

JUN 13 1994

Ms. Jacqueline Sherman
Chem-Tox, Inc.
481 Scotland Road
McHenry, Illinois 60050

Subject: Revised Labeling
Chem-Tox Dursban 2E Insecticide
EPA Registration Number 45385-21
Your Application Dated March 3, 1994

Dear Ms. Sherman:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, is acceptable provided that you make the labeling change indicated below before you release the product for shipment bearing the amended labeling:

Revise the Environmental Hazards section to:

This pesticide is toxic to birds, fish, and aquatic invertebrates. Birds feeding in treated areas may be killed. Clean up spilled product to reduce exposure to wildlife. For terrestrial uses, do not apply directly to water. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees....

Submit five (5) copies of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

DHE

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosure

295
I

CHEM-TOX DURSBAN 2E INSECTICIDE

Controls numerous pests of HOUSEHOLDS and FOOD HANDLING ESTABLISHMENTS. Also recommended for Control of WOOD DESTROYING PESTS (outdoors), Pests on Outside Surface of Buildings, FIRE ANT Control and Area Control of TICKS & CHIGGERS.
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 INGREDIENTS:

*Chlorpyrifos [O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate]	20.5%
+INERT INGREDIENTS:	79.5%
TOTAL:	100.0%

** U.S. Patent No. 3,244,586
+ contains aromatic petroleum distillate
*Dursban - registered trademark of the DowElanco Co.

KEEP OUT OF REACH OF CHILDREN WARNING

See side panel for additional precautionary statement.

EPA Reg. No. 45385-21

EPA Est. No. 45385-IL-01

Net Content: _____

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & 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. 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.

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 min. Get medical attention. **If inhaled:** Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical attention immediately. **Not 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 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 weed if bees are visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

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

ACCEPTED
with COMMENTS
in EPA Letter Dated

JUN 13 1994

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
45385-21

BEST AVAILABLE COPY

USE DIRECTIONS

It is a violation of the Federal law to use this product in a manner inconsistent with its labeling. Read all Directions of Use carefully before applying. Do not formulate this product into other end-use products. Do not apply this product through any type of irrigation system.

STORAGE & 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 pesticide and fertilizers. Do not store above 100°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. 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 State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. CONTAINER DISPOSAL: Do not reuse container. Triple rinse, then puncture and dispose of in a sanitary landfill.

APPLICATION

General Information: Use Durban 2E to control the pests indicated in the areas listed below by application as a 0.25% or 0.50% 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 Durban 2E with water or with a suitable base oil* as shown in the following "spray dilution chart". Repeat the treatment as needed.

*Use only deodorized kerosene for oil-based sprays to be applied in food handling establishments.
Note: Where quick "knockdown" and/or "flushing action" is desired, pyrethrins may be added to the spray mixture containing Durban 2E. For best results, use pyrethrins at 0.25% in water-base and 0.5% in oil-base sprays. Consult labeling for the 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.

SPRAY DILUTION CHART

Gallons of spray Mixture Desired	Fluid Ounces* of Durban 2E to Use	
	0.25% spray	0.50% spray
Water-base spray		
1	1.3	2.6
3	4.0	8.0
5	6.6	13.3
10	13.5	26.6
Oil-based spray**		
1	1.0	2.0
3	3.0	6.0
5	5.0	10.0
10	10.0	21.0

*Note: 1 fluid ounces = 2 tablespoonfuls = 6 teaspoonfuls
**Calculated on basis of deodorized kerosene

Use Precautions

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. If there is a need to treat such areas use only oil-base 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. Do not use in poultry houses. 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 fish bowls (tanks) before spraying.

Application Within Food Handling Establishments (Places Other Than Private Residences in which Food is Held, Processed, 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 (including strains resistant to certain other insecticides), Ants, 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 room and closets; along and behind baseboards; beneath and behind stoves, refrigeration units and similar food preparation areas and equipment; floor drains; around plumbing and other utility installations. For ants apply to ant trails and wherever these pests may find entrance. Spot treatment may encompass crack and crevice treatment by applying small amounts of material directly into openings leading to voids and hollow spaces in walls, equipment legs and bases or which occur at points between different elements of construction or between equipment and floors. 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 or more often than once every 14 days in other types of food handling establishments. In case of emergency (call back), Durban 2E 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 Nonfood 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 any 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 a 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 brown dog ticks, thoroughly apply a 0.5% spray as a spot treatment to 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.

Pests Outdoors: General Information: Use Dursban 2E for control of certain pests on outside surfaces of buildings and on lawns, for area control of ticks and chiggers and for mosquito control. Consult the following directions for dosage and application details to control the pests listed. **Chemigation:** Do not apply this product through any type of irrigation system. **Pests on Outside of Buildings:** Use Dursban 2E at the rate of 2.6 fl oz per one gallon of water (0.5% chlorpyrifos emulsion) to control ants, clover mites, cockroaches, crickets, earwigs, fleas, flies, millipedes, mosquitoes, 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 buildings, also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 1 pint of Dursban 2E per 100 gallons of water and apply as a coarse spray at the rate of about 10 gallons spray mixture per 1000 square feet to thoroughly and uniformly wet the band area.

Pests of Lawns: Use Dursban 2E to control pests listed in the following label by application at the recommended dosages and in accordance with the directions given below. Dilute Dursban 2E 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 insecticides into the turf, except as noted. For best results, the lawn should be moist at time of treatment.

Dosage and Directions for Use on Turf

Pest	Dosage Dursban 2E per 1000 sq ft	Remarks
Ants	1.5* fl oz	Spray when pests first appear.
Armyworms		Re-treat when needed. For sod
Chiggers		webworms delay watering or mowing
Chinch bugs		the treated areas for 12 to 24 hours
Clover mites		after treatment.
Crickets		
Cutworms		
Earwigs		
Flea		
Grasshoppers		
Sod worms		
Ticks		
Turfgrass (Hyperodes)	3.0 fl oz	Spray suspected problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service Specialist in your area.
Weevil		
White grubs (European chafer) (Southern masked chafer) (Japanese beetle larvae)	3.0 - 6.0 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 in your area. Immediately after spraying irrigate the treated area with 0.5 to 1 inch of water to wash the insecticide into the underlying soil.
Bluegrass billbug	3.0 - 6.0 fl oz	Spray early in the season when adult first appear. Re-treat when needed.

* 1.5 fl oz per 1000 sq ft = 7.5 fl oz per 5000 sq ft = 1 pint per 10,000 sq ft = 2 quarts per acre

Use Precautions for Lawns: Keep children and pets off treated areas until spray has dried. Keep out of lawn and garden fishpools and other bodies of water.

BEST AVAILABLE COPY

5
5
5

Imported Fire Ant: Treatment of potted, containerized and balled and burlapped nursery stock: Use Dursban 2E to control imported fire ants in soil attached to roots of these plants by completely submerging the ball of soil in a tank containing Dursban 2E diluted at a rate of 8 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 chemically resistant gloves, boots and apron during this operation. An alternate treatment to submerging potted plants is to apply a solution containing Dursban 2E (8 fl oz per 100 gallons of water) as a substitute for plain water during routine watering activities. This solution should be applied to the point of run-off on a twice daily schedule for three consecutive days. Do not remove burlap wrap or container from plants prior to treatment. Application should be made in a well-ventilated area.

Treatment of fire ant mounds: Apply Dursban 2E as a drench diluted at a rate of 1 fl oz (30cc) per 2 gallons of water. Gently sprinkle a total of 1 gallon of the diluted solution over the surface of each mound using a sprinkle 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.

Area Control of Ticks and Chiggers: Use Dursban 2E 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 2E in water at the rate of 1 pint 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. **Use Precautions:** Do not allow public use of treated areas during application or until spray has dried.

Conditions and Rates to Use for Mosquito Control

Conditions of Area to be treated	Amount to Use per Acre		Number of Acres 1 gallon will treat
	Dursban 2E (fluid ounces)	Chlorpyrifos (Pounds)	
Adult Control Light to medium vegetative cover	1.6	0.025	80
Medium to heavy vegetative cover	3.2*	0.05*	40

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

Warranty Disclaimer: Manufacturer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Manufacturer makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty.

Inherent Risks of Use: It is impossible to eliminate all risks associated with use of this product. Lack of performance, or other unintended consequences may result because of such factors as use of this 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 the Manufacturer 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 Manufacturer's election, one of the following:

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

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

Order Code: EC-519
Chem-Tox, Inc.
McHenry, IL 60050

BEST AVAILABLE COPY