

Best Available
COPY

DURSBAN 4E

INSECTICIDE

CONTROLS PESTS OF HOUSEHOLD (cockroaches, ants, brown dog ticks, silverfish, spiders), TURF (chinch bugs, sod webworms, ants, brown dog ticks, cutworms, earwigs, crickets, grasshoppers, certain white grubs, hyperodes weevil) AND ORNAMENTAL PLANTS (aphids, bagworms, grasshoppers, leafhoppers, spittlebugs, mealybugs, whiteflies, exposed thrips, mites, cutworms). ALSO RECOMMENDED FOR MOSQUITO CONTROL AND AREA CONTROL OF TICKS.

To be applied only by or under the supervision of Pest Control Operators, Public Health Organizations, Mosquito Abatement Districts and other Trained Personnel responsible for Insect Control Programs.

ACTIVE INGREDIENTS:

Chlorpyrifos (0,0-diethyl 0-(3,5,6-trichloro-2-pyridyl) Phosphorothioate)	44.8%
Xylene	46.3%
INERT INGREDIENTS	8.9%

ACCEPTED

JAN 17 1979

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, this product is registered under Reg. No. 655-499

FLAMMABLE MIXTURE
DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME.

TOTAL: 100.0%

WARNING
KEEP OUT OF REACH OF CHILDREN

CONTAINS 4 POUNDS OF CHLORPYRIFOS PER GALLON

NET CONTENTS: _____

*DURSBAN® Trademark of The Dow Chemical Co.
U.S. Patent No. 3,244,586

E.P.A. EST. NO. 655-NJ-1 E.P.A. Reg. No. 655-499



Manufactured by
prentiss
Drug & Chemical Co., Inc.

Plant: 338 Wilson Avenue
Newark, N.J. 07105
Office: 363 7th Avenue
New York, N.Y. 10001

GENERAL USE DIRECTIONS:
This product is highly toxic to bees exposed to direct treatment or residue on plants. Protective information may be obtained from your Cooperative Agricultural Extension Service. DURSBAN 4E also is toxic to fish, wildlife and birds.
Do not contaminate water by cleaning of equipment or disposal of wastes. Promptly crush empty containers and bury them or burn in locations away from domestic water supplies.
USE THIS PRODUCT ONLY AS SPECIFIED ON THIS LABEL.

WARNING
KEEP OUT OF REACH OF CHILDREN

MAY BE FATAL IF SWALLOWED. MAY BE ABSORBED THROUGH SKIN. MAY BE INJURIOUS TO EYES AND SKIN. COMBUSTIBLE.
DO NOT TAKE INTERNALLY. DO NOT GET IN EYES OR ON SKIN. WASH THOROUGHLY AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE RE-USE. FLUSH CONTAMINATED EYES WITH PLENTY OF WATER AND GET PROMPT MEDICAL ATTENTION. AVOID BREATHING VAPORS AND SPRAY MIST. AVOID SPRAYING FOOD CROPS. KEEP AWAY FROM FOOD, FEEDSTUFFS AND DOMESTIC WATER SUPPLIES. KEEP CONTAINER CLOSED. DO NOT USE. POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME. HANDLE CONCENTRATE IN A VENTILATED AREA.

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

NOTICE:
Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, 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.

DO NOT REUSE EMPTY DRUM. RETURN TO DRUM RECONDITIONER OR DESTROY BY PERFORATING OR CRUSHING AND BURYING IN A SAFE PLACE AWAY FROM WATER SUPPLIES.

**This product is toxic to fish, birds and other wildlife. Keep out of lakes, streams or ponds. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

USE DIRECTIONS:
PESTS INDOORS: General Information: Use DURSBAN 4E insecticide as a SPOT TREATMENT to control cockroaches, ants, crickets, firebrats, silverfish, spiders, and brown dog ticks in and around residential, industrial, institutional and commercial building including homes, apartment buildings, hospitals, stores, manufacturing plants, and warehouses. DURSBAN 4E may also be used as a CRACK AND CREVICE TREATMENT to control certain of the above pests in and around both food and nonfood areas of food handling establishments (i.e., any area or place in which food is held, processed, prepared and/or served, e.g., restaurants, canneries, bottling plants, grocery stores, bakeries). Dilute DURSBAN 4E with water or with a suitable base oil to make a 0.25% or 0.5% chlorpyrifos spray as shown in the following SPRAY DILUTION CHART. Apply according to directions given for pests listed. Repeat treatment as needed. 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. APPLICATIONS OF THIS PRODUCT IN THE FOOD AREA OR FOOD HANDLING ESTABLISHMENTS, OTHER THAN CRACK AND CREVICE TREATMENT, ARE NOT PERMITTED.

SPRAY DILUTION CHART

Gallons of Spray Mixture Desired	Fluid Ounces* of DURSBAN 4E to Use	
	0.25% Spray	0.50% Spray
Water-base Spray:		
1	2/3	1-1/3
3	2	4
5	3-1/3	6-2/3
10	6-2/3	13-1/3

(Continued on back panel)

SPRAY DILUTION CHART (Continued)

Oil-base Spray**	1	1-1/2	2
1	1-1/2	2	2-1/2
3	4	6	8
5	6-2/3	10	13-1/3
10	13-1/3	20	26-2/3

* Note: 1 fluid ounce = 2 tablespoons = 6 teaspoons
** Calculated on basis of dechlorinated kerosene.

NOTE: Where quick "knockdown" and/or "flushing action" is desired, dichlorvos (DDVP) or pyrethrins may be added to the spray mixture containing DURSBAN 4E insecticide. For best results, use dichlorvos at a concentration of 0.25% in both water and oil-base sprays; use pyrethrins at 0.25% in water-base and 0.05% in oil-base sprays. 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 those products.

COCKROACHES (including strains resistant to certain other insecticides), **ANTS**, **CRICKETS**, **FIREBRATS**, **SILVERFISH**, **SPIDERS**: Use a 0.25% spray to control light infestations and a 0.5% spray to quickly reduce heavy infestations. FOR SPOT TREATMENT apply as a coarse spray or with a paint brush to localized areas where these pests 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 areas, attics, and wherever else these pests may find entrance. Note: A period of 4 to 7 days is normally required for maximum effect on cockroaches. FOR CRACK AND CREVICE TREATMENT carefully apply the spray into localized areas that are or may contain harborage and entries for insect pests. Such openings commonly occur at expansion joints, between different elements of construction, and between equipment and floors. These openings may lead to voids such as hollow walls, equipment legs and bases, conduits, motor housings, junction or switch boxes. Make the treatment using low pressure (20 psi or less) and a straight (pin) stream or coarse stream nozzle so as to avoid possible atomization or splashing of the spray. Apply only enough spray to thoroughly cover the concealed (inside) surfaces of the openings treated, using particular care to avoid runoff and unnecessary contamination of exposed surfaces of floors, walls, and equipment. Do not allow the spray to contact food or food-contacting surfaces. 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. APPLICATIONS OF THIS PRODUCT IN THE FOOD AREAS OF FOOD HANDLING ESTABLISHMENTS, OTHER THAN CRACK AND CREVICE TREATMENT, ARE NOT PERMITTED.

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 leaded 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.

WARNING (PESTS INDOORS): Do not allow children or pets to contact treated surfaces until spray has dried. Remove pets and cover fish bowls (tanks) before spraying. Do not allow spray to contact food, feedstuffs, and water supplies. Thoroughly wash dishes and food handling utensils and surfaces with soap and water if they become contaminated by application of this product. DO NOT USE DURSBAN 4E FOR SPOT TREATMENT IN country houses, other animal buildings, or in edible products areas of food processing plants, restaurants, or other areas where food is commercially prepared and processed. Do not use in serving areas while food is exposed.

PESTS OUT-OF-DOORS: General Information: Use DURSBAN 4E for control of certain pests of lawns and ornamental plants, for area control of ticks and for mosquito control. Consult the following directions for dosage and application details to control the pests listed.

PESTS OF LAWNS AND OTHER ORNAMENTAL AND RECREATIONAL TURF GRASS AREAS: Use DURSBAN 4E insecticide to control ants, brown dog ticks, chinch bugs, crickets, cutworms, earwigs, grasshoppers and sod webworms (lawn moths). Mix DURSBAN 4E with water according to directions given in the following table and apply as a coarse, low pressure spray using suitable application equipment. For best results, the lawn should be moist at time of treatment, and care should be taken to obtain complete and uniform coverage of pest infested areas. Spray when pests first appear; retreat when needed.

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DOSAGE AND DILUTIONS FOR USE ON TURF

Area to be Treated	Amount of DURSBAN 4E	Dilute with Water to Give
500 sq. ft.	3/8 fl. oz.	35 gallons
1,000 sq. ft.	3/4 fl. oz.	30 gallons
5,000 sq. ft.	3-3/4 fl. oz.	150 gallons
10,700 sq. ft.	1/2 Pint	325 gallons
One Acre	1 quart	1,300 gallons

TO CONTROL CERTAIN WHITE GRUBS (larvae of European chafer and Japanese beetle) use two to four times the amounts of DURSBAN 4E shown in the TURF table, i.e. 1 1/2 to 3 fl. oz. per 1,000 sq. ft. or 1/2 to 1 gallon per acre. Apply in enough water to obtain uniform coverage of the area treated followed by thorough watering to wash the insecticide into the turf. For best results treat when grubs are young and actively feeding near the soil surface, usually during late July and August. Consult your local Agricultural Extension Service specialist for proper time to treat in your area.

TO CONTROL TURFGRASS (HYPERODES) WEEVILS use twice the amount of DURSBAN 4E shown in the above TURF table, i.e., 1/2 gallon diluted in 1,300 gallons of water per acre. Spray suspected problem areas in mid-April and again in mid-May. Consult your local Agricultural Extension Service specialist for proper time to treat in your area.

NOTE: To help prevent infestation of buildings by ants, crickets, earwigs and sowbugs (pillbugs), treat a band of soil 6 to 10 feet wide around and adjacent to the building, also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use the same dosage and dilution recommended for control of these pests on turf as shown in the above table. Apply as a coarse spray to thoroughly and uniformly wet the band area.

PESTS OF ORNAMENTALS: Use DURSBAN 4E to control aphids, bagworms, cutworms, grasshoppers, leafhoppers, mealybugs, mites, spittlebugs, thrips (exposed) and whiteflies on flowers, shrubs, vines, shade and flowering trees and evergreens found to be infested with these pests. Dilute DURSBAN 4E with water according to directions given in the following table and apply using suitable hand or power spray equipment in a manner to provide complete and uniform coverage of infested plants. Avoid over-spraying 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, camelias, poinsettias, rose bushes or variegated ivy because of possible injury to these plants.

DOSAGE AND DILUTIONS FOR USE ON ORNAMENTAL PLANTS

Pests Controlled	Amount of DURSBAN 4E in Water to Make		
	3 gallons	10 gallons	100 gallons
Aphids Bagworms Grasshoppers Mites Spittlebugs Whiteflies	0.25 fl. oz.	.8 fl. oz.	1/2 Pint *
Cutworms Mealybugs Leafhoppers Thrips (exposed)	.5 fl. oz.	1.5 fl. oz.	1 Pint*

* Equivalent to 4 ounces of chlorpyrifos per 100 gallons.
** Equivalent to 8 ounces of chlorpyrifos per 100 gallons.

NOTE: Mosquitoes coming to rest on areas treated for control of turf and ornamental plant pests will be killed for varying periods of time after treatment, depending on exposure of treated areas to weathering conditions.

WARNING (LAWN AND ORNAMENTAL PLANT PESTS): Keep children and pets off treated areas until spray has dried. Keep out of lawn and garden fish-pools and other bodies of water. Fish may be killed if their waters are contaminated with this product. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated.

AREA CONTROL OF TICKS: Use DURSBAN 4E to control ticks infesting non-crop land 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 health problem. Apply DURSBAN 4E in water at the rate of 1 pint per acre (equivalent to 1 fl. oz. per 5,400 sq. ft.) using a hydraulic sprayer, mist applicator, knapsack sprayer or other suitable hand or power spray equipment. Treat low under-brush, grassy areas, weeds and ground surface and debris using enough spray volume to obtain thorough coverage, usually 40 to 100 gal. per acre.

WARNING (AREA CONTROL OF TICKS): Do not allow public use of treated areas during application or until spray has dried. Do not apply when weather conditions favor drift from treated areas. Do not apply where runoff into lakes, streams, ponds or other bodies of water is likely to occur. Fish and crustaceans may be killed if their waters are contaminated with this product.

MOSQUITOS: Apply DURSBAN 4E to mosquito infested non-crop areas according to the conditions and rates shown in the following table. Mix DURSBAN 4E with either water or oil, such as Kerosene or No. 2 fuel oil, using sufficient spray volume to give uniform coverage of area treated. Apply the spray using suitable application equipment such as hand and power ground sprayers, mist applicators, and aerial spray equipment.

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 4E Will Treat
	Dursban 4E (fl. oz.)	Chlorpyrifos (pounds)	
Larval Control			
None to medium vegetative cover	0.4 to .08	0.0125 to 0.025	160 to 80
Medium to heavy vegetative cover	0.8 to 1.6*	0.025 to 0.05*	80 to 40
Adult Control			
Light to medium vegetative cover	0.8	0.025	80
Medium to heavy vegetative cover	1.6*	0.05*	40

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

WARNING (MOSQUITO CONTROL): DURSBAN 4E is toxic to shrimp, crabs and fish. Do not apply to water containing crustaceans and fish. Consult your State Fish and Game Department before using this product for mosquito control.