

1386-649

9-24-2001

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

SEP 24 2001

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Ms. Nik Ramswick  
Universal Cooperative, Inc.  
1300 Corporate Center Curve  
Eagan, MN 55121

Subject: Dursban 4E Insecticide, EPA Reg. # 1386-649  
label amendment submitted 6/29/01  
accepted with comments

Dear Ms. Ramswick:

The revised labeling reference 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 changes required by the Agency as listed below.

Topic	Action required
<p>Front panel List of sites</p>	<p><b>CHANGE</b> the statement under the product name from "controls numerous pests, including ticks and chiggers, of non-residential turf and ornamental plants in golf courses, industrial plant sites, and road medians" to the following:</p> <p style="padding-left: 40px;">"Controls numerous pests, including ticks and chiggers, of golf courses (turf only), industrial plant sites (turf and ornamentals), and road medians (turf and ornamentals)."</p> <p><b>Use of chlorpyrifos on ornamentals in golf courses is prohibited. Golf course use is correctly described throughout the rest of the label.</b></p>

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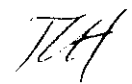
Topic	Action required
Directions for Use section on buildings	<b>CHANGE</b> the section header from "Pest control on outside surfaces and around nonresidential buildings" to:  "Pests around exterior surfaces of industrial plant buildings"  The old text does not clearly indicate that chlorpyrifos can only be used on the exterior of industrial plant buildings (i.e. the term "nonresidential" was too vague when used alone).

Submit two (2) copies of your final printed labeling incorporating the above changes prior to releasing your product for shipment. If the above provisions are not complied with the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A copy of your label stamped "accepted with comments" is enclosed for your records.

If you have any questions please contact me at (703) 308-9423 or Harris.Thomas@EPA.gov.

Sincerely yours,



Thomas C. Harris  
Biologist  
Insecticide Rodenticide Branch  
Registration Division (7505C)

enclosure

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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.**

**ACCEPTED**

with **COMMENTS**

In EPA Letter Dated:

**SEP 24 2001**

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

1386-649

# DURSBAN\* 4E

**Insecticide**

Controls Numerous Pests, Including Ticks And Chiggers, of Non-Residential Turf And Ornamental Plants In Golf Courses, Industrial Plant Sites, And Road Medians.

Not For use On Plants Being Grown For Sale Or Other Commercial Use, Or For Commercial Seed Production, Or For Research Purposes. For Use On Plants Intended For Aesthetic Purposes Or Climatic Modification And Being Grown In Non-Residential Settings Outdoors In Golf Courses, Industrial Plant Sites, And Road Medians.

**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.)

Refer To Inside Of Label Booklet For Additional Precautionary Statements And Directions For Use.

**ACTIVE INGREDIENT:**

Chlorpyrifos [O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate] .....	44.9%
<b>INERT INGREDIENTS **</b> .....	<u>55.1%</u>
Total .....	100.0%

\*DURSBAN and the DURSBAN log are trademarks of DowElanco.

\*\*Contains Xylene Range Aromatic Solvent. Contains 4 Pounds Of Chlorpyrifos Per Gallon.

U.S. Patent No. 3,244,586.

NET CONTENTS: 1 Gallon

EPA Reg. No. 1386-649  
EPA Est. No. 1386-OH-1

UNIVERSAL COOPERATIVES, INC.

EAGAN, MN 55121

# 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. Wear eye protection. Avoid breathing vapors and spray mist. Handle concentrate in a ventilated area. Wear protective clothing and chemically resistant gloves when handling. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Keep away from food, feedstuffs, and water supplies.

## STATEMENT OF PRACTICAL TREATMENT

**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 (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.

For Medical Emergency information call 1-800-228-5635, extension 138.

## 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. 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 formulate this product into other end use products. **NOTE:** This pesticide is to be sold only in this original unbroken package.

**GENERAL INFORMATION:** This product 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. This product 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.

**Attention:** 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.

## SPRAY DILUTION CHART

Gallons Of Spray Mixture Desired	Fluid Ounces* Of DURSBAN® 4E Insecticide To Use	
	0.25% Spray	0.50% Spray
<b>Water Base Spray</b>		
1	2/3	1 1/3
3	2	4
5	3 1/3	6 2/3
10	6 2/3	13 1/3
<b>Oil-Base Spray**</b>		
1	1/2	1
3	1 1/2	3
5	2 1/2	5
10	5	10 1/2

\* Note: 1 fluid ounce = 6 teaspoonfuls.

\*\* Calculated on basis of deodorized kerosene

**NOTE:** Where quick "knockdown" and/or "flushing action" is desired, dichlorvos (DDVP) or pyrethrins may be added to the spray mixture containing DURSBAN® 4E insecticide. For best results, use dichlorvos at a concentration of 0.25% in both water and oil-base sprays; use pyrethrins at 0.25% in oil base sprays. Consult the labeling for the dichlorvos or pyrethrins product used to determine the amount needed to give the desired spray concentration. Also read and observe all use and handling precautions for these products. Do not use DURSBAN® 4E insecticide in combination with dichlorvos (DDVP) or pyrethrins for treatment of food areas of food handling establishments.

Do not apply water-based sprays of this product in conduits, motor housings, junction and switch boxes, or other electrical equipment because of possible shock hazards. If there is need to treat such areas, use only oil-based sprays. Prior to application, de-energize electrical equipment. After application allow time for oil to evaporate before starting motors or placing switches in the "on" position.

**NONRESIDENTIAL TURF IN GOLF COURSES, INDUSTRIAL PLANT SITES, AND ROAD MEDIANS:** Apply to control the pests listed in the following table by applying at the recommended dosages and in accordance with the directions given below. Dilute in water and apply as a coarse, low pressure spray using suitable application equipment. Do not apply more than 1 quart Dursban 4E per acre (1 lb. a.i./A). Thoroughly water immediately after treatment to wash the insecticide into the turf, except as noted. For best results, the lawn should be moist at time of treatment. Treat when pests first appear and repeat at 7 - 10 day intervals, if needed.

Pest	Amount Per		Specific Directions
	1,000 Sq. Ft.	Acre	
Ants (Including foraging Fire Ant)	3/4 Fl. Oz.	1 Qt.	<p>1. Do not allow public use of treated areas during application or until spray has dried. Apply in water at the rate of 1/2 pint per 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. Use enough spray volume to obtain thorough coverage, usually 40 to 100 gallons per acre.</p> <p>2. For individual fire ant mounds, apply as a drench, diluted at the rate of 1 fl. oz. (30 ml) per 4 gallons of water. Gently sprinkle a total of 1 gallon 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. Mosquitoes coming to rest on areas treated for control of turf pests will be killed for varying periods of time after treatment, depending on exposure of treated areas to weather conditions.</p> <p>4. For sod webworms delay watering or mowing the treated areas for 12 to 24 hours after treatment.</p>
Armyworm (Such as Beef, Fall, Yellowstriped)			
Centipedes			
Chiggers (1)			
Chinch Bugs			
Clover mites			
Cutworms			
Crickets			
Earwigs			
Fiery skipper			
Fire ants (mounds)(2)			
Fleas			
Gnats			
Grasshoppers			
Greenbugs			
June beetles			
Leafhoppers			
Lucerne moth			
Millipedes			
Mites (Such as Clover, Formula grass, Winter grain)			
Mosquitoes (3)			
Sod webworm (4) (Lawn moths)			
Sowbugs			
Springtails			
Ticks (1)			
European crane fly	3/4 Fl. Oz.	1 Qt.	
Turfgrass weevil Hyperodes (1)	3/4 Fl. Oz.	1 Qt.	1. Spray suspected problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service specialist.
White grubs [Such as Black turfgrass ataenuis, European chafer, Southern masked chafer, and Japanese Beetle larvae (1)]	3/4 Fl. Oz.	1 Qt.	1. For white grubs, spray when 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 1/2 to 1 inch of water to wash the insecticide into the underlying soil.
Bluegrass billbugs (1)	3/4 Fl. Oz.	1 Qt.	1. For bluegrass billbugs spray early in the season when adults first appear. Treat when pests first appear and repeat at 7 - 10 day intervals if needed.

\*Numbers In Parentheses Refer To Specific Directions.

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**PEST CONTROL ON OUTSIDE SURFACES AND AROUND NONRESIDENTIAL BUILDINGS**

Apply as a residual spray to localized nonresidential outside surfaces of warehouses, industrial plants, manufacturing plants, and food processing plants 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. For spot treatment only.

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	10 Gals.	50 Gals.	
Ants	For Band Treatment (1)			1. To help prevent infestation of buildings: treat a band of soil 6 to 10 feet wide around and adjacent to buildings, also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 4 fluid ounces per 50 gallons of water and apply as a coarse spray at the rate of about 10 gallons spray mixture per 1,000 sq. ft. to thoroughly and uniformly wet the band area. 2. For scorpions: treat or remove accumulations of lumber, firewood, and other materials which serve as insect harborage sites. Note: A period of 4 to 7 days is normally required for maximum effect on cockroaches.
Bees	1/12	3/4	4	
Carpenter ants	Fl. Oz.	Fl. Oz.	Fl. Oz.	
Clover mites	On Outside Surfaces			
Cockroaches				
Crickets	1 1/3	13 1/3	2	
Earwigs	Fl. Oz.	Fl. Oz.	Qts.	
Fleas				
Flies				
Hornets				
Millipedes				
Mosquitoes				
Scorpions (2)				
Silverfish				
Sowbugs				
Spiders				
Ticks				
Wasps				
Yellowjackets				

\*Numbers In Parentheses Refer To Specific Directions.

**ORNAMENTALS (NON-RESIDENTIAL OUTDOOR INDUSTRIAL PLANT SITES AND ROAD MEDIANS):**

Use to treat flowers, shrubs, evergreens, vines, shade and flowering trees found to be infested with pests listed in the following table. Dilute 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 foliage but avoid overspraying to the point of excessive runoff. Do not apply more than 1 quart Dursban 4E per acre (1 lb. a.i./A). Treat when pests appear and repeat at 7 to 10 day intervals, if needed. Do not use on fruit and nut trees that will bear fruit within 1 year of application.

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. This product 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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Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Adelgids (Such as Cooley and Eastern spruce galls, Pine bark)	1/12 Fl. Oz.	1/4 Fl. Oz.	8 Fl. Oz.	1. For bagworms treat when insects are in the crawler stage. 2. For effective control of leafrollers spray should be applied before leaves are tightly rolled. 3. For effective control of 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. 4. 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.
Ants (including foraging fire ants)				
Aphids (Such as Apple, Chrysanthemum, Cottonwood, Elmleaf, Peach, Rose, Spirea, Woolly)				
Armyworms (Such as Fall, Yellowstriped)				
Bagworms (1)				
Boxelderbugs				
Cankerworms, Catalpa sphinx, Chiggers, Citrus mealybugs,				
Cockroaches (American, Brownbanded, German, Oriental, Smokey Brown)				
Elm Spanworm, Fall webworm, Grasshoppers, Greenfruitworm, Hornworms, Jackpine budworm, Juniper webworm, Katydid, Lace bugs, Leafhoppers, Leafrollers (2), Maple leafcutter (3), Mites (Such as Clover, Red spider, Southern red) (4)				
Oleander caterpillar, Orange tortrix, Periodical Cicada, Plant bugs, Poplar tentmaker, Psyllids, Puss caterpillar, Rose chafer, Sawflies, exposed (Such as Pine, Pin oak, Redheaded)				
Sowbugs, Spittlebugs, Spring elm caterpillar Springtails Spruce budworm				
Tent caterpillars (Such as Eastern, Forest, Western)				
Thornbug Walnut caterpillar Western spruce budworm Whiteflies Yellownecked caterpillar				

\*Numbers in Parentheses Refer To Specific Directions.

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Pest	Amount Per in Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Armyworms (Beet)	1/6	1/2	1 Pt.	1. To reduce twig and branch feeding by bark beetles applications should be made in the spring or early summer. 2. To kill migrating and invading gypsy moth larvae treat trunks and foliage. 3. Blackvine weevils are night feeders. Later afternoon spraying will give control in some areas.
Beetles (Fuller rose)	Fl. Oz.	Fl. Oz.		
Native Elm Bark (1)				
Cutworms,				
Leafhoppers,				
Mahogany webworm,				
Mealybugs,				
Mirrosa webworm				
Moths [Such as				
Browntail, Cypress tip,				
Douglas fir tussock,				
European pine shoot, Gypsy (?),				
Holly bud, Nantucket pine tip,				
Pandora, Pitch pine tip,				
Subtropical pine tip, Tussock]				
Oakworms (Such as				
California, Orangestriped,				
Redhumped)				
Redhumped caterpillar				
Thrips (exposed)				
Weevils [Such as Blackvine (3),				
Yellow Poplar, Pine reproduction]				
Beetles [Such as	1/6	1/2	1 Pt.	1. For cottonwood leaf beetles use in water to control larvae and adults infesting cottonwoods. Make the treatment when field counts indicate damaging beetle populations are developing or present.
Cottonwood leaf (1),	to	to	to	
Elm leaf, Flea, Willow leaf]	1/3 Fl. Oz.	1 Fl. Oz.	1 Qt.	
Borers (1): Clearwing moths	1/3	1	1 Qt.	1. For borers, apply 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. 2. For cranberry girdler larvae apply 1 quart per acre. Direct spray at the base of tree using 50 gallons of water per acre. Irrigate immediately after application for soil penetration of 1 to 2 inches. Treat after egg laying during the summer.
(Such as	Fl. Oz.	Fl. Oz.		
Ash, Dogwood, Lesser				
peachtree, Lilac, Oak,				
Rhododendron)				
Metallic wood (Such as Bronze				
birch, Flatheaded apple tree,				
Twolined chestnut)				
Longhorned beetles (Such as				
Locust, Red oak)				
Cranberry girdler larvae (?)				
Leafminers				
Needleminers (Such as				
Jeffrey pine, Ledgepole pine,				
Spruce)				
Scalecrawlers (Such as				
Cottony cushion, Cottonymaple,				
Euonymus, Fletcher, Florida				
wax, Golden oak,				
Hemispherical, Lecanium,				
Magnolia, Oak kermes,				
Oystershell, Pine needle,				
San Jose, Tea, White birch)				

\*Numbers in Parentheses Refer To Specific Directions.

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Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Borers [Such as Cottonwood, Peachtree (1)]	1 Fl. Oz.	3 Fl. Oz.	3 Qts.	1. For peachtree borers apply in 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.
Beetles (1) [Such as Cottonwood leaf, Elm leaf, flea, Fuller rose, Native elm bark (?), Willow leaf]	1 1/3 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. 2. To prevent native elm bark beetles from overwintering in uninfested trees, apply in water to the bottom 9 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.
Beetles [Such as Ambrosia, Anobidae, Black turpentine, European elm bark, Japanese, June, Southern pine, Spruce (1)] Carpenter ants	2 2/3 Fl. Oz.	8 Fl. Oz.	2 Gals.	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 when damage occurs but before adult beetles begin to emerge.

\*Numbers in Parentheses Refer To Specific Directions

**ORNAMENTAL TREE PESTS  
(NON-RESIDENTIAL OUTDOOR INDUSTRIAL PLANT SITES AND ROAD MEDIANS)**

Use Dursban 4E to treat shade and flowering trees, and evergreens found to be infested with pests listed in the following table. 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. Do not apply more than 1 quart Dursban 4E per acre (1 lb. a.i./A). 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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Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Adelgids (Cooley) (Eastern spruce gall) (Pine bark)	1/12 Fl. Oz.	1/4 Fl. Oz.	8 Fl. Oz.	<ol style="list-style-type: none"> <li>1. For bagworms, treat when insects are in the crawler stage.</li> <li>2. For effective control of leafrollers, spray should be applied before leaves are tightly rolled.</li> <li>3. For maple leafcutters on maple trees, apply spray to larvae as cases are being formed. Do not treat sugar maple trees intended for maple syrup production.</li> <li>4. For effective control of spider mites, when large numbers of eggs are present, apply a second spray after 3 - 5 days in the south or 7 - 10 days in the north after initial treatment to control newly-hatched nymphs.</li> </ol>
Aphids				
(Apple)				
(Chrysanthemum)				
(Cottonwood)				
(Elm leaf)				
(Peach)				
(Rose)				
(Spirea)				
(Woolly)				
Bagworms (1)				
Boxelder bugs				
Cankarworms				
Catalpa sphinx				
Citrus mealybugs				
Elm spanworm				
Fall webworms				
Greenstriped maplemorms				
Jackpine budworms				
Juniper webworms				
Katydid				
Lace bugs				
Leafhoppers				
Leafrollers (2)				
Maple leafcutters (3)				
Mites (4)				
(Clover)				
(Red spider)				
(Southern red)				
Oak skeletonizers				
Poplar tentmakers				
Puss caterpillars				
Sawflies, exposed				
(Pine)				
(Pin oak)				
Spring elm caterpillars				
Spruce budworms				
Tent caterpillars				
(Eastern)				
(Forest)				
(Western)				
Walnut caterpillars				
Western spruce budworms				
Yellownecked caterpillars				

\*Numbers in Parentheses Refer to Specific Directions

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Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Beetles (Fuller rose) [Native elm bark (1)]	1/6 Fl. Oz.	1/2 Fl. Oz.	1 Pint	1. To reduce twig and branch feeding by bark beetles, applications should be made in the spring or early summer.
Leafhoppers				
Mahogany webworms				
Mealybugs				2. To kill migrating and invading gypsy moth larvae, treat trunk and foliage.
Mimosa webworms				
Moths (Browntail) (Cypress tip) (Douglas fir tussock) (European pine shoot) [Gypsy (2)] (Holly bud) (Nantucket pine tip) (Pandora) (Pitch pine tip) (Subtropical pine tip) (Tussock)				3. Blackvine weevils are night feeders. Late afternoon spraying will give control in some areas.
Oakworms (California) (Orangestriped) (Redhumped)				
Redhumped caterpillars				
Thrips (exposed)				
Weevils [Blackvine (3)] (Yellow poplar) (Pine reproduction)				

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Beetles {Cottonwood leaf (1)} (Firm Leaf) (Flea) (Willow leaf)	1/6 - 1/3 Fl. Oz.	1/2 - 1 Fl. Oz.	1 Pint - 1 Quart	1. For cottonwood leaf beetles, use Dursban 4E in water to control larvae and adults infesting cottonwoods. Make the treatment when insect counts indicate damaging beetle populations are developing or present. For seedlings, use 8 - 20 gallons of spray volume per acre.

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Borers (1) Clearwing moths (Ash) (Dogwood) (Lesser peachtree)	1/3 Fl. Oz.	1 Fl. Oz.	1 Quart	1. For borers, Apply Dursban 4E to the trunk and lower limbs of trees and shrubs when the adults begin to emerge. Consult your local state agricultural

- (Lilac)
- (Oak)
- (Rhododendron)
- Metallic wood
  - (Bronze birch)
  - (Flatheaded apple tree)
  - (Isolined chestnut)
- Longhorned beetles
  - (Locust)
  - (Red oak)
- Cranberry girdler larvae (2)
- Leafminers
- Needleminers
  - (Jeffrey pine)
  - (Lodgepole pine)
  - (Spruce)
- Scale crawlers
  - (Cottonycushion)
  - (Cottony maple)
  - (Euonymus)
  - (Fletcher)
  - (Florida wax)
  - (Golden oak)
  - (Hemispherical)
  - (Iecanium)
  - (Magnolia)
  - (Oak kermes)
  - (Oyster shell)
  - (Pine needle)
  - (San Jose)
  - (Tea)
  - (White birch)

experimental station or extension service specialist for proper time to treat. Apply uniformly as a coarse low-pressure spray.

2. For cranberry girdler larvae infesting Douglas fir seedlings, apply 1 quart of Durban 4E per acre. Direct spray at the lower crown and stems using 50 gallons of water per acre. Irrigate immediately after application for soil penetration of 1 - 2 inches. Treat after egg laying during the summer.

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Borers (Cottonwood) {Peachtree (1)}	1 Fl. Oz.	3 Fl. Oz.	1 Quarts	1. For peachtree borers, apply Durban 4E in 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.

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Beetles (1) (Cottonwood leaf) (Elm leaf) (Flea) (Fuller rose)	1 1/3 Fl. Oz.	4 Fl. Oz.	1 Gallon	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

[Native elm bark (2)]  
 (Willow leaf)

remedial treatment, apply the spray to the main trunk of infested trees or logs when damage occurs but before adult beetles begin to emerge.

2. To prevent native elm bark beetle from overwintering in uninfested trees, apply Dursban 4F in water to the bottom 9 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.

Pest	Amount Per In Water To Make			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Beetles (1)	2 2/3	8	2	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 or before adult beetles begin to emerge.
(Ambrosia)	Fl. Oz.	Fl. Oz.	Gallons	
(Anobiidae)				
(Black turpentine)				
(Blister)				
(European elm bark)				
(Japanese)				
(June)				
(Southern pine)				
(Spruce)				
Carpenter Ants				
Termites				

\*Numbers In Parentheses Refer To Specific Directions

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### **DORMANT SPRAY [ORNAMENTAL TREE PESTS (Non-Residential Outdoor Industrial Plant Sites and Road Medians)]**

Use 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. Do not apply more than 1 quart Dursban 4E per acre (1 lb. a.i./A). Use the higher dosage for severe infestations. Use oil as recommended by your State Agricultural Experiment Station or Extension Service specialist.

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

Pest	Amount Per In Water To Make:			Specific Directions
	1 Gal.	3 Gals.	100 Gals.	
Aphids (Such as Mealy Plum, Rosey apple, Wooly apple)	1/12 to 1/6 Fl. Oz.	1/4 to 1/2 Fl. Oz.	1/2 to 1 Fl.	1. Tank mix with 1 to 2 gallons to petroleum spray oil recommended for dormant use in 100 gallons of water.
Borer (Such as Peach twig)				
Cutworms (Such as Climbing)				
Leafrollers (Such as Pandemis)				
Pearpsylla adults				
Plantbugs				
Scale (Such as San Jose)				

\*Numbers In Parentheses Refer To Specific Directions.

### **STORAGE AND DISPOSAL**

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 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 and may contaminate ground water. 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.

**PLASTIC 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.

**DRUM DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or dispose of by procedures approved by state and local authorities.

### **WARRANTY AND LIMITATION OF DAMAGES**

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

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