**BOTTLE** 

## WILSON DURSBAN® 2E INSECTICIDE

## Contains Chlorpyrifos

For use by pest control operators only to control numerous pests of turf, ornamental plants and industrial locations and for agricultural use to control cutworms in tobacco.

This product is not to be used in and around homes or other residential areas such as parks, school grounds, playing fields. It is not for use by homeowners or other uncertified users.

#### COMMERCIAL

### REGISTRATION NO. 24424 PEST CONTROL PRODUCTS ACT

GUARANTEE: Chlorpyrifos......240 g/L



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READ THE LABEL AND BOOKLET BEFORE USING. KEEP OUT OF REACH OF CHILDREN

> Nu-Gro PR Inc., 10 Craig St., Brantford, ON N3R 7J1

Dursban® is a trademark of Dow AgroSciences LLC. Nu-Gro Corp. is a licensed user.

**PRECAUTIONS:** 

MAY BE FATAL IF SWALLOWED.

MAY BE FATAL IF ABSORBED THROUGH SKIN.

DANGER - EYE IRRITANT.

CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY.

CAUSES SKIN IRRITATION.

USE IN INDUSTRIAL FOOD AREAS ONLY AS SPECIFIED IN THIS BOOKLET. DO NOT USE IN FOOD PREPARATION AND SERVING OR STORAGE AREAS: GROCERY STORES, HOSPITALS, SCHOOLS, INSTITUTIONAL BUILDINGS.

**DO NOT** get in eyes, on skin or clothing. Avoid breathing vapours and spray mist. Wear protective clothing, chemically resistant gloves and chemical worker's goggles when handling. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Discard contaminated leather articles, including shoes. Handle concentrate in a ventilated area. Keep off treated areas until the product is dry.

**FIRST AID:** If in eyes: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel. If on skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. If swallowed: DO NOT induce vomiting. Call a physician or poison control centre and/or transport to medical facility IMMEDIATELY. If inhaled: Remove to fresh air if effects occur. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection is the preferable antidote. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. Supportive care. Treatment based on judgement of the physician in response to reaction of the patient.

### AGRICULTURAL CHEMICAL.

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

ENVIRONMENTAL AND USE PRECAUTIONS: This product is highly toxic to bees exposed to direct treatment or residues on plants. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Dursban® 2E insecticide is highly toxic to fish, birds and other wildlife. This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment. Fish and crustaceans may be killed at application rates recommended on this label. Do not apply where these are important resources. Do not apply where runoff is likely to occur. Do not apply when weather conditions favour drift from areas treated. Avoid spraying tree crown before mid-morning. Do not apply when birds are nesting in trees to be treated.

# COMBUSTIBLE – DO NOT USE OR STORE NEAR HEAT OR OPEN FLAME. DO NOT CUT OR WELD CONTAINER.

**STORAGE:** Do not contaminate water, food or feed by storage or disposal. Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 38° C 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.

#### **DISPOSAL:**

- 1) Triple or pressure rinse the emptied container and add the rinsings to the spray mixture in the tank.
- 2) Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
- 3) Make the empty container unsuitable for further use.
- 4) Dispose of the container in accordance with provincial requirements.
- 5) For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for the clean-up of spills.

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**PAMPHLET** 

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### **USE DIRECTIONS:**

#### PESTS INDOORS

### **General Information**

This product is used for:

**Crack and crevice** treatment in ship holds, railroad boxcars, industrial plants, manufacturing plants, warehouses, meat packing plants, food processing plants.

**Spot treatment** in industrial plants, manufacturing plants, warehouses, meat packaging plants, food processing plants.

Use Dursban® 2E Insecticide to control the pests indicated in the areas listed below by application as a 0.24% spray to control light infestations and the 0.48% spray to quickly reduce heavy infestations or as directed. To prepare the spray, dilute Dursban® 2E with water or with a suitable base oil as shown in the following "spray dilution chart". Repeat the treatment as needed.

SPRAY DILUTION CHART		
LITRES OF SPRAY	mL of DURSBAN® 2E TO USE	
MIXTURE DESIRED	0.24% SPRAY	0.48% SPRAY
Water Base Spray		
1	10	20
2	20	40
5	50	100
10	100	200
25	250	500
Oil Base Spray		
1	8	16
2	16	32
5	40	80
10	80	160
25	210	420

# Application within meat packing plants, food processing plants, bottling plants canneries and grain mills. Use only during close down periods.

Use as a spot treatment to control cockroaches, ants, crickets, firebrats, silverfish and spiders in and around nonfood areas by application as a coarse, low pressure (150 kPa or less) spray or with a paint brush 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, 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 at points between different elements of construction between equipment and floors. The use of chlorine based cleaning materials will significantly reduce the residual effect of Dursban® 2E.

Remove all food, packaging materials and utensils before spraying. After spraying, wash all surfaces that may contact food and rinse thoroughly with potable water before reuse for food processing.

# Applications of this product in food handling establishments and preparation, serving or storage areas is not permitted.

**NOTE:** A period of 4 to 7 days is normally required for maximum effect on cockroaches.

ATTENTION (Pests Indoors): Do not apply water-base sprays of this product on 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 or other animal buildings. Do not allow spray to contact food, feedstuffs and water supplies. Keep off treated surfaces until spray has dried.

### PESTS OUT-OF-DOORS

#### **General Information**

Use Dursban® 2E to control certain pests of turf (in golf courses, industrial sites, highway medians and sod farms) and ornamental plants (commercial production only) greenhouses, nurseries, industrial sites and around buildings (industrial plants, manufacturing plants, warehouses, meat packing plants or food processing plants). Consult the following directions for dosage and application details to control the pests listed.

### **Pest Control Around Industrial Buildings**

Apply Dursban® 2E as a residual spray around the outside of buildings as a perimeter soil treatment or localized areas on outside surfaces of industrial plants, manufacturing plants, warehouses, meat packing plants, food processing plants.

DIRECTIONS FOR USE AROUND BUILDINGS		
PEST	AMOUNT OF DURSBAN® 2E	SPECIFIC DIRECTIONS
	PER 100 m <sup>2</sup>	
Ants,	45 mL†	To help prevent infestation of
Crickets,		buildings treat a band of soil 2-3 m
Earwigs,		wide around and adjacent to the
Millipedes,		building foundation to a height of 50
Sowbugs		cm to 1 m or use as a spot treatment
(Pillbugs)		where pests are active and may find
		entrance. Dilute in enough water to
		obtain complete and uniform
		coverage and apply as a coarse spray
		to thoroughly wet the band area.

 $\dagger 45 \text{ mL} / 100 \text{ m}^2 = 225 \text{ mL} / 500 \text{m}^2 = 450 \text{ mL} / 1000 \text{m}^2 \text{ or } 4.5 \text{ L/ha}$ 

PEST	SPRAY DILUTION	SPECIFIC DIRECTIONS
Spiders,	0.48% Solution	Close all windows and remove potted plants.
Carpenter Ants,	(See spray dilution	Apply Dursban® 2E by hand held, backpack or
Wasps,	chart)	hydraulic sprayer to nesting sites and other
Hornets,		localized areas where pests congregate. In
Bees,		order to minimize drift, apply a coarse spray
Box Elder Bugs,		thoroughly wetting the surface but not
Cluster Flies		allowing runoff to occur. This can best be
		achieved by utilizing low gun pressures to
		generate large droplets. Avoid repeat
		applications at intervals of less than 50 days.

**NOTE:** To help prevent infestation of buildings by ants, crickets, earwigs, millipedes and sowbugs (pillbugs), either treat a band of soil 2 to 3 metres wide adjacent to the building and the building foundation to a height of 50 cm to 1 m or use as a spot treatment where pests are active and may find entrance. Use the same dosage and dilution recommended for ant control on turf shown in the previous table. Apply as a coarse spray to thoroughly and uniformly wet the band area. Keep off treated areas until spray has dried.

## Pest Control in Turf (golf courses, industrial sites, highway medians and sod farms)

Use Dursban® 2E to control the pests listed in the following table 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 turf immediately after treatment to wash the insecticide into the turf, except as noted. For best results, the turf should be moist at time of treatment.

DOSAGES AND DIRECTIONS FOR USE ON TURF			
PEST	AMOUNT OF DURSBAN® 2E PER 100 m <sup>2</sup>	REMARKS	
Ant, Chinch Bugs, Cutworms	45 mL†	Spray when pests first appear; repeat when needed.	
Sod Webworms	45 mL	For Sod Webworms delay watering or mowing the treated area for 12 to 24 hours after treatment.	

 $\dagger 45 \text{ mL} / 100 \text{ m}^2 = 225 \text{ mL} / 500 \text{ m}^2 = 450 \text{ mL} / 1000 \text{ m}^2 \text{ or } 4.5 \text{ L/ha}$ 

**Pests Of Ornamentals (commercial production only)** – **greenhouses, nurseries, industrial sites:** Use Dursban® 2E to treat flowers, shrubs, vines, shade and flowering trees, and evergreens found to be infested with the pests listed in the following table. Dilute Dursban® 2E 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 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, geraniums, oxalis, coleus or variegated ivy because of possible injury to these plants.

DOSAGES AND DILUTIONS FOR USE ON ORNAMENTAL PLANTS			
(commercial production only) – greenhouses, nurseries, industrial sites			
PEST CONTROLLED	HOST PLANTS	DOSAGES AND DILUTIONS FOR USE	
Eastern Tent Caterpillar, Forest Tent Caterpillar	Ash, Birch	1.0 L / 1000 L	
Mites such as Two-spotted Spider Mite, European Red Mite, Spruce Spider Mite, Red Oak Mite, Clover Mite, Honey Locust Mite	Arborvitae Juniper	750–1000 mL / 1000 L	
Aphids	Beech, Birch, Elm, Hickory, Linden, Maple, Oak, Pine, Flowering Cherry, Flowering Plum, Spruce, Tulip Tree, Viburnum, Willow, Spirea, Nasturtium	750 mL / 1000 L	
Grasshoppers	Various Ornamental Plants	1.0 L / 1000 L	
European Pine Sawfly, Red Headed Pine Sawfly	Various Ornamental Plants	1.0 L / 1000 L	
Spittle Bugs such as Meadow Spittle Bug	Conifers Mountain Ash	175-300 mL / 1000 L	
Whiteflies	Various Ornamental Plants	1.0 L / 1000 L	
Leafhoppers such as Potato and Six Spotted Leafhoppers	Various Ornamental Plants	2.0 L / 1000 L	
Thrips	Various Ornamental Plants	1.0 L / 1000 L	
Borers such as Ash and Lilac Borer	Locust, Birch, Mountain Ash, Willow, Lilac	1.0 L / 1000 L	
Scale Insects such as Lecanium, Cottony Maple, San Jose, Oystershell	Various Ornamental Plants	4.0 L / 1000 L	

<sup>1.0</sup> L is equivalent to 240 g of Chlorpyrifos per 1000 L 2.0 L is equivalent to 480 g of Chlorpyrifos per 1000 L 4.0 L is equivalent to 960 g of Chlorpyrifos per 1000 L

**ATTENTION** (**Turf and Ornamental Plant Pests**): Keep off treated areas until spray has dried. Keep out of fish pools and other bodies of water.

**Cutworms In Tobacco:** Dark-sided cutworms may feed on the cover crop before spring ploughdown. Apply 2.25 L/ha Dursban® 2E to the area planted to tobacco and a strip about 15 m into nearby cover crop and fence rows. Application should be made in mid to late April, 4 to 5 days before ploughdown. When the rye cover crop is about 15 cm tall, the cutworm larvae will be at the right stage for the best control.

In the event of failure to apply the crop treatment, or if there is no cover crop, or where cool temperatures have delayed cutworm hatching until after the application of the cover crop treatment resulting in poor cutworm control, Dursban® 2E may be applied to the soil surface.

Apply about 3 to 5 days before planting preferably before mid-May. A rate of 4.5 L/ha of Dursban® 2E should be applied except under low soil moisture conditions. If the top 1 cm or more of soil is dry, 9.0 L/ha Dursban® 2E may be necessary to give the desired control.

### **Restricted Re-entry Interval: 24 hours**

Dilute Dursban® 2E in water and apply as a broadcast spray. Volumes of 200-400 L/ha and nozzle pressures of 200-350 kPa are recommended. Best results will be obtained when the spray is applied during the afternoon or early evening. Do not make more than one soil application of Dursban® per year.

USE RATES OF DURSBAN® 2E TO CONTROL DARK-SIDED CUTWORMS IN TOBACCO			
AREA TO BE TREATED	AMT. OF DURSBAN® 2E PER HECTARE	AMT. OF CHLORPYRIFOS PER HECTARE	
Cover Crop	2.25 L	540 g	
Soil Surface	4.50 L	1.1 kg	
Soil Surface Dry Conditions (See "Directions for Use")	9.00 L	2.2 kg	

Cereals grown for cover crop treated with Dursban® 2E should not be used for human or animal consumption if treated within 60 days of harvest.

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