

PM 21

62719-269

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
62719-
269

Date of Issuance:
JUN 10 1996

NOTICE OF PESTICIDE:
 X Registration
 Reregistration

Term of Issuance: **Until Reregistration**

Name of Pesticide Product:
Dursban NXS-4

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**DowElanco
9330 Zionsville Road
Indianapolis, Indiana 46268-1054**

Notes: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes:

- a. Revise the EPA Registration Number to read, "EPA Reg. No. 62719-269."
- b. In the list of marketing claims on pages 1-3 delete "No xylene," "No xylene-based solvents," "No volatile organic compounds," "No V.O.C.'s," "No aromatic solvents," "Break through formula," "Technology break through," "Virtually no odor," "Virtually odorless," "Eliminates imported fire ant colonies," "Effective diazinon replacement," "Effective chlordane replacement," "Effective malathion replacement,"

Signature of Approving Official:

DHE

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

Date:

JUN 10 1996

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"Effective sevin replacement," "For indoor use," and "Envirodegradable."

- c. On page 5, in the specific directions for termite control, add the following text: "This treatment is intended to kill localized infestations of workers and reproductive forms of termites and to prevent infestation for a temporary period. The treatment is not intended as a substitute for soil treatments."
- d. On page 19, revise the precautionary statement to "Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling."
- e. On page 19, revise the First Aid section (Statement of Practical Treatment) to:

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

[or] IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available by administering syrup of ipecac. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

3. Submit two copies of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely,

DHE

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

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Dursban* NXS-4

EPA Reg. No. 62719-XXX

Proposed product labeling for subregistrant use.

Insecticide

*Trademark of DowElanco

ACCEPTED
with COMMENTS
in EPA Letter Dated

JUN 10 1996
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
62719-269

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Dursban* NXS-4

Controls common pests around homes and those pests that injure trees, turf, ornamental plants and shrubs, vegetables, fruits, and fruit and nut trees.

and/or

Contains Dursban* insecticide

and/or

All-purpose insect spray

and/or

Multi-purpose insect spray

and/or

Do-it-yourself pest control

and/or

Do-it yourself lawn care

and/or

Kills on contact

and/or

Also kills; roaches, ants, fleas, carpet beetles, spiders, brown dog ticks, scorpions, black widow spiders, flies, mosquitoes, earwigs, silverfish, and other listed pests

and/or

New formula

and/or

No xylene

and/or

No Xylene-based solvents

and/or

No volatile organic compounds

and/or

No V.O.C.'s

and/or

No aromatic solvents

and/or

Improved formula

and/or

Break through formula

and/or

Technology break through

and/or

New lower odor formula

and/or

Virtually no odor

and/or

Virtually odorless

and/or

No unpleasant odor

and/or

Leaves no oily mess or unpleasant odor

and/or

Stops bugs fast

and/or

Kills home invading pests - ants, roaches, ticks, fleas, crickets, mites, earwigs, millipede's

and/or

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- Keeps on killing roaches for up to 8 weeks
- and/or
- Kills roaches for up to 8 weeks
- and/or
- Kills lawn insects
- and/or
- Protects home and lawn from invading pests
- and/or
- Provides long, lasting relief from many insect pests
- and/or
- Residual action kills bugs for weeks
- and/or
- Controls: armyworms, chiggers, crickets, earwigs, fleas, Imported fire ants, sod webworms, ticks, and other insects
- and/or
- Controls home invading pests: ants, fleas, crickets, earwigs, pillbugs, sowbugs, millipedes
- and/or
- Eliminates Imported fire ant colonies
- and/or
- Controls Imported fire ants
- and/or
- Controls Imported fire ants effectively
- and/or
- Treats up to (Ed. note: subregistrant my insert square footage based on container size) sq. ft.
- and/or
- Effective diazinon replacement
- and/or
- Effective chlordane replacement
- and/or
- Effective malathion replacement
- and/or
- Effective sevin replacement
- and/or
- Kills fleas and ticks outdoors in lawns, around buildings, doghouses and kennels
- and/or
- Kills pests on ornamentals
- and/or
- Fast, effective flea control
- and/or
- Fast, effective roach control
- and/or
- Fast, effective ant control
- and/or
- Fast, effective pest control
- and/or
- For indoor use
- and/or
- For outdoor use
- and/or
- For use outdoors
- and/or
- For use around the home
- and/or
- Non-staining

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- and/or
- Does not stain
- and/or
- Will not stain outdoor surfaces
- and/or
- Makes up to (subregistrant may insert gallonage based on container size) gallons of diluted spray
- and/or
- Envirodegradable
- and/or
- Contains Dursban* insecticide
- and/or
- Dursban is a trademark of DowElanco

Active Ingredients:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl)	
phosphorothioate	4.0%
Inert Ingredients	96.0%
Total	100.0%

Keep Out Of Reach Of Children

CAUTION

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.**

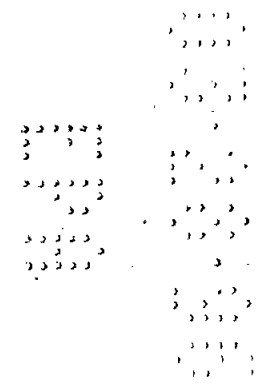
EPA Reg. No. 62719-XXX

EPA Est. _____

*Trademark of DowElanco
DowElanco • Indianapolis, Indiana 46268 USA
[Subregistrant name and address]

Insecticide

Net contents __ pt/qt/gal



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 before applying this product.

General Use Information

Dursban* NXS-4 insecticide is to be diluted for use as a spray to control various pests around homes and other structures and common pests injurious to trees, turf, ornamental plants and shrubs, vegetables, fruits, and fruit and nut trees. The pests controlled are listed in the accompanying tables.

Handling Procedures for General Use

- Do not allow spray to contact food, feedstuffs, or water supplies.
- Do not allow spray to contact food or food-handling surfaces. Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated through application of this product.
- Remove pets before spraying.
- Keep out of fish pools and other bodies of water.
- Do not use as a space spray.
- Keep people and pets off treated areas until spray has dried.

Mixing Instructions

When diluting Dursban NXS-4, first, add approximately one-half of the water to the spray tank; add the proper amount of Dursban NXS-4; close the tank and shake; and then slowly add the remaining water to make the desired amount of finished spray.

Note: 1 fluid ounce = 2 tablespoons = 6 teaspoons
1 fluid ounce = 29.6 milliliters
8 fluid ounces = 1 cup
16 fluid ounces = 2 cups = 1 pint

Control of Wood-Infesting Insects

Use Dursban NXS-4 for the control of wood-infesting insects found around homes and other structures. For treatment of small areas, apply by spraying the diluted spray evenly on wood surfaces. For large or overhead areas, use a coarse, low-pressure spray, being careful to avoid dripping or run-off. Suitable protective clothing (such as: eye protection, protective head covering, chemically resistant gloves, a long-sleeved shirt and long-legged pants or coveralls) should also be worn in confined or overhead areas to help avoid exposure to eyes and skin. Keep people or pets off treated surfaces until spray has dried. Treated areas (especially those which are confined) should be ventilated during and immediately following application before the areas are reoccupied.

Protect structures or other wood items such as deck posts, mailbox posts, fence posts, bird feeder support posts, play houses, wooden swing sets, or other places where wood comes in direct contact with soil. Add 16 ounces (1 pint) of Dursban NXS-4 in one gallon of finished spray and apply to soil before setting posts or placing wood onto or into soil. Thoroughly wet soil and allow mixture to soak into soil before placing wood into or onto soil. Do not handle or contact treated soil.

To control wood-infesting insects as well as other pests that find shelter in wood piles, add 16 ounces (1 pint) of Dursban NXS-4 per one gallon of finished spray and apply. Treat as thoroughly as possible by removing wood as necessary to treat the ground below the wood pile. Apply surfaces to wet but avoid excessive run-off.

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Pests Controlled and Application Rates for Wood-Infesting Insects

Pests	Amount of Dursban NXS-4 per gallon of finished spray
Deathwatch beetles (1)	16 ounces (1 pint)
False powderpost beetles (1)	
Appletwig borer (1)	
Longhorned beetles (1)	
Powderpost beetles (1)	
Carpenter ants and other wood-infesting ants (2)	
Carpenter bees (3)	
Termites (4)	

() Numbers in parenthesis refer to Specific Directions.

Specific Directions:

1. For beetles, spray infested areas and areas where infestations are likely to occur, including, but not limited to, wood surfaces, voids and channels in damaged wood, in spaces between wooden members of a structure, and between wood and foundations.
2. For wood-infesting ants, apply the spray around doors and windows and other places where these ants enter the premises and where they crawl and hide. Also spray into cracks and crevices or through openings or small holes in wall voids or other areas where these ants or their nests are present. Do not spray water based sprays into electrical outlets or utilities.
3. For carpenter bees, spray insecticide into holes and tunnels already made by carpenter bees, or spray onto localized areas where carpenter bees are beginning to build tunnels in wood.
4. For termites, spray localized areas of structures, including voids and channels in damaged wood, in spaces between wooden members of a structure and between wood and foundations where infestation is likely to occur.

Pest Control on Outside Surfaces and Building Perimeters

Apply Dursban NXS-4 as a residual spray to outside surfaces of buildings and surrounding areas, including porches, window frames, doorways, foundations, eaves, patios, garages, refuse dumps, garbage cans and garbage areas, and other areas where pests congregate or have been seen or where they can gain entrance. Repeat treatment as needed.

Use as a perimeter treatment to help prevent infestation of buildings. Treat a band 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. Apply as a coarse spray using a hose end sprayer or other suitable spray equipment at the rate of 10 gallons spray mixture per 1,000 square feet to thoroughly and uniformly wet the perimeter area.

Pest Controlled and Application Rates for Outside Surfaces and Building Perimeters

Pests	Amount of Dursban NXS-4 per gallon of finished spray	
	Outside surfaces of buildings	Around building perimeters
Ants	16 ounces (1 pint)	1 ounce
Bees		
Beetles (1)		
Box Elder Bugs		
Carpenter ants (2)		
Carpenter bees (3)		
Centipedes		
Clover mites		
Cockroaches		
American		
Smoky Brown		
Crickets		
Earwigs		
Elm Leaf Beetles		
Fire Ants (including foraging workers)		

() Numbers in parenthesis refer to Specific directions

Specific Directions:

1. For beetles, spray infested areas and areas where infestations are likely to occur, including, but not limited to, wood surfaces, voids and channels in damaged wood, in spaces between wooden members of a structure, and between wood and foundations.
2. For wood-infesting ants, apply the spray around doors and windows and other places where these ants enter the premises and where they crawl and hide. Also, spray into cracks and crevices or through openings or small holes in wall voids or other areas where these ants or their nests are present.
3. For carpenter bees, spray insecticide into holes and tunnels already made by carpenter bees, or spray onto localized areas where carpenter bees are beginning to build tunnels in wood.
4. For effective outdoor flea control, ensure that areas where the pet or other animals spend time, such as kennels, runs, or other resting areas, are thoroughly treated.
5. For scorpions remove accumulations of lumber, firewood, and other materials which serve as harborage sites and treat areas beneath and adjacent to infested areas.

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**Area Control of Ticks,
Fleas and Chiggers**

Pests Controlled and Application Rates

Pests	Amount of Dursban NXS-4 per gallon of finished spray
Chiggers (1) Fleas (1) Ticks (1) (2) such as: American dog tick Brown dog tick Cattle fever tick Deer tick Gulf coast tick Lone star Tick	3 ounces

() Numbers in parenthesis refer to Specific Directions.

Specific Directions

1. For control of ticks, chiggers and fleas infesting areas such as lawns, yards, around houses, kennels and pet runs, perimeter of yard, footpaths, trails, picnic and camping sites, and other areas where these pests are present and create a nuisance or a possible public health problem. Tuck pant legs into socks to avoid tick bites. An insect repellent applied to lower legs and socks should give additional protection from possible bites. Wearing light colored pants and socks will aid in spotting ticks, chiggers, or fleas that you may pick up during treatment.
2. Treat perimeter of house by applying under shrubbery, in and around ground cover surrounding house, and around and under decks and patios. Treat edges or perimeter of yard area and other areas where grass and other ground cover plants appear likely to serve as harborage sites for ticks. Spray surfaces until wet, but avoid runoff. Prior to and following treatment, weeds and high grasses should be kept trimmed to reduce tick harborage sites. Rodents can serve as hosts for ticks. Rock piles, wood piles, and other rodent habitats should be removed or reduced. Key months for deer tick control are April through November. For specific timing of application in your geographic area, contact your local extension service. When treating other areas away from house, treat low underbrush, grassy areas, weeds, and ground surface and debris using enough spray volume to obtain thorough coverage, usually 1 to 3 gallons per 1000 sq. ft. (5 to 15 gallons per 5000 sq. ft.). Apply Dursban NXS-4 in water using a pump-up, hose-end, knapsack sprayer, or other suitable spray equipment.

NOTE: This application is intended as an exterior surface spray only. Do not use as a direct spray on pets or people. Take care to avoid creating mist or drift which may reach non-target areas or bodies of water. Keep people and pets off treated surfaces until spray has dried.

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Turf and Other Outdoor Uses

Apply Dursban NXS-4 to control the pests listed in the following list by applying at the recommended dosages and follow the directions given below. Mix the Dursban NXS-4 in water and apply as a coarse, low-pressure spray using suitable application equipment such as a hose-end, backpack or pump-up sprayer. For best results, the lawn should be moist at time of treatment. Spray when pests first appear, retreat when needed. Keep people and pets off treated surfaces until spray has dried. Keep out of fish pools and other bodies of water.

[Editor's note: Subregistrant may add specific sprayer name and directions for use if product is packaged in ready to use spray bottle or intended for use in hose-end sprayer.

Pests	Amount of Dursban NXS-4 per gallon of finished spray/ per 1,000 sq. ft.
Ants (including foraging fire ants) Armyworms Such as: Beet Fall Yellow-striped Centipedes Chiggers (1) Chinch bugs Clover mites Crickets Cutworms Deer Ticks (1) Earwigs Fiery skipper Fire ants (mounds) (2)	Fleas (1) Grasshoppers Green bugs June beetles Leafhoppers Lucerne moths Millipedes Mites Such as: Clover Formula grass Winter grain Sod webworms (3) (Lawn moths) Sowbugs Springtails Ticks (1)
Bluegrass billbugs (4)	9 ounces
European Crane Fly	9 to 18 ounces
Turfgrass weevils (Hyperodes) (5)	12 ounces
White grubs (Such as: Black turfgrass aetenius, European chafer, Southern masked chafer, and Japanese beetle larvae) (6)	18 ounces
	18 to 24 ounces

() Numbers in parentheses refer to Specific Directions

Specific Directions

1. Use Dursban NXS-4 for control of fleas, ticks and chiggers infesting areas such as lawns, yards, around houses, kennels and pet runs, perimeter of yard, footpaths, and trails, picnic and camping sites, and other areas where these pests are present and create a nuisance or a possible public health problem. Treat perimeter of house by applying under shrubbery, in and around ground cover surrounding house, and around and under decks and patios. Treat grass and other ground cover plants at edges or perimeter of yard and other areas that appear likely to serve as harborage sites for ticks. Treat low underbrush, grassy areas, weeds, and ground surface and debris using enough spray volume to obtain thorough coverage, usually 1 to 3 gallons per 1000 sq. ft. (5 to 15 gallons per 5000 sq. ft.). Apply using suitable hand-operated spray equipment such as pump-up, hose-end or knapsack sprayer, or other suitable spray equipment in a manner to provide complete and uniform coverage.
2. For individual fire ant mounds, apply Dursban NXS-4 as a drench, diluted at the rate of 1 fl. oz. per gallon of finished spray. Apply a total of 1 gallon of the diluted mixture over the surface of each

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- mound using a gentle spray (such as a sprinkler can). Thoroughly wet mound and surrounding areas 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.
3. For sod webworms, delay watering and mowing the treated area for 12 to 24 hours after treatment.
 4. For bluegrass billbugs spray early in the season when adults first appear. Retreat as needed.
 5. For turfgrass weevils, spray problem areas in mid-April and again in mid-May or as recommended by your local Agricultural Extension Service specialist.
 6. 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, irrigate the treated area with 1/2 to 1 inch of water immediately before and after spraying to wash the insecticide into the underlying soil where these pests congregate.

Outdoor Ornamentals

Use Dursban NXS-4 to treat flowers, shrubs, evergreens, vines, shade and flowering trees, and other ornamental plants found to be infested with pests listed in the following table. Apply using suitable hand-operated spray equipment such as pump-up, hose-end or knapsack sprayer, or other suitable spray equipment in a manner to provide complete and uniform coverage. For best results apply as a coarse spray to thoroughly wet 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. Consult your Extension Service specialist for application timing.

Note: Environmental factors can have effects on plant damage when the plants have been treated with an insecticide. Dursban NXS-4 has been tested on numerous ornamental plants without causing significant damage.

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Pests Controlled and Application Rate for Ornamentals

Pests	Amount of Dursban NXS-4 per gallon of finished spray
<p>Adelgid (Such as: Cooley and Eastern spruce galls Pine bark) Ants (including foraging fire ants) Aphids (Such as: Apple, Chrysanthemum, Cottonwood, Elm leaf, Peach, Rose, Spirea, Woolly) Armyworms (Such as: Fall, Yellow-striped Bagworms (1) Boxelder bugs Cankerworms Catalpa sphinx Citrus mealybugs Chiggers Elm spanworms Fall webworms Grasshoppers Green fruitworms Hornworms Jackpine budworms Juniper webworms Katydids</p>	<p>Mites (Such as: Clover Red spider Southern red) (2) Lace bugs Leafhoppers Leafrollers (3) Maple leafcutters (4) Oleander caterpillars Orange tortrix Periodical cicada Plant bugs Psyllids Poplar tentmakers Puss caterpillars Rose chafers Sawflies, exposed (Such as: Pine, Pin oak, Redheaded) Spittlebugs Spring elm caterpillars Spruce budworms Thornbug Tent caterpillars (Such as: Eastern, Forest, Western) Walnut caterpillars Western spruce budworms Whiteflies Yellow-necked caterpillars</p>
<p>Armyworms Beetles (Such as: Fuller rose, Native elm bark) (5) Cutworms Leafhoppers Mahogany webworms Mealybugs Mimosa webworms Moths (Such as: Browntail, Cypress tip, Douglas fir, tussock, European pine shoot, Gypsy (6), Holly bud, Nantucket Pine tip, Pandora, Pitch pine tip, Subtropical pine tip, Tussock, Zimmerman pine) Oakworms (Such as: California, Orange-striped, Redhumped) Redhumped caterpillars Thrips (exposed) Weevils (Such as: Blackvine (7), Yellow Poplar, Pine reproduction)</p>	<p>1 ounce</p> <p>2 ounces</p>
<p>Beetles (Such as: Cottonwood leaf, Elm leaf, Flea, Willow leaf)</p>	<p>2 to 3 ounces</p>

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Borers (8) (Such as: Bronze birch, Flatheaded appletree, Twolined chestnut) Clearwing moths (Such as: Ash, Dogwood, Lesser - peachtree, Lilac, Oak, Peachtree, Rhododendron) Longhorned beetles (Such as: Cottonwood, Locust, Red oak) Cranberry girdler larvae (9) Leafminers Needleminers (Such as: Jeffrey pine, Lodgepole pine, Spruce) Scale crawlers (Such as: Cottonycushion, Cottony-maple, Euonymus, Fletcher, Florida wax, Golden oak, Hemispherical, Lecanium, Magnolia, Oak kermes, Oystershell, Pine needle, San Jose, Tea, White birch)	4 ounces
Pales weevil (10) Northern pine weevil (10)	10 ounces
Borers (11) (Such as: Cottonwood, Peachtree)	12 ounces
Beetles(12) (Such as: Cottonwood leaf, Elm leaf, Flea, Fuller rose, Native elm bark(13), Willow leaf)	16 ounces (1 pint)
Beetles (14) (Such as: Ambrosia, Anobiidae, Black turpentine, Blister, European elm bark, Japanese, June, Southern pine, Spruce, Western Pine) Carpenter ants	32 ounces (2 pints)

() Numbers in parentheses refer to Specific Directions

Specific Directions

1. For bagworms, treat when insects are in the crawler stage.
2. For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days in the South or 7 to 10 days in the North after initial treatment to control newly-hatched nymphs.
3. For effective control of leafrollers, spray should be applied before leaves are tightly rolled.
4. For effective control of 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 twig and branch feeding by bark beetles, applications should be made in the spring or early summer.
6. To kill migrating and invading gypsy moth larvae, treat trunks and foliage.
7. Blackvine weevils are night feeders. Late afternoon spraying will give better control in most areas.
8. For borers, spray trunks and lower limbs of trees and shrubs when the adults begin to emerge. Apply uniformly as a coarse low-pressure spray.
9. For cranberry girdler larvae, direct spray at the base of plants. Irrigate immediately after application for soil penetration of 1-2 inches. Treat after egg laying during the summer.
10. For control of pales and northern pine weevil larvae, apply as a cut stump spray or drench.
11. For peachtree borers, spray trunks of flowering trees and shrubs of the genus *Prunus* 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.
12. 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 before adult beetles begin to emerge.
13. To prevent native elm bark beetles from over wintering in uninfested trees, spray the bottom 9 feet of the trunk. Wet the trunk thoroughly but do not spray to runoff. Spray the base of the root flare. Application can be made from spring through to early fall.

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14. 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 when damage occurs but before adult beetles begin to emerge.

Vegetables

Control of Onion and Root Maggots on Onions, Cauliflower, Broccoli, Brussels Sprouts, Cabbage, Chinese Cabbage, Collards, Kale, Kohlrabi, Turnips, Radishes, and Rutabagas

Pests	Vegetable	Amount of Dursban NXS-4 per gallon of finished spray per 100 linear feet of row
Onion Maggots	Onions (dry bulbs) (1)	4 teaspoons
Root Maggots	Radishes (2)	4 teaspoons
Root Maggots (3)	Cauliflower, broccoli, Brussels sprouts, cabbage, Chinese cabbage, collards, kale, kohlrabi, turnips, rutabagas (4)	4 teaspoons to 3 ounces (18 teaspoons)

() Numbers in parentheses refer to Specific Directions:

Specific Directions:

1. Apply as an in-furrow drench. Incorporate to a depth of 1-2 inches.
2. Apply in the seed furrows with the seed at planting time. Do not apply more than 1.5 tablespoons (4.5 teaspoons) of Dursban NXS-4 per 100 ft of row.
3. For direct seeded vegetables, apply as a 4-inch wide band over the row at planting time. Incorporate into the soil with a hoe or other suitable equipment. For transplanted vegetables, use the same mix but direct the spray to the base of the plants immediately after setting. Do not apply as a foliage application. Do not apply more than 1.25 tablespoons (3.75 teaspoons) per 100 ft of row. Do not apply within 30 days before harvest.
4. For rutabagas, spray as a 4-inch wide band over the row at planting time. Do not apply more than 1 tablespoon (3 teaspoons) per 100 ft of row. Incorporate into the soil using a hoe or other suitable implement.

Note: Do not make more than one application per year.

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Sweet Corn, Field Corn, Popcorn (1)

Treatment Type	Pests	Amount of Dursban NXS-4 per gallon of finished spray per 35 sq. ft.
Preplant Incorporated (2)	Cutworms Symphylans	2 - 4 teaspoons
	Billbugs Flea beetle larvae Grubs Seed corn beetle Seed corn maggots Wireworms	4 teaspoons
	Corn rootworm larvae Lesser cornstalk borer	1 ounce
	Corn rootworm larvae	2 teaspoons
After plant, Stalk (4)	Grasshoppers	1 - 2 teaspoons
	Armyworms Aphids Chinch bugs (4) Corn rootworm adults Webworms (5) Western bean cutworm	1 - 2 teaspoons
	Corn earworm European corn borer(6) Southwestern corn borer	2 teaspoons
	Billbugs (4) Common stalk borer (4) Cutworms (7) Flea beetle adults (4) Lesser cornstalk borer	2 - 3 teaspoons

() Numbers in parentheses refer to Specific Directions

Specific Directions:

- Restrictions:** Do not apply within 35 days before harvest. Do not apply more than a total of 2.25 ounces of Dursban NXS-4 per 35 sq. ft. per season.
- Use Dursban NXS-4 at the above rates by application to the soil surface and incorporate into the soil. Apply as a broadcast spray to the soil surface using suitable equipment. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of soil using a garden tiller or hoe.
- Apply Dursban NXS-4 in sufficient water and spray on both sides of the row at the base of the plants. Cover the insecticide with soil around the brace roots. The best time to apply this treatment of a soil insecticide with cultivation is near the beginning of egg hatch of corn rootworms.
- Use Dursban NXS-4 at the following rate by application in sufficient water to ensure thorough coverage of treated plants. Apply as a broadcast spray. Treat when pests become a problem. If corn less than 6 inches tall, apply the insecticide spray in a 9 to 12 inch wide band over the row. If corn greater than 6 inches tall, apply the insecticide spray directed to the base of the plant.
- For best billbug, chinch bug, and flea beetle control, apply 2 teaspoons per gallon of finished spray per 35 sq. ft. using suitable spray equipment. When chinch bugs continue to immigrate to corn over a prolonged period, a second application of Dursban NXS-4 may be needed.
- For webworm control, shallow incorporation using a hoe or other suitable equipment immediately after treatment is necessary.

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7. For first-generation European corn borer and corn earworm control, treat when damage becomes evident. Applications should be directed into the corn whorls. For second-generation European corn borer control, treat when pests become a problem. A second application may be applied 10 to 14 days later, if needed due to reinfestation.
8. For cutworms, it is preferable to apply Dursban NXS-4 when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy or crusty at time of treatment, worms may be protected from the spray and effectiveness will be reduced. If such conditions exist, shallow incorporation using a hoe or other suitable equipment immediately before or soon after treatment may improve control. Consult your Extension Service specialist for additional information concerning control practices in your area.

Peanuts

Use Dursban NXS-4 for control of the following pests at the dosages indicated. Mix the required dosage in enough water to ensure thorough coverage. To minimize chemical injury, do not apply Dursban NXS-4 to drought stressed peanuts within 3 days following irrigation or rain. Do not make more than one application per season as a directed spray. Directed and foliar sprays should not exceed 1.5 tablespoons of Dursban NXS-4 per 35 square feet. Do not harvest within 21 days after treatment.

Pests	Amount of Dursban NXS-4 per gallon of finished spray per 35 sq. ft.
Lesser cornstalk borer(1)	2 to 4 teaspoons
Army worms Mites Corn earworm Rednecked peanutworm Cutworms Thrips Leafhoppers	1 to 2 teaspoons
Velvetbean caterpillar (2) Green cloverworm (2)	1/2 teaspoons to 1 teaspoons

() Numbers in parentheses refer to Specific Directions

Specific Directions:

1. Apply as a directed spray to the base of the plants in an 8 to 10 inch wide band
2. Apply as a broadcast, foliar spray using ground equipment when field counts indicate damaging insect populations are developing or present.

Sweet Potatoes

Apply before planting potatoes. Mix the specified dosage with enough water to obtain uniform coverage of the treated area and apply as a coarse spray. After application, incorporate the insecticide into the soil to a depth of 4 to 6 inches using a hoe, or other suitable equipment. Plant the vegetable in the usual manner as soon as possible after treatment. Do not make more than one application per season. Do not harvest within 125 days of treatment.

Pests	Amount of Dursban NXS-4 per gallon of finished spray per 35 sq. ft.
Conoderus wireworms Sweet potato flea beetle Systema flea beetles	4 teaspoons

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Sunflowers (1)

Treatment Type	Pests	Amount of Dursban NXS-4 per gallon of finished spray per 35 sq. ft.
Preplant Incorporation	Cutworms (2)	2 to 4 teaspoons
Postemergence	Cutworms (3)	2 to 3 teaspoons
	Sunflower beetle larvae and adults	1 to 1 1/3 teaspoons
	Stem weevil (4)	
	Sunflower moth (5)	
	Banded sunflower moth	
	Woollybears	
	Seed weevils	
	Grasshoppers	1 teaspoons

() Numbers in parentheses refer to Specific Directions

Specific Directions:

- Restrictions:** Do not apply more than 1.75 ounces of Dursban NXS-4 per 35 sq. ft. per season. Do not apply within 42 days before harvest.
- Apply as a broadcast spray to the soil surface. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of soil. Apply as a broadcast spray when pests become a problem.
- For cutworm control, a second treatment may be made 7 to 10 days later, if needed.
- For stem weevil control, optimal treatment time is within 5 to 7 days after adult weevils begin to appear.
- For sunflower moth control, make first application during early 1 to 5 percent bloom stage. A second treatment may be made 7 days later, if needed.

Fruit And Nut Trees

Use Dursban NXS-4 at the dosages indicated by application as a foliar spray to control pests listed in the following tables. Treat the entire tree by application up to the point of runoff. Where a rate range is listed in the use directions, use the higher rate for more severe infestations. Treat when pests appear or consult your local Extension Service Specialist for best times to treat for the pests described.

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Fruits and Nuts	Pests	Amount of Dursban NXS-4 per gallon of finished spray
Apples (1)	Apple aphid (2) Apple Maggot Codling moth Dogwood borer (trunk spray) European apple sawfly Eyespotted bud moth European corn borer Fruit tree leafroller Green fruitworm Lesser appleworm Oblique-banded leafroller Orange tortrix Oriental fruit moth Pandemis leafroller Periodical cicada Plum curculio Redbanded leafroller Rosy apple-aphid San Jose scale Tarnished plant bug Tufted apple budmoth Variegated leafroller Woolly apple aphid	6 ounces
Almonds (3)	Navel Orangeworm Peachtwig borer San Jose scale	6 ounces
Walnuts (4)	Codling moth Walnut husk fly Walnut scale	8 ounces (1 cup)
Filberts (5)	Eyespotted bud moth Filbert aphid Filbert Leafroller Filbertworm Oblique-banded leafroller Omnivorous leaf tier Winter moth	6 to 9 ounces
Pecans (6)	Black pecan aphid Hickory shuckworm Pecan leaf scorch mite (7) (suppression) Pecan nut casebearer Phylloxera species (8) Fall webworm Spittlebug Fire ants and other ant species (orchard floor) (9)	4 ounces (1/2 cup)
Sour Cherries (10)	Borers (American plum, Lesser peachtree, Pacific flatheaded, Peach twig, Peachtree, Shothole) Climbing cutworm Green fruitworm Leafrollers (Fruittree, Oblique-banded, Pandemis, Redbanded) Lesser appleworm Tarnished plant bug Moth (Eyespotted bud, Mineola) Scale (European fruit lecanium, San Jose Stink bug	4 to 6 ounces
	Black cherry aphid Cherry fruit fly Plum curculio Rose chafer	6 ounces

Sweet Cherries (11)	American plum borer Great peachtree borer Lesser peachtree borer,	6 ounces
Nectarines (12) Peaches (12)	Peachtree borers	6 ounces

() Numbers in parentheses refer to Specific Directions.

Specific Directions:

1. **Restrictions:** 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.
2. To control apple aphid infesting apples, spray every 10 to 14 days on a preventative schedule.
3. Make only one dormant/delayed dormant spray application and no more than three foliar spray applications on almonds per season. Do not apply within 14 days of harvest.
4. Make only one dormant/delayed dormant spray application and no more than two foliar spray application on walnuts per season. Do not apply within 14 days of harvest.
5. Make no more than three foliar spray applications on filberts per season. Do not apply within 14 days of harvest.
6. Make no more than 5 applications per season. Do not apply within 28 days of harvest.
7. To suppress pecan leaf scorch mite on pecans, use in a preventative program.
8. For best pecan Phylloxera control, use two applications 7 to 10 days apart starting at bud swell and ending by early leaf expansion.
9. For ant control on pecans, do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor.
10. Make no more than 8 applications per season. Do not apply within 14 days of harvest.
11. Apply as a coarse, low-pressure spray to give uniform coverage of tree trunks and lower limbs. Avoid contact with foliage (leaves) in sweet cherries as premature leaf drop may result. Make a second application two weeks after the first one and a third application after harvest. Consult your Extension Service Specialist for proper time to treat in your area. The third application can be substituted for a dormant or delayed dormant spray for control of San Jose scale, peach twig borer and climbing cutworms. For control of these pests, mix 1 2/3 to 3 1/3 fluid ounces of Dursban NXS-4 with 1/2 to 1 pint of a petroleum oil recommended for dormant use in 5 gallons of water and spray the entire tree up to the point of runoff using a coarse spray. Use oil as recommended by your local Extension Service. Make only 3 applications per year. Do not apply within 6 days of harvest.
12. Use Dursban NXS-4 for the control of peach tree borers by application as a trunk spray before newly hatched borers enter the trees. Apply as a coarse, low-pressure spray to give uniform coverage of tree trunks. Thoroughly wet all bark areas from ground level to scaffold limbs. Do not allow spray to contact fruit. Consult your Extension Service Specialist for proper time to treat in your area. Make only one application per season. Do not apply within 14 days before harvest.

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Dormant Spray (Tree Pests)

Use Dursban NXS-4 as a dormant or delayed dormant spray at the rates indicated to control the listed insects. Tank mix with 2 1/2 to 5 fl oz of petroleum spray oil recommended for dormant use in 1 gallon of finished spray. Spray the entire tree up to the point of runoff. Use the higher dosage of Dursban NXS-4 for severe infestations. Use oil as recommended by your Extension Service specialist.

Fruits and Nuts	Pests	Amount of Dursban NXS-4 per gallon of finished spray
Apples	Climbing cutworms Lygus Pandemis leafroller Rosy apple aphid San. Jose scale	1 to 2 ounces
Almonds Nectarines Peaches Pears Plums Prunes	Climbing cutworms Mealy plum aphid Peach twig borer Pear psylla adults San Jose scale	1 - 2 ounces

Precautions: Because cold or dry conditions may cause sprays containing Dursban NXS-4 and dormant oil to penetrate the bark of trees, do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated. The penetration of Dursban NXS-4 and dormant oils into the bark can result in bud damage or drop. Make only one application during the dormant season.

Citrus Fruit Trees

Treat when insects become a problem or in accordance with the local spray schedule recommended by your Extension Service Specialist. Do not apply when temperature exceeds 95°F. Dursban NXS-4 is highly toxic to honey bees exposed to direct treatment and should not be applied when bees are actively visiting the area. Apply late in evening or early morning (when bees are not actively foraging) to allow insecticide to dry before honey bees are expected to visit. Do not apply Dursban NXS-4 in combination with any other product. Do not apply more than 2 applications per fruit year or more than 18 ounces of Dursban NXS-4 per 1000 sq. ft. per fruit year. Do not make second application within 30 days of first application. Do not treat within 21 days before harvest.

Grapefruit, Lemons, Oranges, and other Citrus Fruits

Citrus Fruits	Pests	Amount of Dursban NXS-4 per gallon of finished spray
Grapefruit Lemons Oranges Other Citrus Fruits	Aphids Caterpillars Citrus thrips Cutworms Fruittree leafroller Katydid Mealy bugs Orange tortrix Scale insects (Such as: Black, Brown soft, California red, Chaff, Snow) Western tussock moth	2 to 3 Tablespoons

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Other Fruits And Herbs

Fruits and Herbs	Pests	Amount of Dursban NXS-4 per gallon of finished spray
Strawberries (1)	Strawberry bud weevil	3 ounces
Mint (2)	Cutworms	4 to 6 ounces
Mint (2)	Mint root borer	6 ounces

Specific Directions:

1. Use Dursban NXS-4 by application as a broadcast foliar spray to control strawberry bud weevil. Apply 1 gallon of spray per 100 square feet when buds first appear and 10 to 14 days later. Do not apply after berries start to form or when berries are present. Dursban NXS-4 should not be mixed with any other pesticides, surfactants, or fertilizer formulations. Phytotoxicity may occur when Dursban NXS-4 is applied to strawberries experiencing high temperature and drought stress. For pre-bloom use only. Do not make more than two applications per season or apply within 21 days before harvest.
2. Use Dursban NXS-4 by application as a broadcast, foliar spray to control cutworms. Apply 1 gallon of spray per 100 square feet. For cutworm control, treat during May and June when damaging insect populations are developing or present. For mint root borer control, apply after harvest when insect populations are developing or present. When larvae are less than 3/4 inches in length, use the 1 ounce rate. Contact your Extension Service Specialist for proper timing in your area. For best results against both insect pests, follow treatment with approximately 1 inch of sprinkler watering immediately after application to incorporate the insecticide into the soil. Make only one application during the growing season. Do not apply within 90 days before harvest. Make only one post-harvest application per season.

Precautionary Statements**Hazards to Humans and Domestic Animals****Keep Out of Reach of Children****CAUTION****Harmful If Swallowed, Inhaled, Or Absorbed Through The Skin.**

Avoid breathing vapors or spray mist. Avoid contact with eyes. In case of contact, immediately flush eyes with plenty of water. Get medical attention if irritation persists.

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, or 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 when disposing of equipment washwaters. Cover or contain spills outdoors and dispose of in a manner consistent with local, state, and federal regulations.

Storage and Disposal

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

Storage: Store in original container out of the reach of children and pets. Do not store above 122°F for extended periods of time. Preferred storage is above 40°F. Storage below 35°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.

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

Container Disposal: Do not reuse empty container. Triple rinse, put in trash, or offer for recycling or reconditioning.

[**Editor's note:** Subregistrant may include appropriate statements to address warranty disclaimer, Inherent Risks of Use, or Limitation of Remedies pertaining to use of this product.]

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