

Reg # 62719 - 72

PM-19

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

Robert F. Bischoff
DOWELANCO
Quad IV 9002 Purdue Road
Indianapolis, IN 46268

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SUBJECT: Label Amendment Submission of 08/03/93 in Response to PR Notice 93-7
EPA Reg. No. 62719-72
DURSBAN 50W IN WATER SOLUBLE PACKETS

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, successfully **REMOVES THE PRODUCT FROM THE SCOPE** of PR Notice 93-7 once the comments on the attached sheet are addressed. Other than the alterations listed on the attached sheet, no further alterations to the labeling are necessary to reflect the requirements of the Worker Protection Standard. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notices 93-7 and 93-11, which reflect the WPS labeling requirements of 40 CFR part 156, subpart K. Any other labeling changes submitted in connection with this amendment application and not directly related to compliance with PR Notice 93-7 or 93-11 have neither been reviewed nor accepted by the Agency. If you wish to make any such changes, you must submit a separate amendment application proposing them. If your product registration is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.



Recycled/Recyclable
Printed with Soy/Canola ink
contains at least 50% recycled fiber

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WHAT YOU NEED TO DO NEXT:

Send to EPA one (1) copy of the final printed labeling.

Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,

James Tompkins
James Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Enclosures

6/17/93

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(Epa copy dated 4/30/93; datapack, base label, Dursban 50W):

(logo) DowElanco

**Dursban® 50W
in Water Soluble Packets**

To be applied only by or under the supervision of pest control operators or other trained personnel responsible for insect control programs

Active Ingredient:
chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate.....50%
Inert Ingredients.....50%

**Keep Out of Reach of Children
WARNING**

Refer to inside of label booklet for additional precautionary information and Directions for Use including STORAGE AND DISPOSAL.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.
In case of emergency endangering health or the environment involving this product, call collect 517-636-4400.
Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-72
01638
*Trademark of DowElanco
DowElanco • Indianapolis, IN 46268, U.S.A.

EPA Est. 464-MI-1
900-001634

Specialty Insecticide

ACCEPTED
with COMMENTS
in EPA Letter Dated

FEB 16 1994

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

62719-72

Revisions:

- 1) Product label amended to remove it from the scope of the Worker Protection Standard.

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(datapack, cover, Dursban 50W):

(logo) DowElanco

Dursban® 50W
in Water Soluble Packets

To be applied only by or under the supervision of pest control operators and other trained personnel responsible for insect control programs

Active Ingredient:

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Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-72
01638

EPA Est. 464-MI-1
900-001634

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Specialty Insecticide

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(datapack, page 1):

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Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

AVISO:

May Be Fatal If Swallowed • Harmful If Inhaled Or Absorbed Through Skin • Causes Eye Irritation

Do not get in eyes, on skin or clothing. Avoid breathing dust and spray mist. 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.

First Aid

If swallowed: Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious person.

If on skin: Wash with plenty of soap and water. Get medical attention.

If in eyes: Flush with plenty of water for 5 minutes. Get medical attention if irritation persists.

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.

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Environmental Hazards

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

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

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 122°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage.
Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Container Disposal: When all packets are used, dispose of empty package in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

General Information

This canister contains eight 4 oz water-soluble packets. Do not allow packets to become wet prior to adding to the spray tank. Wear gloves when handling water-soluble packets. Do not handle with wet gloves. Do not excessively handle water-soluble packets since this may cause breakage. Reseal outer package to protect remaining packets. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage.

Dursban 50W insecticide is a formulation 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 50W 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. Dursban 50W mixes readily with water to form a suspension. Dursban 50W contains a wetting agent. Do not use additional wetting agents, spreaders or stickers.

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

Applicator Safe Handling Procedures

When exposure to spray mist is likely to occur, wear protective equipment and clothing (eye protections, long-sleeved coveralls and waterproof gloves) to prevent exposure of eyes and skin. To prevent breathing of spray mist during application in confined areas, wear a respirator and cartridge(s) approved by NIOSH/MSHA for pesticides.

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.

Mixing Directions

For paddle, sparger and bypass agitation systems.

1. Fill the spray tank 1/3 full or water.
Note: For paddle agitation systems, paddles should be covered with water.
2. Activate agitation system.
3. Add required number of water-soluble packets to obtain desired dilution.
4. Complete tank filling while the packet dissolves and Dursban 50W disperses.
5. Before beginning to spray, make sure Dursban 50W has dispersed and water-soluble packet has dissolved.

Note: Depending on the water temperature and the degree of agitation, the packets and Dursban 50W should be completely dispersed within approximately 5 minutes from the time they were added to the water.

Approved Uses

Turf and Other Outdoor Uses

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This product may not be used on farms, forests, nurseries and greenhouses which produce plants, plant materials or seed for sale, other commercial use, or for research purposes

Use Dursban 50W to control pests infesting lawns, golf courses, parks, perennial turf grasses grown for seed or sod, etc., listed in the following table by application at the recommended dosages. Dilute Dursban 50W in enough water to obtain complete and uniform coverage of pest-infested areas and apply 40 to 200 gallons of water per acre in a manner to obtain complete and uniform coverage of pest-infested areas. Use a coarse, low-pressure spray using suitable application equipment. For best results, the lawn should be moist at time of treatment. Spray when pests first appear; re-treat when needed, but not more often than once every 7 days.

Pest†	Amount of Dursban 50W per Acre	Specific Directions
ants (including foraging fire ants)	2 lb (eight 4 oz packets)	<p>1. Use Dursban 50W for area control of ticks and chiggers infesting non-cropland areas such as roadsides, footpaths, and trails, picnic and camping sites, parks and other recreational areas where these pests are present and create a nuisance or a possible public health problem. Do not allow public use of treated areas during application or until spray has dried. Apply Dursban 50W in water at the rate of 1/2 lb/acre (equivalent to 1/2 oz per 2700 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, ground surfaces and debris using enough spray volume to obtain thorough coverage, usually 40 to 100 gallons per acre.</p> <p>2. 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 weathering conditions.</p> <p>3. For best results in controlling sod webworms, delay watering or mowing the treated area for 12 to 24 hours after treatment.</p>
armyworms (beet) (fall) (yellowstriped)		
centipedes		
chiggers ¹		
chinch bugs		
clover mites		
curworms		
crickets		
earwigs		
fiery skipper		
fleas		
gnats		
grasshoppers		
greenbugs		
June beetles		
leafhoppers		
Lucerne moths		
millipedes		
mites		
(clover) (Bermuda grass stunt) (winter grain)		
mosquitoes ²		
pillbugs		
sod webworm ³ (lawn moths)		
sowbugs		
springtails		
ticks ¹		
European crane fly	3 lb (twelve 4 oz packets)	
turfgrass weevil ¹ (<i>Hyperodes</i>)	4 lb (sixteen 4 oz packets)	<p>1. Spray suspected problem areas in mid-April and again in mid-May or as recommended by your Local Agricultural Extension Service Specialist.</p>

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white grubs¹

(black turfgrass chafer)
(European chafer)
(southern masked chafer)
(Japanese beetle larvae)

4 to 8 lb
(sixteen to thirty-two 4 oz packets)

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 billbugs¹

2 to 8 lb
(eight to thirty-two 4 oz packets)

1. For bluegrass billbugs, spray early in the season when adults first appear. Re-treat as needed.

mole crickets

4 to 6 lb
(sixteen to twenty-four 4 oz packets)

1. Mole Crickets: Apply Dursban 50W in a minimum spray volume of 50 gallons of water per acre using broadcast or suitable hand held application equipment. Apply when early stage nymphs are active. Efficacy may be enhanced by spraying late in the afternoon or early evening and irrigating the turf prior to treatment to move mole crickets close to the soil surface.

Imported fire ants in commercial sod¹

16 lb
(sixty-four 4 oz packets)

1. Imported fire ants: Apply Dursban 50W as a spray to the area of sod to be cut. Immediately after applying the spray soak in with at least 1/2 acre-inch of water or a sufficient volume to thoroughly soak below the cut line. Do not apply a volume or rate of water to cause runoff. Sod can be cut when vegetation has dried and when soil is moist but not wet.

Precaution: Personnel handling treated sod should wear elbow-length chemically resistant gloves and apron. Protective clothing and boots should be worn to prevent repeated skin exposure to treated sod.

Certification Period: 42 days from day of application.

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chiggers¹
(turkey pens)

8 lb
(thirty-two 4 oz packets)

1. For control of chiggers infesting outdoor turkey pens, apply Dursban 50W as a spray to the soil using 100 to 150 gallons of water per acre.

To prevent turkeys from becoming infested with chiggers, spray the soil in pens just before turkeys are transferred to them. For turkeys already infested with chiggers, spray the soil in pens thoroughly. Allow at least three weeks for chigger lesions on the turkeys to heal before turkeys are slaughtered. For optimum results, spray a 10 to 15 ft protective area around the periphery of the treated pens.

Treatment is limited to 2 applications to the soil in turkey pens at intervals of not less than 4 weeks. Do not treat soil in turkey pens later than 7 days before turkeys are to be slaughtered. Avoid getting the spray on food or in waterers. Open feed should be covered during spraying operations, and water troughs should be flushed out immediately after the spraying operations. Do not spray Dursban 50W directly on the turkeys.

[†]Superscripts refer to "Specific Directions".

Pest Control on Outside Surfaces, Around and Under Structures or in Crawl Spaces
Apply Dursban 50W by application as a residual spray to outside surfaces, around and under structures or buildings including porches, window frames, eaves, patios, crawl space areas, garages, refuse dumps and other areas where pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness. Avoid application to surfaces where visible residues are objectionable.

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Pest†	Amount of Dursban 50W in Water to Make 50 Gallons of Diluted Spray	Specific Directions
ants bees boxelder bugs carpenter ants clover mites cockroaches crickets earwigs elm leaf beetles (adults) firebrats fleas flies hornets millipedes mosquitoes pillbugs scorpions ² silverfish sowbugs spiders springtails symphylans ticks wasps yellowjackets	<p style="text-align: center;">Perimeter Treatment</p> <p style="text-align: center;">1/4 to 1 lb (one to four 4 oz packets)</p> <p style="text-align: center;">On Outside Surfaces</p> <p style="text-align: center;">4 lb (sixteen 4 oz packets)</p> <p style="text-align: center;">Under Structures or in Crawl Spaces³</p> <p style="text-align: center;">1/4 to 1 lb (one to four 4 oz packets)</p>	<p>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 to 16 ounces (one to four 4 oz packets) of Dursban 50W 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.</p> <p>2. For scorpions, remove accumulations of lumber, firewood and other materials which serve as harborage sites. Dursban 50W may be applied as a residual spray to surfaces immediately below such materials. Perimeter treatments may reduce pest immigration from surrounding areas.</p> <p>3. Apply spray to foundation areas, cracks and crevices, along sill line, foundation vents, door frames and other areas where pests may find entry or harborage. Apply up to 10 gallons per 1000 sq ft depending on surface texture and type of surface. Use low pressure to minimize splashback. Avoid puddling.</p>

†Superscripts refer to "Specific Directions".

~~Ornamentals (Outdoor, Greenhouse, Shadehouse, Nurseries, etc.)~~

Use Dursban 50W to treat flowers, shrubs, evergreens, vines and shade and flowering trees found to be infested with pests listed in the following table. Dilute Dursban 50W 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. 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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Note for Greenhouse Grown Ornamentals: Environmental factors significantly affect phytotoxicity. While Dursban 50W has been tested on numerous ornamental plants without causing serious phytotoxicity, 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. Two test sprays should be made 7 days apart and the plants observed for another 7 days after the second treatment. Significant phytotoxicity has been observed in the following species following treatment with Dursban 50W.

Apply to these species at your own risk.

Plant Species

Common Name	Scientific Name
copperleaf	<i>Acalyphis wilkesiana</i>
zebra plant	<i>Aphelandra squarosa</i>
schefflera	<i>Brassia acinophylla</i>
black olive	<i>Bucida buceras</i>
papayas	<i>Carica papaya</i>
cissus	<i>Cissus antarctica</i>
croton	<i>Codiaeum variegatum</i>
figus	<i>Ficus nitida</i>
weeping fig	<i>Ficus pumila</i>
Cuban laurel	<i>Ficus retusa</i>
yellow hibiscus	<i>Hibiscus calycinus</i>
red/Chinese hibiscus	<i>Hibiscus rosa-sinensis</i>
impatiens	<i>Impatiens</i> spp.
Boston fern, fluffly ruffle fern	<i>Nephrolepis exaltata</i>
petunia	<i>Petunia</i> spp.
Belinda, caramia, lavande, Jack Frost	<i>Rosa</i> spp.

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Pest†	Amount of Dursban 50W in Water to Make:		Specific Directions
	50 gal	100 gal	
adelgids (cooley spruce gall) (eastern spruce gall) (pine bark)	1/4 oz (one 4 oz packet)	1/2 lb (two 4 oz packets)	<p>1. For bagworms, treat when insects are in the crawler stage.</p> <p>2. For effective control of leafrollers, spray should be applied before leaves are tightly rolled.</p> <p>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.</p> <p>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.</p> <p>5. For effective control of fall webworm, direct spray into web and immediately surrounding foliage.</p>
ants (including foraging fire ants)			
aphids (apple) (chrysanthemum) (cottonwood) (elm leaf) (peach) (rose) (spirea)			
armyworms (fall) (yellowstriped)			
bagworms ¹			
boxelder bugs			
cankerworms			
catalpa sphinx			
chiggers			
citrus mealybugs			
clover mite			
cockroaches (American) (Asian wood) (smokey brown)			

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elm spanworms
fall webworms³
grasshoppers
green fruitworm
hornworms
jackpine budworm
juniper webworms
karydids
lace bugs
leafhoppers
leafrollers²
maple leafcutter³
mites⁴
 (red spider)
 (southern red)
oleander caterpillars
orange tortrix
periodical cicada
plant bugs
poplar tentmaker
phylloids
puss caterpillars
rose chafer
sawflies, exposed
 (pine)
 (pin oak)
 (redheaded)
sowbugs
spittlebugs
spring elm caterpillars
spruce budworms
tent caterpillars
 (eastern)
 (forest)
 (western)
thornbugs
walnut caterpillars
western spruce budworms
whiteflies
yellownecked caterpillars

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armyworms (beet)	1/2 lb	1	<ol style="list-style-type: none"> 1. To reduce twig and branch feeding by bark beetles, applications should be made in the spring or early summer. 2. To control migrating and invading gypsy moth larvae, treat trunks and foliage. 3. Blackvine weevils are night feeders. Late afternoon spraying will give control in some areas.
beetles (native elm bark) ¹	lb	(four 4	
cutworms	(two 4 oz	packets)	
leafhoppers	oz		
mahogany webworms	packets)		
mealybugs			
mimosa webworms			
moths			
(browntail)			
(Cypress tip)			
(Douglas fir tussock)			
(European pine shoot)			
(gypsy) ²			
(holly bug)			
(Nantucket pine tip)			
(Pandora)			
(pitch pine tip)			
(subtropical pine tip)			
(tussock)			
oakworms			
(California orangestriped)			
(redhumped)			
redhumped caterpillars			
thrips			
(exposed)			
weevils			
(blackvine) ³			
(yellow poplar)			
(pine reproduction)			
foliar feeding beetles	1/2 to 1 lb	1 to 2 lb	<ol style="list-style-type: none"> 1. For cottonwood leaf beetles, use Dursban 50W in water to control larvae and adults infesting cottonwoods. Make the treatment when field counts indicate damaging beetle populations are developing or present.
(Mister)	(two to four	(four to	
(cottonwood leaf) ¹	eight	4 oz packets)	
(elm leaf)	4 oz packets)		
(flea)			
(fuller rose)			
(Japanese)			
(June)			
(willow leaf)			

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borers ¹ :	1 lb		
clearwing moths	2 lb		
(ash)	(four 4 oz	(eight 4 oz	
(dogwood)	packets)	packets)	
(lesser peachtree)			1. For borers, apply Dursban 50W
(lilac)			to the trunks and lower limbs of
(oak)			trees and shrubs when the adults
(rhododendron)			begin to emerge. Consult your
metallic wood			State Agricultural Experiment
(bronze birch)			Station or Extension Service
(flatheaded appletree)			Specialist for proper time to treat.
(twolined chestnut)			Apply uniformly as a coarse low-
longhorned beetles			pressure spray.
(locust)			
(red oak)			
leafminers			
needleminers			
(Jeffrey pine)			
(lodgepole pine)			
(spruce)			
scale crawlers			
(cottoncushion)			
(cottony maple)			
(euonymus)			
(Fletcher)			
(Florida wax)			
(golden oak)			
(hemispherical)			
(lecanium)			
(magnolia)			
(oak kermes)			
(oystershell)			
(pine needle)			
(San Jose)			
(tea)			
(white birch)			
borers	3 lb		
(cottonwood)	6 lb		
(peachtree) ¹	(twelve	(twenty-	
	four	four	
	4 oz packets)	4 oz packets)	
			1. For peachtree borers, apply
			Dursban 50W in water to flowering
			trees and shrubs of the genus <i>Prunus</i>
			as a trunk spray before newly-
			hatched larvae enter the trees. Apply
			as a coarse, low-pressure spray.
			Thoroughly wet all bark areas from
			ground level to scaffold limbs.
wood infesting beetles ¹	8 lb	16	
(ambrosia)	1/2 lb		
(Anobiidae)	(thirty-two	(sixty-	
(black turpentine)	six	four	
(cottonwood leaf)	4 oz packets)	4 oz packets)	
(European elm bark)			1. For preventive treatment,
(native elm bark)			apply the spray to the main trunk
(willow)			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.

¹Superscripts refer to "Specific Directions".

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Tree Pests (~~Nurseries, Plantations and Felled Trees~~)

Use Dursban 50W 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 should be treated as necessary.~~ Dilute Dursban 50W 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. Treat when pests appear and repeat at 7 to 10 day intervals, if needed.

Attention: ~~For felled trees, treat after cutting.~~ Do not handle until spray has dried, or wear protective clothing. Treat only fruit and nut trees identified in the "Tree Fruits and Nuts" section of this label.

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

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Pest†	Amount of Dursban 50W in Water to Make		Specific Directions
	50 Gallons	100 Gallons	
adelgids (cooley spruce gall) (eastern spruce gall) (pine bark)	1/4 lb lb (one 4 oz packet)	1/2 (two 4 oz packets)	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 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.
aphids (apple) (chrysanthemum) (cottonwood) (elm leaf) (peach) (rose) (spirea)			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
bagworms ¹ boxelder bugs cankerworms carpenter ants ⁶ catalpa sphinx citrus mealybugs clover mite elm spanworms fall webworms ⁵ fire ants greenstriped mapleworms jackpine budworm juniper webworms katydids lace bugs leafhoppers leafrollers ² maple leafcutter ³ mites ⁴ (red spider) (southern red) oak skeletonizer poplar tentmaker puss caterpillars rose chafer sawflies, exposed (pine) (pin oak) spring elm caterpillars spruce budworm ⁴ tent caterpillars (eastern) (forest) (western) walnut caterpillars western spruce budworms yellownecked caterpillars			5. For effective control of fall webworms, direct spray into web and immediately surrounding foliage. 6. If possible, locate carpenter ant nests and drench thoroughly.

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beetles ¹	1/2 lb		
(native elm bark)	1 lb		
leafhoppers	(two 4 oz	(four	1. To reduce 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.
mahogany webworms	4 oz		
mealybugs	packets)		
mimosa webworms	packets)		
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)			
oakworms			
(California orangestriped)			
(redhumped)			
redhumped caterpillars			
thrips			
(exposed)			
weevils			
(blackvine) ³			
(yellow poplar)			
(pine reproduction)			
foliar feeding beetles	1/2 to 1 lb	1 to 2	1. For cottonwood leaf beetles, use Dursban 50W in water to control larvae and adults infesting cottonwoods. Make the treatment when field counts indicate damaging beetle populations are developing or present. For seedlings, use 8 to 20 gallons spray volume per acre.
(blister)	lb		
(cottonwood leaf) ¹	(two to four	(four to	
(elm leaf)	eight		
(flea)	4 oz packets)	4 oz packets)	
(fuller rose)			
(Japanese)			
(June)			
(willow)			

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borers ¹ :	1 lb		
clearwing moths	2 lb		
(ash)	(four 4 oz	(eight 4	1. For borers, apply Dursban 50W 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.
(dogwood)	oz		
(lesser peachtree)	packets)		
(lilac)	packets)		
(oak)			
(rhododendron)			
metallic wood			
(bronze birch)			
(flatheaded appletree)			
(twolined chestnut)			
longhorned beetles			
(locust)			
(redoak)			
Cranberry girdler larvae ²			2. For cranberry girdler larvae infesting Douglas fir seedlings, apply 2 lb of Dursban 50W 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 to 2 inches. Treat after egg laying during the summer.
leafminers			
needleminers			
(Jeffrey pine)			
(lodgepole pine)			
(spruce)			
scale crawlers			
(cottonycushion)			
(cottony maple)			
(cuonymus)			
(Fletcher)			
(Florida wax)			
(golden oak)			
(hemispherical)			
(lecanium)			
(magnolia)			
(oak kermes)			
(oystershell)			
(pine needle)			
(San Jose)			
(tea)			
(white birch)			
borers	3 lb		
(cottonwood)	6 lb		
(peachtree) ¹	(twelve 4 oz	(twenty-	1. For peachtree borers, apply Dursban 50W in water to flowering trees of the genus <i>Prunus</i> as a trunk spray before newly-hatched larvae enter the trees. Apply as a coarse, low-pressure spray. Thoroughly wet all bark areas from ground level to scaffold limbs.
	four	4 oz	
	packets)		
	packets)		

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beetles [†]	4 lb	
(elm leaf)	8 1/3 lb	
(flea)	(sixteen 4 oz	(thirty-
(fuller rose)	three	
(native elm bark) ²	packets)	4 oz
(willow leaf)	packets)	

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 Dursban 50W 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.

beetles [†]	8 1/3 lb	16 2/3
(ambrosia)	lb	
(Anobiidae)	(thirty-three	(sixty-seven
(black turpentine)	4 oz packets)	4 oz packets)
(European elm bark)		
(Japanese)		
(June)		
(southern pine)		
(spruce)		

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 or before adult beetles begin to emerge. ~~For plantation trees, apply to individual trees using suitable hand- or power-operated spray equipment.~~

weevils [†]	16 1/2 lb	33 1/3 lb	1. For southern pine
(northern pine)	(sixty-six	(133 4 oz	seedlings, treat immediately after
(pales)	4-oz-packets)	packets)	transplanting. Treat each seedling
(pitch-eating)			with enough spray to thoroughly
(twig)			wet the foliage and stems to the
			point of runoff but do not use more
			than 6 gallons of spray per acre.

[†]Superscripts refer to "Specific Directions".

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Tree Fruits and Nuts
Use Dursban 50W at the dosages indicated by application as a foliar spray to control pests listed in the following table. Mix the required dosage of Dursban 50W in water. Spray for thorough and complete coverage of the foliage, using suitable hand- or conventional power- operated spray equipment. Treat when pests first appear or in accordance

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- (2) Replacement of amount of product used.

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