

PH 10

70-232

10 of 12

APR 29 1985

Mr. Jon M. Gehring
Rigo Company
P.O. Box 89
Buckner, KY 40010

Dear Mr. Gehring:

Subject: Rigo Dursban 2EC Liquid Insecticide
EPA Registration No. 70-232
Your Application Dated April 8, 1985

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 registration record for the product named above has been amended to include the additional product name listed below. It is understood that the label will be identical with that of the basic label accepted under this registration except for product name.

Rigo's Best Dursban 2EC Liquid Insecticide

Sincerely yours,

Jay S. Ellenberger
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

Enclosure

RD/IRB:JOB-85095:Ellenberger:RD:85/21:EK:Kendrick:898-1270:4/23/85:Del.4/29/85

CONCURRENCES

SYMBOL ▶							
SURNAME ▶							
DATE ▶							

PH 4 70-232 70-232 ^{Jan 10}

ACCEPTED
with COMMENTS
in EPA Letter Dated:

APR 29 1985

R I G O

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

DURSBAN^{(R)*} 2EC

70-232

Liquid Insecticide

Controls Numerous Pests of Households, Turf and Ornamental Plants. Also Recommended for Mosquito Control and Area Control of Brown Dog Ticks and Chiggers.

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)	22.400%
Heavy Aromatic Naptha.	57.845%
Aromatic petroleum derivative solvent.	14.755%

INERT INGREDIENTS:	5.000%
TOTAL	100.000%

Contains 2 pounds of chlorpyrifos per gallon.

(R)*Trademark of The Dow Chemical Company

EPA Reg. No. 70-232
EPA Est. No. 70-KY-1

NET CONTENTS
ONE GALLON

WARNING
KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: May be fatal if swallowed. May be fatal if absorbed through skin or clothing. Avoid breathing of vapors. Wash thoroughly after handling. Do not wear contaminated clothing. Keep away from food, feedstuffs and water supplies.

Statement of Practical Streatment

If Swallowed: Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician immediately. If On Skin: In case of contact, remove contaminated clothing and immediately wash skin with soap and water. If In Eyes: Flush eyes with plenty of water for 15 minutes. Call a physician.

Note to Physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine only by injection is an antidote.

Physical or Chemical Hazards

COMBUSTIBLE

Do Not Use or Store Near Heat or Open Flame

Environmental Hazards

This pesticide is extremely toxic to fish, birds, and other wildlife. 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 or equipment or disposal of waste.

This product is highly toxic to bees exposed to direct treatment or residues on plants. Protective information may be obtained from your Cooperative Agricultural Extension Service.

AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, Drugs or Clothing

STORAGE AND DISPOSAL

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

STORAGE: Store in cool, dry location away from children and domestic pets.

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

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved State and local procedures.

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 2EC 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 2EC with water or with a suitable base oil+ as shown in the following SPRAY

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DILUTION CHART. Repeat the treatment as needed.

+Use only deodorized kerosene for oil-based sprays to be applied in food handling establishments.

SPRAY DILUTION CHART

Gallons of Spray Mixture Desired	Fluid Ounces+ of DURSBAN 2EC to Use	
	0.25% spray	0.50% spray
Water-base spray		
1	1 1/3	2 2/3
3	4	8
5	6 2/3	13 1/3
10	13 1/3	26 2/3
Oil-Base spray++		
1	1	2
3	3	6
5	5	10
10	10	21

+Note: 1 fluid ounce = 2 tablespoonfuls = 6 teaspoonfuls
 ++Calculated on basis of deodorized kerosene

NOTE: Where quick "knockdown" and/or "flushing action" is desired, dichlorvos (DDVP) or pyrethrins may be added to the spray mixture containing DURSBAN 2EC 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 these products. Do not use DURSBAN 2EC 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, 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 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 rooms and closets; along and behind baseboards; beneath

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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 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 often 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), DURSBA 2EC 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 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 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.

Attention (Pests Indoors): Do not apply water-base sprays of this product in conduits, motor housings, junctions and switch boxes or other electrical equipment because of possible shock hazard. If there is 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 or other animal buildings. Do not allow spray to contact food, feed-stuffs, 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.

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PESTS OUT-OF-DOORS

General Information: Use DURSBAN 2EC insecticide for control of certain pests on outside surfaces of buildings and on lawns and ornamental plants, 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.

Pests on Outside Surfaces of Buildings: Use DURSBAN 2EC at the rate of 2 2/3 fluid ounces per one gallon of water (0.5% chlorpyrifos emulsion) to control ants, clover mites, cockroaches, crickets, earwigs, fleas, flies, millipedes, mosquitoes, sowbugs, spiders and brown dog 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. Do not treat or allow the spray to contact plants (lawns, flowering plants, shrubs, trees, evergreens, etc.) because of possible injury. 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 2EC 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.

Pests of Lawns and other Ornamental and Recreational Turf Grass Areas: Use DURSBAN 2EC to control pests listed in the following table by application at the recommended dosages and in accordance with the directions given below. Dilute DURSBAN 2EC 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.

Pests of Ornamentals: Use DURSBAN 2EC insecticide to treat flowers, shrubs, vines, shade and flowering trees, and evergreens found to be infested with pests listed in the following table. Dilute DURSBAN 2EC 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 hedges, or variegated ivy because of possible injury to these plants.

Dogwood Borer: Apply DURSBAN 2EC to the trunks and lower limbs of dogwood trees when the adults begin to emerge. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat in your area. Mix at the rate of two quarts of DURSBAN 2EC in 100 gallons of water and apply uniformly on trees as a coarse, low-pressure spray.

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DOSAGES and DIRECTIONS for USE on TURF

Pest	Dosage DURSBAN 2EC per 1000 sq.ft.	Remarks
Ants Armyworms Chiggers Chinch bugs Clover mite Crickets Cutworms Earwigs Fleas Grasshoppers Sod webworms Brown Dog Ticks	1½ fl. oz.	Spray when pests first appear; retreat when needed. For sod webworms delay watering or mowing the treated area for 12 to 14 hours after treatment.
Turfgrass (Hyperodes) weevil	3 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.
White grubs (European chafer and Japanese beetle larvae only)	3 to 6 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 ½ to 1 inch of water to wash the insecticide in the underlying soil.
Bluegrass billbug	3 to 6 fl. oz.	Spray early in the season when adults first appear. Retreat when needed.

+1½ fl. oz. per 1000 sq.ft. = 7½ fl. oz. per 5000 sq.ft. = 1 pint per 10,700 sq.ft. = 2 quarts per acre.

Peach Tree Borer: Apply DURSBAN 2EC 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 Experiment Station or Extension Service specialist for proper time to treat in your area.

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.

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.

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Native Elm Bark Beetle: Prevention of Overwintering. To prevent the adult beetle from overwintering in uninfected trees and to reduce beetle population in disease free areas, apply DURSBAN 2EC insecticide as a 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. Applications 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 a 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 to the tree crown.

Area Control of Brown Dog Ticks and Chiggers: Use DURSBAN 2EC insecticide to control brown dog 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 2EC 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.

Attention (Area Control of Brown Dog 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 2EC 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 2EC diluted at the rate of 8 fl.oz. per 100 gallons of water. 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 2EC as a drench diluted at the 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 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.

Mosquitoes: Apply DURSBAN 2EC insecticide to mosquito infested, non-crop areas according to the conditions and rates shown in the following table. Mix DURSBAN 2EC 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.

WARNING (Mosquito Control): Read complete Environmental and Use Precautions and consult your State Fish and Game Department before using this product for mosquito control.

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DOSAGES and DILUTIONS for USE on ORNAMENTAL PLANTS

Pests Controlled	Amount of DURSBAN 2EC in Water to Make			
	3 gals.	10 gals.	100 gals.	
Aphids Bagworms Eastern tent caterpillar Fall webworm Grasshoppers	Mites Orangestriped oakworm Spittlebugs Whiteflies Yellownecked caterpillar	0.5 fl.oz.	1.6 fl.oz.	1 pint ⁺
Cutworms Leafhoppers Mealybugs	Mimosa webworm Redhumped caterpillar Thrips (exposed)	1.0 fl.oz.	3.2 fl.oz.	1 quart ⁺⁺
Ash borer Lilac borer Dogwood borer	Scale crawlers: Oak lecanium Pine needle Tea White peach	2.0 fl. oz.	6.4 fl.oz.	2 quarts ⁺⁺⁺
Peach tree borer		5.8 fl.oz.	19.2 fl.oz.	6 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.

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 2EC Will Treat
	DURSBAN 2EC (fl. oz.)	Chlorpyrifos (pounds)	
Larval Control None to medium vegetative cover	0.8 to 1.6	0.0125 to 0.025	160 to 80
Medium to heavy vegetative cover	1.6 to 3.2 ⁺	0.025 to 0.05 ⁺	80 to 40
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.

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NOTICE: Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

Manufactured by

RIGO COMPANY
BUCKNER, KENTUCKY 40010

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