

DEC 04 1995

Mr. John R. Fitt
DowElanco
9330 Zionsville Road
Indianapolis, Indiana 46268-1054

Subject: Revised Confidential Statement
of Formula and Labeling
Dursban Pro
EPA Registration Number 62719-166
Your Applications Dated November 17 and 22, 1995

Dear Mr. Fitt:

We acknowledge receipt of the revised Confidential Statement of Formula, dated November 6, 1995, showing a new basic formulation for this product by increasing the concentration of the active ingredient chlorpyrifos to support a label claim of "2.0 pounds of chlorpyrifos per gallon." It is understood that this CSF replaces and supersedes all previous formulations.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, is also acceptable. A stamped copy is enclosed for your records.

Sincerely yours,

DHE

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

Enclosure

BEST COPY AVAILABLE

Dursban* Pro

EPA Reg. No. 62719-166

Proposed Label Amendment: Current label text based on EPA-accepted copy dated February 24, 1995.

Note: Certain text of the Master Label involving "broadcast" applications do not appear in final printed labeling for this product at this time. Text which does not appear in final printed labeling are indicated in the master file in the color magenta.

Amendments:

1. Ingredients statement revised in accordance with the product CSF dated 11/06/95 which reflects new nominal concentration of chlorpyrifos.

*Trademark of DowElanco

ACCEPTED
DEC 04 1995
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 62719-166

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(Base label):

(logo) DowElanco

Dursban* Pro

To be applied only by or under the supervision of commercial applicators responsible for pest control programs

For control of various pests in and around residential and nonresidential buildings and structures, on various modes of transport, and on turf, ornamental plants, or fruit, nut, and citrus trees not grown for sale or commercial production.

Active Ingredient:

chlorpyrifos: 0,0-diethyl 0-(3,5,6-trichloro-2-pyridinyl) phosphorothioate.....	22.5-23.5%
Inert Ingredients.....	77.5-76.5%
Total	100.0%

Contains 2.0 pounds of chlorpyrifos per gallon.

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION PRECAUCION

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

Harmful If Swallowed, Inhaled, Or Absorbed Through Skin

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or spray mist. Wear eye protection. Handle concentrate in a ventilated area. Wear protective clothing when using or handling this product to help reduce exposure to eyes and skin. As a minimum, chemically resistant gloves and footwear, a long-sleeved shirt and long-legged pants or coveralls are recommended. Keep away from food, feedstuffs and water supplies. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

First Aid

If swallowed: Call a physician or Poison Control Center immediately. Do not induce vomiting. Do not put anything into the mouth of an unconscious person.

If on skin: Wash exposed area with plenty of soap and water. Get medical attention.

If in eyes: Flush eyes with plenty of water for 15 minutes. Get medical attention.

If inhaled: Remove person to fresh air and if not breathing give artificial respiration, preferably by mouth to mouth. Get medical attention.

Note 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.

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Environmental Hazards

This pesticide is toxic to birds and wildlife and extremely toxic to fish and aquatic organisms. 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 organisms in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Cover or contain spills outdoors and dispose of in a manner consistent with local, state, and federal regulations.

Refer to label booklet for additional precautionary information and Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

In case of emergency endangering health or the environment involving this product, call collect 517-636-4400.
Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-166

16 93

EPA Est. 464-MI-1; 52379-MI-002

Superscripts correspond to places 7 & 8 of lot number.

*Trademark of DowElanco

DowElanco • Indianapolis, IN 46268 U.S.A.

Specialty Insecticide

Net Contents XXX

BEST COPY AVAILABLE

(Datapack cover):

(logo) DowElanco

Dursban* Pro

To be applied only by or under the supervision of commercial applicators responsible for pest control programs

For control of various pests in and around residential and nonresidential buildings and structures, on various modes of transport, and on turf, ornamental plants, or fruit, nut, and citrus trees not grown for sale or commercial production.

Active Ingredient:

chlorpyrifos: 0,0-diethyl 0-(3,5,6-trichloro-2-pyridinyl) phosphorothioate.....	22.5 <u>23.5</u> %
Inert Ingredients.....	77.5 <u>76.5</u> %
Total	100.0%

Contains 2.0 pounds of chlorpyrifos per gallon.

Keep Out of Reach of Children

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Refer to label booklet for additional precautionary information and Directions for Use.

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In case of emergency endangering health or the environment involving this product, call collect 517-636-4400.

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

EPA Reg. No. 62719-166

16 93

EPA Est. 464-MI-1; 52379-MI-002

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Specialty Insecticide

Net Contents XXX

6727

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Warranty Disclaimer
Inherent Risks of Use
Limitation of Remedies

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION PRECAUCION

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

Harmful If Swallowed, Inhaled, Or Absorbed Through Skin

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or spray mist. Wear eye protection. Handle concentrate in a ventilated area. Wear protective clothing when using or handling this product to help reduce exposure to eyes and skin. As a minimum, chemically resistant gloves and footwear, a long-sleeved shirt and long-legged pants or coveralls are recommended. Keep away from food, feedstuffs and water supplies. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

First Aid

If swallowed: Call a physician or Poison Control Center immediately. Do not induce vomiting. Do not put anything into the mouth of an unconscious person.

If on skin: Wash exposed area with plenty of soap and water. Get medical attention.

If in eyes: Flush eyes with plenty of water for 15 minutes. Get medical attention.

If inhaled: Remove person to fresh air and if not breathing give artificial respiration, preferably by mouth to mouth. Get medical attention.

Note 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, 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 organisms in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Cover or contain spills outdoors and dispose of in a manner consistent with local, state, and federal regulations.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not formulate this product into other end-use products.

Not for use on plants grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or on golf courses or lawns and grounds.

Storage and 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 pesticides or fertilizers. Do not store above 122°F for extended periods of time. Preferred storage is above 32°F. Storage below 32°F may result in solidification. If warmed to above 32°F, product will return to original form. Freezing does not adversely affect this product. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

Storage for Dilutions: Dilutions of Dursban Pro are sensitive to crystal formations when exposed to freezing, or near freezing temperatures, e.g. temperatures below 35°F, for extended periods of time. Therefore, dilutions allowed to stand overnight should be stored at temperatures above 40°F.

Pesticide Disposal: Excess pesticide resulting from the use of this product may be disposed of on site according to label directions or at an approved waste disposal facility.

Container Disposal: Do not reuse empty container. Triple rinse, wrap container and put in trash.

General Information

Dursban* Pro insecticide is an emulsifiable concentrate designed for use as a spray to control various pests in and around residential and nonresidential buildings and structures, on various modes of transport, and on turf, ornamental plants, and fruit, nut, and citrus trees not grown for sale or commercial production.

General Pest Control - Indoors

Directions for General Use Indoors

Dursban Pro is intended to be mixed with water and applied as crack and crevice and spot, treatments with pressurized sprayers or other equipment suitable for applying insecticides to localized areas. The active ingredient in this product can provide effective residual control of pests listed on this label. To minimize airborne particles spray pressure should not exceed 30 psi at the nozzle tip.

Handling Procedures for General Use Indoors

Adults, children or pets should not contact treated surfaces until spray has dried.

Before spraying, remove pets and cover aquaria, i.e., fish bowls, and turn off air pump.

Do not apply where electrical short circuits could occur.

Do not use indoors as a space spray or in fogging equipment.

To avoid breathing spray mist during application in confined areas, wear a mask or respirator of a type recommended by NIOSH for filtering spray mists.

It is recommended that eye protection be worn when making applications overhead.

Treatment Sites

When used in accordance to label directions Dursban Pro may be applied in and around residential and nonresidential buildings and structures including residential kitchens and all types of food handling establishments and vehicles. This product can be applied to walls, floors, ceilings, in and around cabinets, between, behind and beneath equipment and appliances, around floor drains, window and door frames, around plumbing, sinks and other possible pest harborage sites.

Permitted areas of use include but are not limited to:

apartment buildings	industrial buildings
bakeries	kitchens
bottling facilities	laboratories
breweries	mausoleums
cafeterias	mobile and motor homes
crawl spaces	offices
food manufacturing plants	restaurants
food processing plants	schools
food service establishments	stores
granaries and grain mills	warehouses
hospitals	wineries
hotels	vehicles
houses	

Dosage Rates

Applications of 0.25% to 0.5% Dursban Pro can be made depending on pest species and conditions of premises. See "Specific Indoor Use Directions" for additional information.

Mixing Directions

To make a 0.25% water based spray mix 1 1/3 fl oz of Dursban Pro per each gallon of spray. To make a 0.5% water based spray mix 2 2/3 fl oz of Dursban Pro per each gallon of spray. A stable emulsion of Dursban Pro can be formed by first adding approximately one-half the water to a spray tank followed by adding the proper amount of Dursban Pro. Close the tank and shake vigorously for 5 to 10 seconds. To avoid excess foam, slowly add the remaining water.

Tank Mixing: Unless prohibited by a product's label, users, at their own discretion, can tank mix pesticides currently labeled for similar use patterns. It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing. Do not tank mix this product with products containing dichlorvos (DDVP).

Application Methods

This product may be applied indoors as crack and crevice and spot, treatments. Treat where pests are found or normally occur. Except as noted under "Food Handling Establishments", applications can be made in 7 day intervals. If necessary, Dursban Pro may be applied after 2 days from last treatment (call back treatments), but such use should be limited to once per month.

Crack and Crevice Applications

Use a low pressure system with a pinpoint or variable pattern nozzle to apply the spray mixture to areas such as: floors, cracks, and crevices in and around baseboards, walls, expansion joints, areas around water and sewer pipes, and voids formed by equipment or appliances.

Spot Applications

Use a low pressure system with fan type nozzle to uniformly apply spot treatments in and around cuoboards and between, beneath and behind equipment or appliances. Dursban Pro may be applied as a spot treatment for control of ticks and carpet beetles.

Note: Thoroughly ventilating treated areas following treatments can reduce potential odors and speed drying. Ventilation in buildings with closed air circulating systems can be improved by adjusting ventilation systems to include outside air.

Cabinet Interiors: When treating interiors of cabinets containing food or food utensils, remove or otherwise protect such items from contact with spray. Allow spray to dry before returning food or food utensils to treated cabinets. Prevent the above items from directly contacting treated surfaces. Shelf liners or similar material can provide adequate protection from treated surfaces. Thoroughly wash dishes, food utensils or food-contacting surfaces with soap and water if they are directly exposed to this product.

Food Handling Establishments: Dursban Pro may be applied in both food and nonfood areas of all types of food-handling establishments, i.e. food service, food processing and food manufacturing establishments. This includes, but is not limited to, restaurants, grocery stores, bakeries, bottling plants, canneries, and grain mills. See "Treatment Sites" for a more complete but not exhaustive listing.

Note: Applications of this product within food handling areas are limited to spot and crack and crevice treatments. Applications can be applied in 7 day intervals in restaurants and similar food service establishments and applied in 14 day intervals in other types of food handling establishments. If necessary, Dursban Pro may be applied after 2 days from last treatment (call back treatments), but such use should be limited to once per month.

Indoor Pests Controlled by Dursban Pro

Ants (1)	Firebrats
Beetles	Fleas (5)
Boxelder bugs	Flour beetles
(or other true bugs)	(Confused)
Brown dog ticks (2)	(Red)
Carpet beetles (3)	(Sawtoothed)
Centipedes	Indian meal moths
Clover mites	Mediterranean flour moths
Cockroaches (4)	Millipedes
(American)	Rice weevils
(Asian)	Silverfish
(Brownbanded)	Scorpions
(German)	Sowbugs
(Oriental)	Spiders
(Smokybrown)	Ticks
Crickets	and other insect pests
Earwigs	

Numbers refer to "Specific Indoor Use Directions".

Specific Indoor Use Directions

1. **Ants** may be controlled by treating ant trails and wherever else these pests may find entrance; for example, around doors and windows.
2. For the control of **brown dog ticks**, thoroughly apply the spray to infested areas, such as cracks and crevices, along baseboards, windows and door frames, and areas of floor and floor coverings where these pests may be present. Old bedding should be replaced or thoroughly washed. Use a 0.5% spray at the rate of 1 gallon of diluted spray per 1600 square feet. **DO NOT TREAT PETS WITH THIS PRODUCT. Humans or pets should not contact treated surfaces for a minimum of 4 hours and until the spray has dried.**
3. For the control of **carpet beetles**, thoroughly apply the spray to rugs, carpets, 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. Use a 0.5% spray at the rate of 1 gallon of diluted spray per 1600 square feet. **Humans or pets should not contact treated surfaces for a minimum of 4 hours and until spray has dried.**
4. **Cockroaches** can be controlled by making crack and crevice, and spot treatments. Treat where insects are found or normally occur including, but not limited to floors, cracks and crevices in walls, along and behind baseboards, around plumbing, floor drains and other utility installations, beneath and behind sinks, cabinets or other fixtures. Applications within food handling areas are limited to spot and crack and crevice treatments.
5. To control **fleas**, thoroughly apply a fine-particle spray to infested areas, such as rugs and carpets. Vacuuming carpets prior to treatment may improve flea control. For light infestations, use a 0.25% dilution at the rate of 1 gallon of diluted spray per 1600 square feet. For heavy infestations or for extended residual control, use a 0.5% dilution at the rate of 1 gallon of diluted spray per 1600 square feet or a 0.25% dilution may be used at the rate of 1 gallon of diluted spray per 800 square feet. **Do not use a 0.5% dilution at the rate of 1 gallon of spray per 800 square feet.** An insect growth regulator may be added to achieve extended control of developing flea larvae and pupae. Cover aquarium and fish bowls and remove pets (cats, dogs, birds, etc.) from area prior to treating. Other than the

applicator, treated areas should be vacated during application. **Humans or pets should not contact treated surfaces for a minimum of 4 hours and until spray has dried.** Old pet bedding should be replaced or thoroughly washed. **DO NOT TREAT PETS WITH THIS PRODUCT.** To control the source of flea infestations, pets inhabiting the treated premises should be treated with a flea-control product registered for application to animals.

General Pest Control - Perimeter Treatments

Directions for Perimeter Treatments

Dursban Pro is intended to be mixed with water and applied outdoors with pressurized sprayers as a general surface spray.

Handling Procedures for Perimeter Treatments

Adults, children or pets should not contact treated surfaces until spray has dried.

Keep out of fish pools or and other bodies of water.

Do not treat vegetable gardens.

Do not allow livestock to graze in treated areas.

Do not feed treated grass cuttings (hay) or seed screenings to livestock, nor use treated hay for livestock bedding.

Treatment Sites

When used in accordance to label directions Dursban Pro may be applied to and around outside surfaces of residential and nonresidential buildings and structures. Permitted areas of use include but are not limited to:

crawl spaces	garages
decks	patios
driveways	refuse dumps
eaves	walkways
fences	walls
foundations	window and door frames

Note: Phytotoxicity: Environmental factors and varietal differences may affect phytotoxic expression. In situations where phytotoxicity potential is of concern, it is recommended that a small group of plants be sprayed and observed for 7 to 10 days to determine phytotoxic potential before treating large numbers of those plants.

Dosage Rates

Applications of 0.03% to 0.5% Dursban Pro can be made depending on pest species and method of application. See "Application Methods" for additional information.

Mixing Directions

To make a 0.03% water based spray, add 1 2/3 fl oz Dursban Pro per 10 gallons of spray. To make a 0.5% water based spray add 2 2/3 fl oz Dursban Pro per each gallon of spray.

A stable emulsion of Dursban Pro can be formed by first adding approximately one-half the water to the spray tank followed by adding the proper amount of Dursban Pro. Close the tank and agitate for 5 to 10 seconds. Add remaining water slowly to avoid excess foam.

Tank Mixing

Unless prohibited by a product's label, users, at their own discretion, can tank mix pesticides currently labeled for similar use patterns. It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing. **Do not** tank mix this product with products containing dichlorvos (DDVP).

Application Methods

This product may be applied outdoors as a general surface spray. Treat where pests are found or normally occur.

Low Volume Directed Sprays

Application of low volume, high concentration (about 0.5%) sprays can quickly reduce localized heavy pest infestations on outside surfaces. Use a low pressure system with a pinpoint or variable pattern nozzle, such as a 1 gallon hand pump sprayer, and apply the spray mixture to specific areas such as cracks and crevices along walkways, patios, windows and door frames or other areas where insects may congregate or can gain entrance to the structure.

High Volume Broadcast Sprays

Application of high volume, low concentration (0.03% - 0.12%) sprays, such as with power spraying equipment, can help prevent infestation of buildings by reducing pests in outdoor areas. Longer residual is achieved at the higher rates (about 0.12%). To make a 0.03% water based spray, mix 8 fl oz of Dursban Pro per 50 gallons. To make a 0.12% dilution, mix 32 fl oz of Dursban Pro per 50 gallons of water. This type of treatment provides more thorough coverage over large areas than low volume directed sprays. Treat by applying spray mixture directly to areas such as junctions of soil and structural walls, along base of fences, and under eaves. Apply as a coarse spray at the rate of about 10 gallons spray mixture per 1000 square feet. Thoroughly and uniformly wet the treated area.

Pests Controlled by Perimeter Treatments of Dursban Pro

Ants	Elm leaf beetles
Bees	(adults)
Beetles	Fire ants (1)
Boxelder bugs	Fleas
(or other true bugs)	Flies
Carpenter ants	Hornets
Centipedes	Millipedes
Clover mites	Mosquitoes
Cockroaches	Pillbugs
(American)	Scorpions (2)
(Asian)	Sowbugs
(Brownbanded)	Spiders
(German)	Springtails
(Oriental)	Ticks
(Smokybrown)	Wasps
Crickets	Yellowjackets
Earwigs	and other outdoor insects

)Numbers refer to "Specific Outdoor Use Directions".

Specific Use Directions for Perimeter Treatments

1. **Fire ant mounds** may be controlled by applying Dursban Pro as a drench. Dilute 2 fl oz per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2 foot diameter. For best results, apply in cool weather, 65 to 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.
2. **Scorpions** may be controlled by removing accumulations of lumber, firewood and other materials serving as harborage sites. Before stacking firewood or lumber, apply Dursban Pro as a localized spray to surfaces immediately below such materials. Broadcast sprays outdoors may assist in reducing pests migrating from surrounding areas.

General Control of Wood - Infesting Insects

Directions for General Use to Control Wood-Infesting Insects

Dursban Pro is intended to be mixed with water and applied as a general surface or localized injection treatment with pressurized sprayers or other equipment suitable for applying insecticides to localized areas.

Handling Procedures to Control Wood-Infesting Insects

Contact with treated surfaces should be avoided until spray has dried.

Cover or remove exposed foods before treatment.

Before spraying remove pets and cover aquaria, i.e. fishbowls and turn off air pump.

Do not apply where electrical short circuits could occur.

Do not use in structures housing animals which are intended for or which produce products to be used for food purposes, i.e. poultry houses.

Thoroughly ventilating treated areas following broadcast treatments can reduce potential odors and speed drying. Ventilation in buildings with closed air circulating systems can be improved by adjusting ventilation systems to include outside air.

Treatment Sites

When used in accordance to label directions Dursban Pro can be applied to residential and nonresidential buildings and structures for control of wood-infesting insects. Permitted areas of use include but are not limited to:

- wood surfaces
- voids and channels in damaged wood
- gaps between wooden members
- wall voids
- junctions between wood and foundation

Dosage Rates

Applications of 0.5% to 1.0% Dursban Pro can be made depending on pest species and method of application. Expect increased residual control at higher rates. See "Specific Use Directions For Control of Wood-Infesting Insects" for additional information.

Mixing Directions

To make a 0.5% water based spray mix 2 2/3 fl oz of Dursban Pro per each gallon of spray mixture. To make a 1.0% water based spray mix 5 1/3 fl oz of Dursban Pro per each gallon of spray mixture.

A stable emulsion of Dursban Pro can be formed by first adding approximately one-half the water to a spray tank followed by adding the proper amount of Dursban Pro. Close the tank and shake vigorously for 5 to 10 seconds. To avoid excess foam, slowly add the remaining water.

Tank Mixing

Unless prohibited by a product's label, users at their own discretion, can tank mix pesticides currently labeled for similar use patterns. It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing. **Do not** tank mix this product with products containing dichlorvos (DDVP).

Application Methods

This product may be applied either as a coarse spray or by brushing onto targeted surfaces. Equipment capable of delivering a coarse, low pressure (about 20 psi) spray is recommended for treatment of large or overhead areas. Inaccessible areas such as wall voids can be treated by injecting the spray mixture under low pressure (about 20 psi) through drilled openings. Use sufficient amount of spray dilution to cover the area to the point of wetness but avoid applying to the point of runoff.

Overhead Areas

It is recommended that, when spraying overhead interior living areas of residential buildings, surfaces below areas being treated be covered with plastic sheeting or other material which could be disposed of by placing in trash.

Wood-Infesting Insects Controlled by Dursban Pro

Beetles (1)

(Anobiidae)

(Bostrichidae)

(Cerambycidae)

(Lyctidae)

Carpenter ants and other wood-infesting ants (2)

Carpenter bees

Termites (3)

Numbers refer to "Specific Use Directions for Control of Wood-Infesting Insects".

Specific Use Directions for Control of Wood-Infesting Insects

1. **Beetles** may be controlled by applying spray mixture to infested areas, or areas where infestations are likely to occur. This includes but is not limited to wood surfaces, voids, and channels in damaged wood, in spaces between wooden members of a structure, and junctions between wood and foundations. Use the following guidelines to determine appropriate rates of application:
 - New Wood, (typically less than 10 years of age) apply at about 1 gallon of dilution per 150 square feet.
 - Old Wood, (typically greater than 10 years of age) apply at about 1 gallon of dilution per 100 square feet.
2. **Wood-Infesting ants** may be controlled by applying spray mixture around doors and windows, cracks or crevices, or other areas where ants may enter, crawl, or hide.
 - Primary colonies are typically found outside through an exterior inspection. Correction of sanitation and structural deficiencies or landscape modifications may be necessary for effective control.
3. **Termites** can be treated by applying spray mixture to infested areas, or areas where infestations are likely to occur. This includes but is not limited to wood surfaces, voids and channels in damaged wood, in spaces between wooden members of a structure, and junctions between wood and foundations.

This treatment is intended to kill localized infestations of workers and winged reproductive forms of termites, and to prevent infestation for a temporary period. This application is not intended as a substitute for soil treatments.

General Pest Control - Turf, Ornamentals, and Fruit, Nut, and Citrus Trees

General Information

Dursban Pro is an emulsifiable concentrate for use to control pests injurious to turf, ornamentals, and fruit, nut, and citrus trees. The pests controlled are listed in the accompanying tables. Dursban Pro is compatible with insecticides, miticides and fungicides commonly recommended except for alkaline materials such as Bordeaux mixture and lime. A small amount of spray mixture should be prepared to check for compatibility before a large volume of spray is mixed.

Handling Procedures:

Adults, children or pets should not contact treated surfaces until the spray has dried.

Keep out of fish pools and other bodies of water.

Do not treat vegetable gardens.

Do not allow livestock to graze in treated areas.

Do not feed treated grass cuttings (hay) or seed screenings to livestock nor use hay for livestock bedding.

Chemigation: do not apply this product through any type of irrigation system.

Fruit, nut, and citrus trees: see precautionary statements and restrictions in this section of the label.

It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing.

Turf and Other Outdoor Uses

Use Dursban Pro to control the pests listed in the following table by application at the recommended dosages. Dilute Dursban Pro in water and apply using suitable application equipment. For best results, turf should be moist at time of treatment.

Pest	Amount of Dursban Pro per	
	1000 sq. ft.	Acre
Ants Armyworms (Such as: Beet, Fall, Yellowstriped) Centipedes Chiggers (1) Chinch bugs Crickets Cutworms Deer ticks (2) Earwigs European crane fly larvae Fiery skipper Fire ants (foraging workers) Fire ants (mounds) (3) Fleas	Gnats Grasshoppers Greenbug aphids Green June beetle grubs Leafhoppers Lucerne moth Millipedes Mites (Such as: Clover, Bermudagrass stunt, Winter grain) Mosquitoes (4) Pillbugs Sod webworms (lawn moths) (5) Sowbugs Ticks (1)	1 1/2 fl oz 2 qt
Billbug adults (Such as: Bluegrass, Denver, Hunting) (6)		1 1/2 - 3 fl oz 2 - 4 qt
Annual bluegrass weevil (<i>Hyperodes</i>) (7) Black turfgrass ataenius adults (8) Mole crickets (9)		3 fl oz 4 qt
Mole crickets (10)		3 - 4 1/2 fl oz 4 - 6 qt
White grubs (Such as: Black turfgrass ataenius, European chafer, Japanese beetle larvae, and Northern and Southern masked chafers) (11)		3 - 6 fl oz 4 - 8 qt

Specific Directions:

- Use Dursban Pro for area control of **ticks** and **chiggers** infesting non-cropland areas such as turf and grassy areas, roadsides, footpaths and trails, picnic and camping sites, parks and other recreational areas where these pests are present and create a nuisance or a possible public health problem. Do not allow public use of treated areas during application or until spray has dried. Apply Dursban Pro insecticide in water at the rate of 1 pint per acre (1/3 fl oz per

- 1000 sq. ft.) using a hydraulic sprayer, mist applicator, backpack sprayer, or other suitable hand or power operated spray equipment.
2. For control of **deer ticks** apply Dursban Pro in water at the rate of 2 quarts per acre or 1 1/2 fl oz per 1000 square feet. Treat low underbrush, turf, grassy areas, weeds, and ground surface and debris, using enough spray volume to obtain thorough coverage.
 3. For individual **fire ant mounds** apply Dursban Pro as a drench. Dilute 2 fl oz per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2 foot diameter. 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.
 4. **Mosquitoes** coming to rest on areas treated for control of turf pests will be controlled for varying periods of time after treatment depending on exposure of treated areas to weathering conditions.
 5. For **sod webworms**, watering or mowing of the treated area should be delayed for 12 to 24 hours after treatment.
 6. For **billbugs**, spray early in the season just prior to, or coinciding with first appearance of adults as recommended by your local Agricultural Extension Service Specialist.
 7. To control **annual bluegrass weevil**, spray suspected problem areas in mid-April and again in Mid-May, or as recommended by your local Agricultural Extension Service specialist.
 8. For **black turfgrass ataenius** adults, spray early in the season as recommended by your local Agricultural Extension Service Specialist. A repeat application may be needed 1 to 2 weeks later.
 9. To control **mole crickets** in turfgrass, apply Dursban Pro through high pressure injection or other suitable subsurface placement application equipment. Depending on the application equipment used, follow the manufacturer's recommendation for calibration and the volume of spray per acre needed to provide control or as recommended by your local Agricultural Extension Service Specialist. For best results, apply when young nymphs are active.
 10. To control **mole crickets** in turfgrass, apply Dursban Pro using broadcast or suitable hand-held application equipment. Application should be in a minimum of 50 gallons of water per acre. Turf must be irrigated within 24 hours after treatment to wash the insecticide into the area of insect activity. Apply when early stage nymphs are active. Effectiveness may be enhanced by spraying late in the afternoon or early evening and irrigating the turf within 24 hours prior to and following application to move mole crickets near the soil surface and wash the insecticide into the zone of insect activity.
 11. 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 best results, soil should be moist prior to treatment. For best results, immediately after spraying, irrigate the treated area with 1/2 to 1 inch of water to wash the insecticide deep into the thatch or underlying soil.

Ornamentals (Outdoor)

Use Dursban Pro to treat flowers, shrubs, evergreens, vines, shade and flowering trees, and non-bearing fruit trees found to be infested with the types of pests listed in the following tables. Dilute Dursban Pro with water according to directions given in the tables and apply using suitable hand or power-operated spray equipment in a manner to provide complete and uniform coverage. Attempt to penetrate dense foliage, but avoid over-spraying to the point of excessive runoff. Uniform coverage is critical for effective insect and mite control.

Consult your State Agricultural Experiment Station or Extension Service specialist for application timing and other specific use information

Note: Phytotoxicity: Environmental factors and varietal differences may affect phytotoxic expression. In situations where phytotoxicity potential is of concern, it is recommended that a small group of plants be sprayed and observed for 7 to 10 days to determine phytotoxic potential before treating large numbers of those plants.

Leafminers Needleminers (Such as: Jeffrey pine, Lodgepole pine, Spruce) Pine needle midge Rhododendron gall midge	2/3 fl oz	2 qt
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Specific Directions:

1. For **bagworms**, treat when larvae are small and actively feeding.
2. For effective control of **fall webworms**, direct spray into web and immediately surrounding foliage.
3. For effective control of **leafrollers**, spray should be applied before leaves are tightly rolled.
4. For **maple leafcutter** on maple trees, apply spray to larvae as cases are being formed. Do not treat sugar maple trees intended for maple syrup production.
5. To reduce foliar feeding on twigs and branches by **beetles**, applications should be made in the spring or early summer.
6. To control migrating and invading **gypsy moth** larvae, treat trunks and foliage.
7. For **cottonwood leaf beetles**, spray larvae and adults infesting cottonwoods. Applications should be made when damaging beetle populations are developing or present.

Borers, Bark Beetles, and Weevils

Pest	Amount of Dursban Pro per	
	1 gallon	100 gallons
Weevils (Such as: Black vine (1), Cranberry girdler (2), Pine reproduction, Yellow poplar)	1/3 fl oz	1 qt
Borers: Clearwing moths (Such as: Ash, Dogwood, Lesser peachtree, Lilac, Oak, Peachtree, Rhododendron), Longhorned beetles (Such as: Cottonwood, Locust, Red oak), Metallic wood (Such as: Bronze birch, Flatheaded appletree, Twolined chestnut) (3) Pales weevil adults Zimmerman pine moth	2/3 fl oz	2 qt
Northern pine weevil (4) Pales weevil (4)	2 fl oz	6 qt
Beetles (5); (Such as: Ambrosia, Anobiidae, Black turpentine, Blister, Cottonwood leaf, Elm leaf, European elm bark, Fuller rose, Japanese, June, Mountain pine, Native elm bark (6), Southern pine, Spruce, Western pine, Willow leaf)	5 1/3 fl oz	4 gal
Weevils (Such as: Northern pine, Pitch eating, Twig) (7)	10 2/3 fl oz	8 gal

Specific Directions:

1. **Black vine weevils** are night feeders. Late afternoon spraying will maximize control.
2. For **cranberry girdler** larvae infesting Douglas-fir seedlings, direct spray at lower crown and stems following egg laying during summer and irrigate immediately after application to move the insecticide into the top 1 to 2 inches of soil.
3. For **borers**, spray trunks and lower limbs of trees and shrubs when adults begin to emerge. For **peachtree borers**, spray flowering trees and shrubs of the genus *Liriodendron* as a trunk spray before newly-hatched larvae enter the trees and thoroughly wet all bark areas from ground level to scaffold limbs. Pheromone traps may aid in detection of adult clearwing moths. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat.
4. For control of **northern pine and pales weevil** larvae, apply as a cut stump spray or drench in winter or early spring.
5. For **preventive treatment**, spray the main trunk of trees in the early spring or when threat of attack exists from nearby infested trees. For **remedial treatment**, spray the main trunk of infested trees or logs before adult beetles begin to emerge.
6. To prevent **native elm bark beetles** from over-wintering in uninfested trees, apply using a dilution of 2 gal per 100 gallons of water (2 2/3 fl oz per gallon) as a spray to the bottom 9 feet of 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 from spring to early fall. To reduce twig and branch feeding on trees deemed to be of high value, apply as a spray to the tree crown using a dilution of 2 gal per 100 gallons of water (2 2/3 fl oz per gallon). Applications should be made in the spring or early summer using a sprayer that will give thorough coverage to the tree crown.

- For pine seedlings, treat immediately after transplanting. Treat each seedling with enough spray to thoroughly wet the foliage and stem to the point of runoff.

Ants, Termites, and Miscellaneous Pests

Pest	Amount of Dursban Pro per	
	1 gallon	100 gallons
Ants Cockroaches (Such as: American, Asian, Brownbanded, German, Oriental, Smokybrown, Wood) Fire ants (foraging workers) Fire ants (mounds) (1) Sowbugs Springtails	1/3 fl oz	1 qt
Carpenter ants (2) Termites	5 1/3 fl oz	4 gal

Specific Directions:

- For individual **fire ant mounds** apply Dursban Pro as a drench. Dilute 2 fl oz per 4 gallons of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding areas to a 2 foot diameter. 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.
- If possible, locate **carpenter ant nests** and drench thoroughly.

Ornamentals (Dormant Spray of Tree Pests)

Use Dursban Pro as a dormant or delayed dormant spray at the rates indicated to control the listed insects. While Dursban Pro may be used without oil, oil is recommended to control additional pests such as European red mite.

For high volume (dilute) sprays (200 to 600 gallons of spray mixture per acre), tank mix the specified dosage with 1 to 2 gallons of a petroleum spray oil recommended for dormant use in 100 gallons of water. Spray the entire tree to runoff using suitable ground spray equipment.

For low volume (concentrate) sprays (less than 200 gallons of spray mixture per acre), use the same amount of Dursban Pro as for a dilute spray and apply in a manner that will ensure thorough coverage of the trees. Use oil as recommended by your State Agricultural Experiment Station or Extension Service Specialist.

Precautions: Because cold dry conditions may cause Dursban Pro plus oil to infuse trees resulting in bud damage or drop, do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.

Restrictions: Make only one application during the dormant season. Do not allow meat or dairy animals to graze in treated areas.

Pest	Amount of Dursban Pro per	
	1 gallon	100 gallons
Aphids (Such as: Mealy plum, Rosy apple, Woolly apple) Borers (Such as: Peach twig) Cutworms (Such as: Climbing) Leafrollers (Such as: Obliquebanded, Pandemis) Pear psylla adults Scale insects (Such as: San Jose)	1/6 - 1/3 fl oz	1 pt - 1 qt

Fruit, Nut, and Citrus Trees

Use Dursban Pro to treat **almond, apple, cherry, filberts, nectarine, peach, pecan, walnut** and **citrus trees or tree fruit** (such as: **grapefruit, lemon, orange**) not grown for commercial consumption of fruit by spraying to the point of runoff. When treating citrus trees only, a petroleum spray oil recommended for use on **citrus trees** may be added to spray mixtures only at rates of up to 1.8 gallons per 100 gallons of water to improve control of aphids, mealybugs, scale insects and thrips. Treat when insects become a problem or in accordance with the local spray schedule recommended by your State Extension Service Specialist.

Precautions: Do not apply as a foliar spray to **sweet cherries** because contact of spray solution with leaves may result in premature leaf drop. Observe local use directions for tank mix combinations especially with applications of Dursban Pro plus spray oil. Do not apply Dursban Pro in combination with oil to **walnuts**. Dry or cold conditions may cause Dursban Pro plus oil to infuse trees resulting in bud damage or drop; do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated. Do not apply when trees are stressed by drought.

Restrictions:

Almonds, Filberts, Walnuts: Make only one dormant/delayed dormant spray application and no more than three foliar spray applications on **almonds** per season, one dormant/delayed dormant spray application and no more than two foliar spray applications on **walnuts** per season, and no more than three foliar spray applications on **filberts** per season. Do not apply within 14 days of harvest.

Apples: Rate applied must not exceed 2/3 fl oz per gallon or 2 qt per 100 gallons. Make no more than 8 applications per season. Do not apply last treatment within 28 days before harvest or apply last two treatments closer than 21 days apart.

Citrus (Such as: Grapefruit, Lemon, Orange): Rate applied must not exceed 1/3 fl oz per gallon or 1 qt per 100 gallons. Do not apply to flowering trees. Do not apply when temperature exceeds 95°F. Do not apply more than 2 applications per fruit year. Do not make a second application within 30 days of the first application. Do not pick fruit for consumption until 21 days after application.

Nectarines, Peaches (trunk sprays only): Do not allow spray to contact fruit. Make only one application per season. Do not apply within 14 days of harvest.

Pecans: Rate applied must not exceed 2/3 fl oz per gallon or 2 qt per 100 gallons. Make no more than 5 applications per season. Do not apply within 28 days of harvest.

Sour cherries: Make no more than 8 applications per season. Do not apply within 14 days of harvest.

Sweet cherries (trunk and lower limb sprays only): Rate applied must not exceed 2/3 fl oz per gallon or 2 qt per 100 gallons. Avoid spray contact with foliage (leaves) since premature leaf drop may result. Make only three applications per year. Do not apply within 6 days of harvest.

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 DowElanco's election, one of the following:

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

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

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