebugs Thornbug Whiteflies	½ - 1/6 fl oz	8 fl oz - 1 pt	1 pt - 1 qt
Leafhoppers Mealybugs (Such as: Citrus, Taxus) Mites (Such as: Clover, Red spider, Southern red, Spruce spider, Two-spotted spider) ¹ Thrips (exposed)	1/6 fl oz	1 pt	1 qt
Scale insects (Such as: Cottony cushion, Cottony maple, Dearness, Euonymus, Fletcher, Florida wax, Golden oak, Hemispherical, Lecanium, Magnolia, Oak kermes, Oak lecanium, Oystershell, Pine needle, San Jose, Tea, White birch) ²	1/3 fl oz	1 qt	1 qt

Specific Directions:

1. For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days in the South or 7 to 10 days in the North after initial treatment to control newly hatched nymphs.
2. Time applications for control of scale insects when crawlers or first two stages of settled nymphs are present.

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Defoliators and Leafminers

Pest	Amount of Dursban 4E per		
	1 gallon	100 gallons	Acre
Armyworms (Such as: Fall, Yellow-striped) ¹ Bagworms Cankerworms Catalpa sphinx Elm spanworms Fall webworms ² Grasshoppers Greenstriped mapleworms Green fruitworms Hornworms Jackpine budworms Juniper webworms Katydid ³ Leafrollers ³ Maple leafcutters ⁴	Oak skeletonizers Oleander caterpillars Orange tortrix Poplar tentmaker Puss caterpillars Rose chafers Sawflies, exposed (Such as: European pine, Pine, Pin oak, Redheaded) Spring elm caterpillars Springtails Spruce budworms (Such as: Eastern, Western) Tent caterpillars (Such as: Eastern, Forest, Western) Walnut caterpillars Yellownecked caterpillars	1/2 - 1/6 fl oz	8 fl oz - 1 pt 1 pt - 1 qt
Balsam gall midge Beet armyworms Beetles (Such as: Fuller rose) ⁵ Browntail moth Cutworms Cypress tip moth Douglas-fir tussock moth European pine shoot moth Gypsy moth ⁶ Holly bud moth	Mahogany webworms Mimosa webworms Nantucket pine tip moth Oakworms (Such as: California, Orangestriped, Redhumped) Pandora moth Pitch pine tip moth Redhumped caterpillars Subtropical pine tip moth Tussock moth	1/6 fl oz	1 pt 1 qt
Beetles (Such as: Cottonwood leaf ⁷ , Elm leaf, Flea, Willow leaf)		1/6 - 1/3 fl oz	1 pt - 1 qt 1 qt
Leafminers Needleminers (Such as: Jeffrey pine, Lodgepole pine, Spruce) Pine needle midge Rhododendron gall midge		1/3 fl oz	1 qt 1 qt

Specific Directions:

1. For bagworms, treat when larvae are small and actively feeding.
2. For effective control of fall webworms, direct spray into web and immediately surrounding foliage.
3. For effective control of leafrollers, spray should be applied before leaves are tightly rolled.
4. For maple leafcutter on maple trees, apply spray to larvae as cases are being formed. Do not treat sugar maple trees intended for maple syrup production.
5. To reduce foliar feeding on twigs and branches by beetles, applications should be made in the spring or early summer.
6. To control migrating and invading gypsy moth larvae, treat trunks and foliage.
7. For cottonwood leaf beetles, spray larvae and adults infesting cottonwoods. Applications should be made when damaging beetle populations are developing or present.

Borers, Bark Beetles, and Weevils

Pest	Amount of Dursban 4E per		
	1 gallon	100 gallons	Acre
Weevils (Such as: Black vine ¹ , Pine reproduction, Yellow poplar)	1/6 fl oz	1 pt	1 qt
Cranberry girdler ²	1/6 fl oz	1 pt	-
Borers: Clearwing moths (Such as: Ash, Dogwood, Lesser peachtree, Lilac, Oak, Peachtree, Rhododendron), Longhorned beetles (Such as: Cottonwood, Locust, Red oak), Metallic wood (Such as: Bronze birch, Flatheaded appletree, Twolined chestnut ³) Pales weevil adults	1/3 fl oz	1 qt	-
Zimmerman pine moth Northern pine weevil ⁴ Pales weevil ⁴	1 fl oz	3 qt	-
Beetles ⁵ : (Such as: Ambrosia, Anobidae, Black turpentine, Blister, Cottonwood leaf, Elm leaf, European elm bark, Fuller rose, Japanese, June, Mountain pine, Native elm bark ⁶ , Southern pine, Spruce, Western pine, Willow leaf)	2 2/3 fl oz	2 gal	-
Weevils (Such as: Northern pine, Pitch eating, Twig ⁷)	5 1/3 fl oz	4 gal	-

Specific Directions:

1. **Black vine weevils** are night feeders. Late afternoon spraying will maximize control.
2. For **cranberry girdler** larvae infesting Douglas-fir seedlings, direct spray at lower crown and stems following egg laying during summer. For nurseries: apply a minimum of 50 gallons of dilute spray per acre and irrigate immediately after application to move the insecticide into the top 1 to 2 inches of soil.
3. For **borers**, spray trunks and lower limbs of trees and shrubs when adults begin to emerge. For **peachtree borers**, spray flowering trees and shrubs of the genus Prunus as a trunk spray before newly-hatched larvae enter the trees and thoroughly wet all bark areas from ground level to scaffold limbs. Pheromone traps may aid in detection of adult clearwing moths. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat.
4. For control of **northern pine and pales weevil** larvae, apply as a cut stump spray or drench in winter or early spring.
5. For **preventive treatment**, spray the main trunk of trees in the early spring or when threat of attack exists from nearby infested trees. For **remedial treatment**, spray the main trunk of infested trees or logs before adult beetles begin to emerge.
6. To prevent **native elm bark beetles** from over-wintering in uninfested trees, apply using a dilution of 1 gal per 100 gallons of water (1 1/3 fl oz per gallon) as a spray to the bottom 9 feet of 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. Applications can be made from spring to early fall. To reduce twig and branch feeding on trees deemed to be of high value, apply as a spray to the tree crown using a dilution of 1 gal per 100 gallons 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.
7. For **pine seedlings**, treat immediately after transplanting. Treat each seedling with enough spray to thoroughly wet the foliage and stem to the point of runoff. For nurseries: do not use more than 6 gallons of spray dilution per acre.

Ants and Miscellaneous Pests

Pest	Amount of Dursban 4E per		
	1 gallon	100 gallons	Acre
Ants	1/6 fl oz	1 pt	1 qt
Cockroaches (Such as: American, Asian, Brownbanded, German, Oriental, Smokybrown, Wood)			
Fire ants (foraging workers)			
Fire ants (mounds)			
Sowbugs			
Springtails			
Carpenter ants	2 2/3 fl oz	2 gal	-

Specific Directions:

1. For individual **fire ant mounds** apply Dursban 4E as a drench. Dilute 1 fl oz per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2 foot diameter. For best results, apply in cool weather, 65-80° F. or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.
2. If possible, locate **carpenter ant nests** and drench thoroughly.

Ornamentals in Commercial Nurseries Only (Dormant Spray of Tree Pests)

Use Dursban 4E as a dormant or delayed dormant spray at the rates indicated to control the listed insects. While Dursban 4E may be used without oil, oil is recommended to control additional pests such as 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 per 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 Dursban 4E 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: Because cold dry conditions may cause Dursban 4E plus oil to infuse trees resulting in bud damage or drop, do not apply until rain or irrigation has replenished soil moisture such that bark and twigs are not desiccated. For nurseries: do not use more than 4 pints of Dursban 4E Insecticide per acre.

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

Pest	Amount of Dursban 4E per	
	1 gallon	100 gallons
Apple ermine moth	1/12 fl oz	1/2 pt
Aphids (Such as: Mealy plum, rosy apple, Woolly apple)	1/12 - 1/6 fl oz	1/2 - 1 pt
Borers (Such as: Peach twig)		
Cutworms (Such as: Climbing)		
Leafrollers (Such as: Obliquebanded, Pandemis)		
Pear psylla adults		
Scale insects (Such as: San Jose)		

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Specific Directions:

1. For control of apple ermine moth on Malus species, make 2 applications at a 7-14 day interval of Dursban 4E Insecticide in combination with a petroleum spray oil at the rate of 2 - 4% (volume:volume) in a spray to wet application to ensure thorough coverage of all stems and branches. When using tank mixtures, also 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 (Soil Treatment of Containerized or Balled and Burlapped Nursery Stock)

Use Dursban 4E to treat containerized (potted) or balled and burlapped nursery stock to control soil insects.

Pest	Amount of Dursban 4E per	
	1 gallon	100 gallons
Fire ants	1/25 fl oz	4 fl oz
Coffee root mealybug ²	1/6 fl oz	1 pt
Weevils (Such as: Black vine ² White grubs ²)	2/3 fl oz	2 qt

General Use Directions

Completely submerge the container with drain holes or root ball stabilized by burlap in a tank containing diluted Dursban 4E. Do not remove burlap wrap or 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 chemical resistant apron in addition to other PPE listed for applicators and other handlers. Application should be made in a well-ventilated area.

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.

Note: The professional user assumes responsibility for determining if Dursban 4E is safe to treat plants under commercial growing conditions.

Specific Directions:

1. An alternative treatment to submerging containerized or balled and burlapped plants is to drench the soil ball or container with the diluted insecticide solution to the point of runoff on a twice-daily schedule for three consecutive days. Do not remove burlap wrap or container from plants prior to treatment.

2. An alternative treatment to submerging containerized plants is to drench the container with the diluted insecticide solution applying 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 premoistened by irrigation or rainfall before drenching. Do not remove container from plants prior to treatment.

3. An alternate treatment to submerging balled and burlapped plants is to inject Dursban 4E Insecticide into the root ball. Equally distribute 1 to 3 quarts of the dilute solution of Dursban 4E 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 four 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 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 most 30 psi. The application should be made such that splash-back and runoff are minimized.

Ornamentals (Pre-Plant Incorporation Treatment of Field Grown Nursery Stock)

White Grubs and White Fringed Beetles

Apply Dursban 4E Insecticide to soil and incorporate before transplanting or planting to control white grubs and white fringed beetles during transplant or seedling establishment. Apply to the soil surface as a broadcast spray at a rate of 4 quarts per acre using sufficient water to obtain adequate coverage. Do not aerially apply. On the same day of the 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. Dursban 4E Insecticide has been evaluated at the above indicated rate on loblolly pine without phytotoxic effects. 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. The following procedure should be used: 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 Dursban 4E is safe to treated plants under commercial growing conditions.

Garden Symphylans

Apply Dursban 4E 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 rate of 2 - 4 quarts 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 or where deeper incorporation is necessary.

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Precaution: Environmental factors significantly affect phytotoxicity. Dursban 4E Insecticide 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. Do not blend Dursban 4E Insecticide with dry bulk fertilizer materials. Note: The professional user assumes responsibility for determining if Dursban 4E is safe to treated plants under commercial growing conditions.

Warranty Disclaimer

Prentiss Incorporated 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, subject to the inherent risks set forth below. Prentiss Incorporated **MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Prentiss Incorporated or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Prentiss' election, one of the following:

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

Prentiss Incorporated shall not be liable for losses or damages resulting from handling or use of this product unless Prentiss is promptly notified of such loss or damage in writing. In no case shall Prentiss be liable for consequential or incidental damages or losses. The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Prentiss Incorporated or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

STORAGE & DISPOSAL

Do not contaminate water or food by storage or disposal. Open dumping is prohibited.

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 crystallizes, 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 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.

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

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ADHESIVE PANEL

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.



DURSBAN[®] 4E INSECTICIDE

CONTAINS 4 POUNDS OF CHLORPYRIFOS PER GALLON

ACTIVE INGREDIENTS:		
Chlorpyrifos [O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) Phosphorothioate]	44.8%
INERT INGREDIENTS*:	55.2%
	TOTAL:	100.0%



PRENTOX[®] - Registered Trademark of Prentiss Incorporated
DURSBAN[®] - Registered Trademark of Dow AgroSciences LLC

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.)

ORGANOPHOSPHATE

See inside of booklet for additional precautionary statements including First Aid Statement, Personal Protective Equipment (PPE), User Safety Recommendations, and Directions for Use including Storage and Disposal.

E.P.A. Reg. No. 655-499

12/00

E.P.A. Est. No. 655-GA-1

Manufactured by:
PRENTISS INCORPORATED

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