

AUG 23 1993

Mr. Barry J. Santerre
Unicorn Laboratories
1000 118th Avenue North
St. Petersburg, Florida 33716

Dear Mr. Santerre:

Subject: Revised Labeling
Unicorn Dursban 1-E Insecticide
EPA Registration No. 28293-210
Your Submission Dated May 24, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable, subject to the comment listed below:

- The statement restricting the use of this product to Pest Control Operators contains a typographical error. Please change "To be Allied Only..." to "To be Applied Only..."

A stamped copy of the label is enclosed for your records.

Sincerely,

DHE

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

Enclosure

UNICORN

DURSBAN^(R) 1-E INSECTICIDE

ROACH and FLEA CONCENTRATE

Controls Numerous Pests of Household, Turf and Ornamental Plants.

**To be Allied Only By or Under the Supervision of
Pest Control Operators or Other Trained Personnel
Responsible for Insect Control Programs.**

ACTIVE INGREDIENTS:

Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-
2 pyridyl) phosphorothioate)..... 12.6%

INERT INGREDIENTS:.....87.4%**

**** Contains Petroleum Distillate**

Contains 1 pound chlorpyrifos per gallon.

DURSBAN - Trademark of DowElanco

100.0%

ACCEPTED
with COMMENTS
in EPA Letter Dated

AUG 23 1993

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
28293-210

KEEP OUT OF REACH OF CHILDREN

WARNING

See Side/Back Panel for Additional Precautionary Statements

Do not ship or store with food, feed, drugs or clothing.

PRECAUCION AL USUARIO: Si usted no lee ingles, no use esta
producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read English, do not use this product
until the label has been fully explained to you.)

NET CONTENTS: 1 QUART

MANUFACTURED BY:

Unicorn Laboratories
1000 118th Avenue North
St. Petersburg, FL 33716

EPA REG. NO. 28293-210

EPA EST. NO. 28293-FL-1

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING: Harmful if swallowed. Causes eye irritation. Do not take internally. Do not get in eyes, on skin or clothing. Wash contaminated clothing before reuse. Avoid breathing vapors and spray mist. Avoid spraying food crops. Keep away from food, feedstuffs and domestic water supplies. Keep container closed. Handle concentrate in a ventilated area.

Statement of Practical Treatment

IF SWALLOWED: Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician immediately. Wash skin with plenty of soap and water.

IF INHALED: Remove to fresh air if effects occur, and call a physician.

IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Call a physician.

IF ON SKIN: In case of contact, remove contaminated clothing and immediately wash skin with plenty of soap and water. Thoroughly launder clothing before wearing again.

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine only by injection is an antidote.

Physical and Chemical Hazards

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

Environmental Hazards

This pesticide is extremely toxic to fish, birds and other wildlife. 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 sites. Cover or incorporate spills. Do not contaminate water by cleaning of equipment or disposal 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.

EPA REG. NO. 28293-210

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DIRECTIONS FOR USE

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

PESTS INDOORS

General Information: Use Dursban 1-E insecticide to control the pests indicated in the areas listed below by application as a 0.25% or 0.5% chlorpyrifos spray. Use the 0.25% spray to control light infestations and the 0.5% spray to quickly reduce heavy infestations or as directed. To prepare the spray, dilute Dursban 1-E with water as shown in the following SPRAY DILUTION CHART. Repeat the treatment as needed.

SPRAY DILUTION CHART

Gallons of Spray Mixture Desired	Fluid Oz. Chlorpyrifos - DURSBAN 1-E To Use	
	0.25% Spray	0.50% Spray
Water base spray:		
1	3	5-1/3
3	8	16
5	13-1/3	27
10	27	54

NOTE: 1 Fluid ounce = 2 tablespoonsful = 6 teaspoonsful.
 NOTE: Where quick "knockdown" and/or "flushing action" is desired, dichlorvos (DDVP) or pyrethrins may be added to the spray mixture containing Dursban 1-E insecticide. Consult 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 1-E in combination with dichlorvos (DDVP) or pyrethrins for treatment of food areas of food handling establishments.

Application within food handling establishments (places other than private residences in which food is held, prepared, or served) including, but not limited to, restaurants, grocery stores, bakeries, bottling plants, canneries and grain mills: Use as a spot treatment in and around both food and nonfood areas to control cockroaches, crickets, firebrats, silverfish, spiders and stored product insects such as confused flour beetles, saw-toothed grain beetles, Indian meal moths, rice weevils, Mediterranean flour moths and red flour beetles. Apply as a coarse, low pressure (20 psi or less) spray to localized areas where the above pests have been seen or are suspected of hiding or entering. Apply only enough spray to thoroughly cover the surfaces treated using special care to avoid unnecessary runoff. Do not introduce the spray into the air or allow the spray to contact food or food-contacting surfaces. Areas treated may include dark corners of rooms and closets; along and behind baseboards; beneath and behind stoves, refrigeration units and similar food preparation areas and equipment, floor drains and around plumbing and other utility installations. For ants apply to ant trails and wherever these pest may find entrance.



Spot treatment may include crack and crevice treatment by applying small amounts of material directly into openings leading to voids and hollow spaces in walls and on and around equipment legs and bases of equipment. Equipment capable of delivering a pinstream of insecticide should be used. Repeat treatment as needed but not more than once every 7 days in restaurants and similar food service establishments. In case of emergency (call back) Dursban 1-E may be applied after 2 days from last treatment but emergency use should be limited to once per month.

Applications of this product in food handling establishments other than as a spot and/or crack and crevice treatment are not permitted. Application within residential buildings including homes and apartment buildings and within non-food areas of industrial, institutional and commercial buildings, including hospitals, stores, manufacturing plants, and warehouses: For Spot Treatment Only - Apply as a coarse spray or with a paint brush to localized areas where cockroaches (including strains resistant to certain other insecticides), ants, clover mites, crickets, firebrats, silverfish, and spiders are found or normally occur including dark corners of rooms and closets; cracks and crevices in walls; along and behind baseboards, beneath and behind sinks, stoves, refrigerators and cabinets, around plumbing and other utility installations. For ants apply to ant trails, also around doors and windows and wherever else these pests may find entrance. For clover mites use a 0.5% spray only. NOTE: A period of 4 to 7 days is normally required for maximum effect on cockroaches.

For Control of Carpet Beetles: Thoroughly apply an 0.5% spray as a spot treatment along baseboards and edges of carpeting, under carpeting, rugs and furniture, in closets and on shelving, and wherever else these insects are seen or suspected.

For Control of Fleas and Brown Dog Ticks: Thoroughly apply a 0.5% spray as a spot treatment on infested areas such as pet beds and resting quarters; nearby cracks and crevices, along and behind baseboards, window and door frames and localized areas of floor and floor covering where these pests may be present. Old bedding of pets should be removed and replaced with clean, fresh bedding after treatment. DO NOT TREAT PETS WITH THIS PRODUCT. To control the source of flea infestation, pets inhabiting the treated premises should be treated with a product registered for application to animals.

Attention (Pests Indoors): Do not apply water-base sprays of this product in conduits, motor housings, junction and switch boxes or other electrical equipment because of possible shock hazard. Do not use in poultry houses or other animal buildings. Do not allow spray to contact food, feedstuffs, and water supplies. Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product. Do not allow children or pets to contact treated surfaces until spray has dried. Remove pets and cover fishbowls (tanks) before spraying.



PESTS OUT-OF-DOORS

General Information: Use Dursban 1-E insecticide for control of certain pests on outside surfaces of buildings and on lawns and ornamental plants, for area control of ticks and chiggers. Consult the following directions for dosage and application details to control the pests listed.

Pests on Outside Surfaces of Buildings: Use Dursban 1-E insecticide at the rate of 5-1/3 fluid ounces per one gallon of water (0.5% chlorpyrifos emulsion) to control ants, clover mites, cockroaches, crickets, earwigs, fleas, flies, millipedes, sowbugs, spiders and ticks by application as a residual spray, or with a paint brush to outside surfaces of buildings, including porches, screens, window frames, eaves, patios, garages, refuse dumps and other areas where these pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness.

NOTE: To help prevent infestation of buildings by ants, crickets, earwigs, millipedes and sowbugs (pillbugs), treat a band of soil 6 to 10 feet wide around and adjacent to the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 2 pints of Dursban 1-E per 100 gallons of water and apply as a coarse spray at the rate of about 10 gallons spray mixture per 1000 sq. ft. to thoroughly and uniformly wet the band area.

Pest of lawns and other ornamental and recreational turf grass areas: Use Dursban 1-E to control pest listed in the following table by application at the recommended dosages and in accordance with the directions given below. Dilute Dursban 1-E in enough water to obtain complete and uniform coverage of pest infested areas and apply as a coarse, low-pressure spray using suitable application equipment. Thoroughly water immediately after treatment to wash the insecticide into the turf, except as noted. For best results the lawn should be moist at time of treatment.

DOSAGES AND DIRECTIONS FOR USE ON TURF

PEST	DOSAGE DURSBAN 1-E PER 1000 SQ.FT.	REMARKS
Ants, Armyworms, Brown Dog Ticks, Chiggers, Chinch Bugs, Clover Mites, Crickets, Cutworms, Earwigs, Fleas, Grasshoppers, Sod Webworms, Ticks	3 Fl. Oz.	Spray when pests first appear; retreat when needed. For sod webworms delay watering or mowing the treated areas for 12 to 24 hours after treatment.
Turfgrass (Hyperodes) Weevil	6 Fl. Oz.	Spray suspected problem areas in mid-April and again in May or as recommended by your local Agricultural Extension Service specialist for your area.

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Directions for Use on Turf (Continued) PEST	DOSAGE DURSBAN 1-E PER 1000 SQ.FT.	REMARKS
White grubs (European Chafer and Japanese Beetle larvae only)	6 to 12 Fl. Oz.	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 for your area. Immediately after spraying, irrigate the treated area with 1/2 to 1 inch of water to wash the insecticide into the underlying soil.
Bluegrass Billbug	6 to 12 Fl. Oz.	Spray early in the season when adults first appear. Retreat as needed.

1-1/2 Fl. Oz. per 1000 sq. ft. = 7-1/2 fl. oz. per 5000 sq. ft. = 1 pint per 10,700 sq. ft. = 2 quarts per acre.

DOSAGES and DILUTIONS FOR USE ON ORNAMENTAL PLANTS

Pests Controlled	Amount of DURSBAN 1-E of Water to Dilute		
	3 Gallons	10 Gallons	100 Gallons
Aphids, Bagworms, Eastern Tent Caterpillar, Fall Webworm, Grasshoppers, Mites, Orangestriped Oakworm, Spittlebugs, Whiteflies, Yellownecked Caterpillar	1 fl. oz.	3.2 fl. oz.	2 pints *
Cutworms, Leafhoppers, Mealybugs, Mimosa Webworm, Redhumped Caterpillar, Thrips (Exposed)	2 fl. oz.	6.4 fl. oz.	2 quarts **
Ash Borer, Lilac Borer, Dogwood Borer, Scale Crawlers, Oak Lecanium, Pine Needle, Tea, White Peach	4 fl. oz.	12.8 fl. oz.	4 quarts ***
Peach Tree Borer	11.6 fl. oz.	38.4 fl. oz.	12 quarts ****

- * Equivalent to 4 ounces of chlorpyrifos per 100 gallons.
- ** Equivalent to 8 ounces of chlorpyrifos per 100 gallons.
- *** Equivalent to 1 pound of chlorpyrifos per 100 gallons.
- **** Equivalent to 3 pounds of chlorpyrifos per 100 gallons.

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CONDITIONS and RATES TO USE FOR MOSQUITO CONTROL

Condition of Area to be Treated	Amount to Use Per Acre		Number Acres 1 Gallon of Dursban 1-E will treat
	Dursban 1-E (fluid ounces)	Chlorpyrifos (pounds)	
Larvae Control - None to medium vegetative cover	1.6 to 3.2	0.025 to 0.05	160 to 80
Larvae Control - Medium to heavy vegetative cover	3.2 to 6.4	0.05 to 0.1	80 to 40
Adult Control - Light to medium vegetative cover	3.2	0.05	80
Adult Control - Medium to heavy vegetative cover	6.4	0.1	40

* the higher dosage will also give faster knockdown and longer residual control where there is little or no vegetative cover.

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Pests of Ornamentals: Use Dursban 1-E insecticide to treat flowers, shrubs, vines, shade and flowering trees and evergreens found to be infested with the pests listed in the table. Dilute Dursban 1-E with water according to directions given in the table and apply using suitable hand or power spray equipment in a manner to provide complete and uniform coverage. For best results apply a wetting spray to 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. **NOTE:** Do not use on azaleas, camellias, poinsettias, rose bushes, or variegated ivy because of possible injury to these plants.

Dogwood Borer: Apply Dursban 1-E to the trunks and lower limbs of dogwood trees when the adults begin to emerge. Consult your State Agricultural Experimental Station or Extension Service specialist for proper time to treat in your area. Mix at the rate of one gallon of Dursban 1-E in 100 gallons of water and apply uniformly on trees as a coarse, low-pressure spray.

Peach Tree Borer: Apply Dursban 1-E to flowering trees and shrubs of the Genus Prunus in water 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. Consult your State Agricultural Experimental Station or Extension Service specialist for proper time to treat in your area.

Attention (lawn and ornamental plant pests): Keep children and pets off treated areas until spray has dried. Keep out of lawn and garden fishpools and other bodies of water.

Native Elm Bark Beetle: Prevention of overwintering. To prevent the adult beetle from overwintering in uninfected trees and to reduce beetle populations in disease-free area, apply Dursban 1-

E insecticide as an 0.5% mixture of chlorpyrifos 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 back pack mist blower or a hydraulic pressure sprayer from spring through to the early fall. Prevention of branch and twig feeding on high value elm trees: To reduce the twig and branch feeding on uninfected trees deemed to be high in value apply 0.5% chlorpyrifos water spray to the tree crown. Application should be made in the spring or early summer using a sprayer that will give thorough coverage in the tree crown. Area control of ticks and chiggers: Use Dursban 1-E insecticide to control 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 possible public health problem. Apply Dursban 1-E in water at the rate of 2 pints per acre (equivalent to 1 fl. oz. per 2,700 sq. ft.) using a hydraulic sprayer, mist applicator, knapsack sprayer, or other suitable hand or power spray equipment. Treat low underbrush, grassy areas, weeds and ground surface and debris using enough spray volume to obtain thorough coverage, usually 40 to 100 gallons per acre.

Attention (area control of ticks and chiggers): Do not allow public use of treated areas during application or until spray has dried.

Imported Fire Ant: Treatment of potted, containerized and balled and burlapped nursery stock. Use Dursban 1-E to control imported fire ants in soil attached to roots of these plants by completely submerging the ball of the soil in a tank containing Dursban 1-E diluted at the rate of 16 fl. oz. per 100 gallons of water. Do not remove burlap wrap or plastic containers with drain holes prior to submerging. Keep soil submerged until complete saturation has occurred, normally about 30 seconds. Wear rubber gloves, boots and apron during this operation.

Treatment of Fire Ant Mounds: Apply Dursban 1-E as a drench diluted at the rate of 2 fl. oz. (30 cc) per 2 gallons of water. Gently sprinkle a total of 1 gallon of the diluted solution over the surface of each mound using a sprinkler can. Thoroughly wet mound and surrounding area 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.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store in original container, in safe, dry place. Do not contaminate other pesticides, fertilizers, seeds, food or feed.

PESTICIDE WASTES resulting from the use of this product may be **DISPOSAL:** disposed of on site or at an approved waste disposal facility.



CONTAINER Triple rinse (or equivalent), then offer for recycling
DISPOSAL: or reconditioning, or puncture and dispose of in a
sanitary landfill, or incineration, or, by other
procedures approved by state and local authorities.

NOTICE: Seller warrants that the product conforms with chemical
description and is reasonably fit to the purposes stated on the
label when used in accordance with directions under normal
conditions of use, but neither this warranty nor any other warranty
of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or
implied, extends to the use of this product contrary to label
instructions or under abnormal conditions or under conditions not
reasonably foreseeable to seller, and buyer assumes the risk of any
such use.

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