

Mr. Michael W. Melichar
DowElanco
Quad IV--9002 Purdue Road
Indianapolis, Indiana 46268-1189

Subject: Revised Labeling--Change of Product Name
Dursban Turf Insecticide
(formerly Professional Turf Insecticide)
EPA Registration Number 62719-35
Your Submission Dated July 9, 1992

Dear Mr. Melichar:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, is acceptable. A stamped copy is enclosed for your records.

The change of the official name of record of the product from Professional Turf Insecticide to

Dursban Turf Insecticide

is acceptable. We have amended our records to reflect this change.

Sincerely yours,

DHE

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide-Rodenticide Branch
Registration Division (H7505C) -

Enclosure

AUG 6 1992

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-35

Dow *Elanco*

Dursban*

Turf Insecticide

Specialty Insecticide

To be applied only by or under the direct supervision of commercial applicators responsible for insect control programs

Sale to or use by persons owning or occupying a dwelling is strictly prohibited.

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate44.9%
Inert Ingredients:.....55.1%
Contains 4 pounds of chlorpyrifos per gallon.

EPA Reg. No. 62719-35
EPA Est. 464-MI-1
Net Contents 55 gal

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

WARNING AVISO:

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

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. Wear eye protection. Avoid breathing vapors and spray mist. Handle concentrate in a ventilated area. When handling concentrate, wear protective

clothing such as long-sleeved shirt, long-legged pants, hat, rubber gloves and footwear resistant to aromatic solvents, i.e. neoprene or nitrile butadiene rubber. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Keep away from food, feed-stuffs and water supplies.

First Aid

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.

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 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.

Physical or Chemical Hazards

Combustible - Do not use or store near heat or open flame.

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 an emergency endangering life or property involving this product, call collect 517-636-4400.

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

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Dursban* Turf

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
 Read all Directions for Use carefully before using.
Chemigation: 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 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 80 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.
Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

General Information

Dursban Turf Insecticide is an emulsifiable concentrate designed for use as a spray to control various pests injurious to trees, turf and ornamental plants. The pests controlled are listed in the accompanying tables. Dursban Turf Insecticide 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.

Turf and Other Outdoor Uses

Use Dursban Turf Insecticide to control the pests listed in the following table by application at the recommended dosages. Dilute Dursban Turf Insecticide in water and apply as a coarse, low-pressure spray using suitable applicator 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 than once every 7 days.

Pest†	Amount of Dursban Turf Insecticide per		Specific Directions
	1000 Sq Ft	Acre	
ants (including foraging fire ants) armyworm (beet) (fall) (yellowstriped) centipedes chiggers* chinch bugs crickets cutworms earwigs fairy shipper fire ants (mound)* fleas grasshoppers greenbugs June beetles leafhoppers Lucerne moth millipedes mites (clover) (Bermuda grass stung) (winter grain) mosquitoes* pillbugs seed webworm* (lawn moths) sawbugs ticks*	3/4 fl oz	1 qt	<ol style="list-style-type: none"> Use Dursban Turf Insecticide 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 Turf Insecticide 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. Treat low underbrush, grassy areas, woods, and ground surface and debris, using enough spray volume to obtain thorough coverage, usually 40 to 100 gallons per acre. For individual fire ant mounds, apply Dursban Turf Insecticide as a drench, diluted at the rate of 1 fl oz (30 ml) per 4 gallons of water. Gently sprinkle a total of 1 to 2 gallons of the diluted emulsion over the surface of each mound using a gentle spray (such as a sprinkler can). Thoroughly drench 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. 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. For seed webworms, delay watering or mowing the treated area for 12 to 24 hours after treatment.

† Superscripts refer to "Specific Directions".

Pest†	Durban Turf Insecticide per		Specific Directions
	1000 Sq Ft	Acre	
crickets	1 1/2 oz	1 1/2 gal	
white grubs* (black turgrasses atterius) (European chafar) (southern masked chafar) (Japanese beetle larvae)	1 1/2 - 3 fl oz	2 qt - 1 gal	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 - 1 inch of water to wash the insecticide into the underlying soil.
bluegrass billbugs*	3/4 - 3 fl oz	1 qt - 1 gal	1. For bluegrass billbugs, spray early in the season when adults first appear. Pre-treat as needed.
mole crickets	1 1/2 fl oz	2 qt	1. For mole crickets, apply through high pressure injection application equipment such as the Cross Equipment Injectaspray™. Apply in a minimum spray volume of 80 gallons of water per acre. For best results, spray when young nymphs are active.

†Superscripts refer to "Specific Directions".

Pest Control on Outside Surfaces and Around Buildings

Apply Durban Turf Insecticide by application as a residual spray to outside surfaces of buildings including porches, 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.

Pest†	Amount of Durban Turf Insecticide in Water to Make			Specific Directions
	1 Gallon	10 Gallons	80 Gallons	
ants	For Perimeter Treatment			1. To help prevent infestation of 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 - 16 fl oz of Durban Turf Insecticide per 80 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.
bees	1/12 - 1/8 fl oz	3/4 - 3 fl oz	4 - 16 fl oz	
beetle bugs	For Outside Surfaces			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.
carpenter ants	1 1/3 fl oz	13 1/3 fl oz	2 qt	
clever mice				
cockroaches				
crickets				
termites				
wasps				
other leaf beetles (adults)				
beetles				
flies				
hoppers				
millipedes				
mosquitoes				
pillbugs				
scorpions*				
silverfish				
springtails				
ticks				
wasps				
yellowjackets				

†Superscripts refer to "Specific Directions".

Ornamentals (Soil Treatment)

Use Durban Turf insecticide to treat potted, containerized, and balled and burlapped nursery stock to control the insects in the soil attached to the roots of these plants. Completely submerge the ball of soil in a tank containing diluted Durban Turf insecticide. Do not remove burlap wrap or plastic containers with drain holes prior to submerging. Keep

Note: Wear rubber gloves, boots, and apron during this operation. Application should be made in a well-ventilated area.

Note: Environmental factors significantly affect phytotoxicity. Durban Turf insecticide has been tested on numerous ornamental plants without causing serious phytotoxicity. However, because of varying growing conditions and observed for phytotoxic symptoms for at least 7 days, before a large number of plants are treated.

Pest†	Amount of Durban Turf Insecticide in Water to Make		Specific Directions
	1 Gallon	100 Gallons	
fire ants*	1/4 fl oz	4 fl oz	1. An alternate treatment to submerging potted plants is to dilute 4 fl oz of Durban Turf insecticide in 100 gal of water. This dilution should be applied 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.
grubs weevils	2/3 fl oz	2 qt	

† Superscript refers to Specific Directions.

Ornamentals (Outdoor)

Use Durban Turf insecticide to treat flowers, shrubs, evergreens, vines, shade and flowering trees found to be infested with pests listed in the following table. Dilute Durban Turf insecticide 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 over-spraying to the point of excessive runoff. 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: Durban Turf insecticide 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.

Pest†	Amount of Durban Turf Insecticide in Water to Make			Specific Directions
	1 Gallon	3 Gallons	100 Gallons	
adelgids (saw - gall) (eastern spruce gall) (pine bark) beet (including foraging fire ants) cicadas (apple) (strychnine) (underwood) (elm leaf) (sawch) (rose) (spruce) (woolly) caterpillars (elm) (yellow-striped) beetles beetle bugs beetleworms carpenter ants caterpillar aphid chiggers crows mealy bugs clover mite elm sawworm fall webworm grasshoppers green fruitworm harmaline jaspine budworm striped webworm ladybird lace bugs leafhoppers leafrollers mealy aculeator mites (red spider) (southern red) clematis caterpillar orange tort pe-lotted cicada plant bugs poplar borer Psyllid puss caterpillar rose chafar sawflies, exposed (pine) (pin oak) (red-headed) sawbugs spittlebugs spring elm caterpillar spruce budworm tent caterpillar (eastern) (forest) (western) thornbug walnut caterpillar western spruce budworm whiteflies yellow-necked caterpillar	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 adelgids (including) on maple trees, apply spray to larvae as dense 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 - 5 days in the south or 7 - 10 days in the north after initial treatment to control newly-hatched nymphs. 5. Locate carpenter and mealybugs, and crush thoroughly. 6. For control of fall webworm, direct spray into web and immediately adjacent foliage.

† Superscripts refer to "Specific Directions".

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Pest†	Amount of Dursban Turf Insecticide in Water to Make			Specific Directions
	1 Gallon 14 1/2 oz	3 Gallons 14 1/2 oz	100 Gallons 1 pt	
sawflies (beet) beetles* (native elm bark) caterpillars leafhoppers mahogany webworms mealy bugs minnow webworms moths (browntail)	(cypress tip) (Douglas fir tussock) (European pine shoot) (gypsy)* (holly bud) (Nantucket pine tip) (Ponders) (pitch pine tip) (subtropical pine tip) (tussock)	oakworms (California) (orangestriped) (redhumped) redhumped caterpillar thrips (exposed) weevils (blackvine)* (yellow poplar) (pine reproduction)		<ol style="list-style-type: none"> To reduce long and branch loading by bark beetles, applications should be made in the spring or early summer. To kill migrating and invading gypsy moth larvae, treat trunks and foliage. Blackvine weevils are night feeders. Late afternoon spraying will give control in some areas.
leaf feeding beetles* (tiller leaf) (elm leaf) (fir) (tiller rose) (Japanese) (Juno) (willow leaf)	1/8 - 1/3 fl oz	1/2 - 1 fl oz	1 pt - 1 qt	<ol style="list-style-type: none"> For cottonwood leaf beetles, use Dursban Turf Insecticide in water to control larvae and adults infesting cottonwoods. Make the treatment when field counts indicate damaging beetle populations are developing or present.
borers* clearwing moths (ash) (dogwood) (lesser peachtree) (lilac) (oak) (rhododendron) metallic wood (bronze birch) (sawheaded apple tree) (wired chestnut) longhorned beetles (locust) (red oak)	1/3 fl oz	1 fl oz	1 qt	<ol style="list-style-type: none"> For borers, apply Dursban Turf Insecticide 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. For cranberry girdler larvae, apply 1 quart of Dursban Turf Insecticide per acre. Direct spray at the base of tree using 80 gallons of water per acre. Irrigate immediately after application for soil penetration of 1 - 2 inches. Treat after egg laying during the summer.
borers (cottonwood) (peachtree)*	1 fl oz	3 fl oz	3 qt	<ol style="list-style-type: none"> For peachtree borers, apply Dursban Turf Insecticide 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.
beetles* (cottonwood leaf) (elm leaf) (fir) (tiller rose) (native elm bark)* (willow leaf)	1 1/3 fl oz	4 fl oz	1 gal	<ol style="list-style-type: none"> 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 of logs when damage occurs, but before adult beetles begin to emerge. To prevent native elm bark beetles from overwintering in uninfested trees, apply Dursban Turf Insecticide in water to the bottom 8 ft of the trunk. Wet the trunk thoroughly beside and spray to runoff. Care should be taken to keep the spray right to the base of the root flare. Application can be made with either a backpack mistblower or a hydraulic sprayer. Do not spray from spring through to early fall.

†Superscripts refer to "Specific Directions".



Pest	Amount of Dureban Turf Insecticide in Water to Make			Specific Directions
	1 Gallon	5 Gallons	100 Gallons	
Beetles (Ambrosia) (ash-barked) (black turpentine) (European elm bark) (Japanese) (long) (southern pine) (spruce)				Spray the main trunk of trees in the early spring or when brood of adults enters 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.

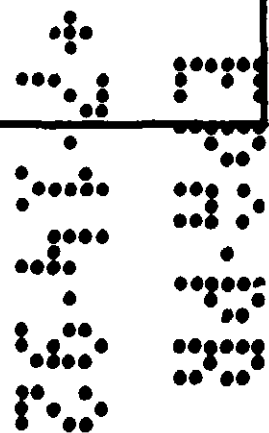
† Superscripts refer to "Specific Directions".

Dormant Spray (Tree Pests)

Use Dureban Turf Insecticide as a dormant or delayed dormant spray at the rates indicated to control the listed insects. Spray the entire tree to dampen using suitable ground spray equipment. Use the higher dosage of Dureban Turf Insecticide 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 of Dureban Turf Insecticide in Water to Make			Specific Directions
	1 Gallon	5 Gallons	100 Gallons	
Aphids (mostly plum) (pear apple) (woolly apple) Bees (beach twig) Caterpillars (climbing) Fleas (parasitic) Pear psylla adults Plant bugs Scale (San Jose)	1/12 - 1/8 fl oz	1/4 - 1/2 fl oz	1/2 - 1 pt	Tank mix with 1 - 2 gallons of petroleum spray oil recommended for dormant use in 100 gallons of water.



Warranty Disclaimer

DowElanco 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 herein. **DOW ELANCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF 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 DowElanco 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 DowElanco's 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.

DowElanco shall not be liable for losses or damages resulting from handling or use of this product unless DowElanco is promptly notified of such loss or damage in writing. In no case shall DowElanco 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 DowElanco or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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DowElanco • Indianapolis, IN 46206, U.S.A.

LABEL CODE 113-10-018 DATE CODE 002
EPA APPROVAL 09/19/88, 07/23/91, 01/23/92
REPLACES 113-10-001, 123-A1ASP012, 123-10-022

Revisions include:

- 1) Added Supplemental Label for Treatment of Potted, Containerized, and Balled and Burlapped Nursery Stock.
- 2) Added Supplemental Label for Control of Mole Crickets in Turfgrass Using High Pressure Injection Equipment.

Discard previous specimen labels.