

62719-254

12/21/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

December 21, 2012

Darin W. Lickfeldt  
Dow AgroSciences  
9330 Zionsville Road  
Indianapolis, IN 46268

Subject: Amended labeling to implement required spray drift mitigation measures  
Product Name: Dursban® 4E-N  
EPA Registration No. 62719-254  
Your submission dated August 28, 2012

Dear Dr. Lickfeldt:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable with the following comment:

- On page 12, under the "Non-Bearing Almond, Citrus Fruits, Filbert, Pecan, Tree Fruits, and Walnut Tress in Nurseries" section, insert the statement "Apply only to trees grown in wholesale nursery operations" immediately before the sentence, "Wholesale nursery operations are commercial agricultural operations..."

A stamped copy of the label is enclosed for your records. Please submit one copy of your final printed labeling before you release the product for shipment. Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). If you have any questions, please contact Julie Chao by phone at: (703) 308-8735, or by email at: [chao.julie@epa.gov](mailto:chao.julie@epa.gov).

Regards,

A handwritten signature in black ink, appearing to read "Venus Eagle".

Venus Eagle, Product Manger 01  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

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(Base label):

**RESTRICTED USE PESTICIDE**

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

**Dursban<sup>®</sup> 4E-N****Specialty Insecticide****Active Ingredient:**

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate .....	44.9%
Other Ingredients .....	55.1%
Total .....	100.0%

Contains 4 lb of chlorpyrifos per gallon.  
Contains aromatic petroleum distillates.

ACCEPTED  
With COMMENTS  
In EPA Letter Dated:

DEC 21 2012

Under the Federal Insecticide, Fungicide  
and Rodenticide Act, As amended, for the  
pesticide Registered under EPA Reg. No:

62719-254

**Keep Out of Reach of Children****WARNING AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals**

May Be Fatal If Swallowed • Harmful If Asorbed Through Skin • Causes Moderate Eye Irritation •  
Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some  
Individuals

Avoid contact with skin, eyes or clothing.

**Personal Protective Equipment (PPE)**

Materials that are chemical-resistant to this product are barrier laminate and viton (≥14 mils).

**Mixers and loaders** using a mechanical transfer loading system must wear:

- Long-sleeved shirt and long pants
- Socks and shoes

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:

- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist-filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator or any R, P, or HE filter

See Engineering Controls for additional requirements.

All **other mixers, loaders, applicators and handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves

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- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator or any R, P, or HE filter

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### Engineering Controls

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### First Aid

#### Organophosphate

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Note to physician:** Contains petroleum distillate – vomiting may cause aspiration pneumonia.

**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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. 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 water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

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**Physical or Chemical Hazards****Combustible.** Do not use or store near heat or open flame.**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for requirements about this standard.

**(Storage and Disposal for rigid containers 5 gal or less)****Storage and Disposal**

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

**Pesticide Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50 to 70°F and agitate to redissolve crystals. 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 must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for refillable rigid containers larger than 5 gal)****Storage and Disposal**

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

**Pesticide Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50 to 70°F and agitate to redissolve crystals. 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 must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)**

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**Storage and Disposal**

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

**Pesticide Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50 to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

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Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

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

EPA Reg. No. 62719-254

EPA Est. \_\_\_\_\_

®Trademark of Dow AgroSciences

**Produced for**

**Dow AgroSciences**

**9330 Zionsville Road**

**Indianapolis, IN 46268**

**Net Contents** \_\_\_\_

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(Cover, shipping container):

**RESTRICTED USE PESTICIDE**

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

**Dursban<sup>®</sup> 4E-N****Specialty Insecticide****Active Ingredient:**

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate .....	44.9%
Other Ingredients .....	55.1%
Total .....	100.0%

Contains 4 lb of chlorpyrifos per gallon.

Contains aromatic petroleum distillates.

**Keep Out of Reach of Children****WARNING                      AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for requirements about this standard.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

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(page 1 through end):

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****WARNING**

**May Be Fatal If Swallowed • Harmful If Absorbed Through Skin • Causes Moderate Eye Irritation • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals**

**Avoid contact with skin, eyes or clothing.**

**Personal Protective Equipment (PPE)**

Materials that are chemical-resistant to this product are barrier laminate and viton ( $\geq 14$  mils).

**Mixers and loaders** using a mechanical transfer loading system must wear:

- Long-sleeved shirt and long pants
- Socks and shoes

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:

- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator or any R, P, or HE filter

See Engineering Controls for additional requirements.

**All other mixers, loaders, applicators and handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator or any R, P, or HE filter

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls**

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

**User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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**First Aid****Organophosphate**

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Note to physician:** Contains petroleum distillate – vomiting may cause aspiration pneumonia.

**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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

**Environmental Hazards**

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. 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 water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**Physical or Chemical Hazards**

**Combustible.** Do not use or store near heat or open flame.

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**Directions for Use**

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**Restricted Use Pesticide**

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.

This product cannot be reformulated or repackaged into other end-use products.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.



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Do not enter or allow worker entry into treated areas during the restricted entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop.

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early reentry requirements pursuant to 40 CFR Part 170.

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made out of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

### Storage and Disposal

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

**Pesticide Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50 to 70°F and agitate to redissolve crystals. 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 must be disposed of on site or at an approved waste disposal facility.

#### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### Refillable containers 5 gallons or larger:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then

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offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Nonrefillable containers 5 gallons or larger:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

## Product Information

Dursban® 4E-N specialty insecticide is an emulsifiable concentrate for use in listed crops. This product resists washoff once it is dry. Target pests and application rates are provided in the accompanying tables.

## Use Precautions and Restrictions

- **Chemigation:** Do not apply this product through any type of irrigation system.
- Keep out of fishpools and other bodies of water.
- Do not treat vegetable gardens.
- Do not allow meat or dairy animals to graze in treated areas.
- Do not feed treated grass cuttings (hay) or seed screenings to livestock nor use hay for livestock bedding.
- Do not use in poultry houses or greenhouses.
- Do not aerially apply this product.

## Spray Drift Management

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland sites, woodlands, pastures, rangelands, or animals.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making the decision to apply this product.

Observe the following precautions when spraying Dursban 4E-N adjacent to permanent bodies of water such as rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries, and commercial fish ponds.

The following treatment setbacks or no-spray buffer zones must be utilized for all applications around the above listed aquatic areas with the following application equipment:

Application Method	Required Setback (Buffer Zone) (feet)
ground boom	25
orchard airblast	50

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Making applications when wind is blowing away from sensitive areas is the most effective way to reduce the potential for adverse effects.

The buffer distances specified in the below table are the distances in feet that must exist to separate sensitive sites from the targeted application site. Buffers are measured from the edge of the sensitive site to the edge of the application site.

Sensitive sites are areas frequented by non-occupational bystanders (especially children). These include residential lawns, pedestrian sidewalks, outdoor recreational areas such as school grounds, athletic fields, parks and all property associated with buildings occupied by humans for residential or commercial purposes. Sensitive sites include homes, farmworker housing, or other residential buildings, schools, daycare centers, nursing homes, and hospitals. Non-residential agricultural buildings, including barns, livestock facilities, sheds, and outhouses are not included in this prohibition.

Application Rate (lb ai/A)	Nozzle Droplet Type	Required Setback (Buffer Zones) (feet)		
		Aerial	Airblast	Ground
>0.5 – 1	coarse or very coarse	10	10	10
>0.5 – 1	medium	25	10	10
>1 – 2	coarse or very coarse	50	10	10
>1 – 2	medium	80	10	10
>2 – 3	coarse or very coarse	80 <sup>1</sup>	10	10
>2 – 3	medium	100 <sup>1</sup>	10	10
>3 – 4	medium or coarse	NA <sup>2</sup>	25	10
>4	medium or coarse	NA	50	10

<sup>1</sup>Aerial application of greater than 2 lb ai/A is only permitted for Asian Citrus Psylla control, up to 2.3 lb ai/A.

<sup>2</sup>NA is not allowed.

Only pesticide handlers are permitted in the setback area during application of this product. Do not apply this product if anyone other than a mixer, loader, or applicator, is in the setback area. Exception: Vehicles and persons riding bicycles that are passing through the setback area on public or private roadways are permitted.

Follow these spray drift **best management practices** to avoid off-target drift movement from applications.

#### Ground Boom Application

The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from ground applications.

- Choose only nozzles and pressures that produce a medium or coarse droplet size (255 to 400 microns volume median diameter) per ASABE Standard 572.1. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
- Apply with nozzle height no more than 2 feet above the ground or crop canopy.
- Do not apply product when wind speed exceeds 10 mph as measured by an anemometer.

#### Orchard Airblast Application

The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from airblast applications.

- Direct nozzles so spray is not projected above the canopies.

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- Apply only when wind speed is 3 to 10 mph applications at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.
- Outward pointing nozzles must be shut off when turning corners at row ends.

The applicator should take into account the following **best management practices** to reduce off-site spray drift. This section is advisory and does not supercede mandatory label requirements.

- Number of nozzles, nozzle orientation and spray volume, air speed and wind direction are key factors in adjusting airblast spray delivery to match the height and density of the crop canopy. Adjust airblast equipment to provide uniform coverage while minimizing the amount of spray movement over the top or completely through the crop canopy.
  - High air volumes deliver spray more efficiently than air at high speed. Reducing forward travel speed decreases the air speed necessary to deliver the spray to the top of the crop canopy.
  - Use air guides along with the number and orientation of spray nozzles to achieve the desired spray coverage and directional control.
- Take the following steps to minimize drift and the amount of non-target spray:
  - Orient nozzles and adjust air speed/volume/direction to force the spray through the crop canopy but not allow drift past the canopy.
  - Shut off spray delivery when passing gaps in crop canopy within rows.
  - Spray the outside rows of orchards from outside in, directing the spray into the orchard and shutting off nozzles on the side of the sprayer away from the orchard.
  - When treating smaller trees, vines or bushes, shut off top nozzles to minimize over-the-top spray movement.

## Application Directions

### Broadcast Foliar Application

Apply with conventional power-operated spray equipment using nozzles and spray pressures specified for insecticides. Apply Dursban 4E-N in a spray volume of not less than 10 gallons per acre (gpa) for ground equipment, unless otherwise specified. Increase spray volume to ensure adequate coverage with increased density and height of crop canopy.

**Ground Application:** Orient the boom and nozzles so that uniform coverage is obtained. The swath width should not be wider than the boom. Follow nozzle manufacturer's recommendations for insecticide nozzles with respect to nozzle type, pressure, and spacing.

## Mixing Directions

### Dursban 4E-N – Alone

To prepare the spray, add a portion of the required amount of water to the spray tank and, with the spray tank agitator operating, add Dursban 4E-N. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

### Dursban 4E-N – Tank Mix

Dursban 4E-N is compatible with insecticides, miticides, and fungicides, except for alkaline materials, such as Bordeaux mixture and lime. Conduct a small jar compatibility test prior to tank mixing. Prepare tank mixtures in the same manner as directed above for use of Dursban 4E-N alone. When tank mixing Dursban 4E-N with herbicides, add wettable powders first, flowables second, and emulsifiable concentrates last. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture. Do not allow spray mixtures to stand overnight.

**Tank Mix Compatibility Test:** Test compatibility of the intended tank mixture before adding Dursban 4E-N to the spray or mix tank. Add proportional amounts of each tank mix ingredient to a clear glass pint or quart jar with a lid, cap it, invert the jar several times, and let set 15 minutes. If the mixture balls-up,

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forms flakes, sludges, jels, oily films or layers, or other precipitates that do not readily redisperse, it is an incompatible mixture that must not be used.

## Uses

### Non-Bearing Almond, Citrus Fruits (Crop Group 10)<sup>1</sup>, Filbert, Pecan, Tree Fruits<sup>2</sup>, and Walnut Trees in Nurseries

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days for citrus, 4 days for tree fruit, and 24 hours for almond, filbert, pecan, and walnut unless PPE required for early entry is worn.

<sup>1</sup>Citrus fruits (crop group 10) including calamondin, chironja, citrus citron, citrus hybrids, clementine, grapefruit, kumquat, lemon, lime, mandarin (tangerine), Mediterranean mandarin, pummelo, satsuma mandarin, sour orange, sweet orange, tangelo, tangor

<sup>2</sup>Apple, cherry, nectarine, peach, pear, plum, prune

Non-bearing almond, citrus fruits, filbert, pecan, tree fruits, and walnut trees are those which will not bear a crop within one year after treatment with Dursban 4E-N. Wholesale nursery operations are commercial agricultural operations which do not sell or distribute directly to consumers or the general public through retail sales. Plants, trees, fruit, vegetables, or any parts of the plants, fruits or vegetables treated with this product cannot be sold or distributed directly to consumers or the general public through retail sales.

Apply this product as a foliar spray at the dosages indicated to control pests listed in the following table in wholesale nursery operations only. Use a higher rate in the rate range when there is increased pest pressure. Use sufficient spray volume to completely wet tree foliage, but not to point of runoff. For best results, use a petroleum spray oil when applying to citrus fruits to improve control of aphids, mealybugs, scale insects, and thrips. See precautions for use of oil below. Treat when pests appear or in accordance with the local conditions. Consult your state agricultural experiment station, certified pest control advisor, or extension service specialist for specific use information in your area.

Pests		Amount of Dursban 4E-N (fl oz) per		
		Gallon	100 Gallons	Acre
aphids (1)	lepidopterous larvae	1/6 - 1/3	16 - 32	32 - 64
apple	lesser appleworm			
black cherry	<i>Lygus</i> spp.			
black pecan	mealybugs (1)			
filbert	mineola moth			
rosy apple	mites (3)			
woolly apple	citrus rust			
yellow pecan	European red			
apple maggot	pecan leaf scorch			
borers	twospotted spider			
American plum	navel orangeworm			
dogwood	oriental fruit moth			
lesser peachtree	pecan nut casebearer			
pacific flatheaded	pecan weevil			
peach twig	periodical cicada			
peachtree	<i>Phylloxera</i> spp.			
shothole	plum curculio			
cherry fruit fly	potato leafhopper			
climbing cutworm	rose chafer			
codling moth	scale insects (1)			
European apple sawfly	European fruit lecanium			

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European corn borer eyespot bud moth fall webworm filbert worm grasshoppers (2) lubber green fruitworm hickory shuckworm katydids leafrollers and tiers avocado leafroller filbert leafroller fruittree leafroller obliquebanded leafroller omnivorous leaftier orange tortrix pandemis leafroller redbanded leafroller variegated leafroller	San Jose walnut spittlebug spotted tentiform leafminer stinkbug tarnished plant bug thrips (1) citrus tufted apple budmoth walnut husk fly western tussock moth white apple leafhopper winter moth			
scale insects (1) (4) black scale brown soft scale California red scale chaff scale	Florida red scale long scale purple scale snow scale	1/3 - 2/3	32 - 64	64 - 128

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

#### Pest-Specific Use Directions:

1. **Aphids, mealybugs, scale insects, and thrips on citrus fruits only:** To improve control, a petroleum spray oil specified for use on citrus trees may be added to spray mixtures at up to 1.8 gallons per 100 gallons of spray.
2. **Lubber grasshoppers:** Effective control requires direct contact with spray when grasshoppers are small (less than 1 inch in length).
3. **Twospotted spider mites:** When large numbers of eggs are present at the time of the first application, a second application after 3 to 5 days in the south or 7 to 10 days in the north may be required to control newly hatched nymphs and maintain effective control.
4. **Scale insects:** Apply when scale crawlers or first two stages of settled nymphs are present.

#### Specific Use Precautions:

- Cold or dry conditions may cause Dursban 4E-N plus oil sprays to infuse into trees, resulting in bud damage or bud drop. Do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.
- Avoid contact with foliage in sweet cherries as premature leaf drop may result.
- Observe local use directions for tank mix combinations, especially with regard to use of Dursban 4E-N plus spray oil. Do not use penetrating surfactants in tank mixes with Dursban-4E. Consult with a county farm advisor, county agency, extension service personnel, agricultural commissioner, pest control advisor, or local Dow AgroSciences representative for local recommendations.

#### Specific Use Restrictions:

- Do not make more than two applications of Dursban 4E-N or other product containing chlorpyrifos per year (does not include citrus orchard floors) to almond, citrus fruits, filbert, pecan, cherry, pear, plum, and walnut.
- Do not make more than one application of Dursban 4E-N or other product containing chlorpyrifos per year to apple, nectarine and peach.
- Maximum single application rate is 2 lb ai chlorpyrifos (4 pints of Dursban 4E-N) for almond, cherry, citrus fruits, filbert, pear, pecan, plum, prune, and walnut.

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- Do not apply more than a total of 4 lb ai chlorpyrifos (8 pints of Dursban 4E-N) per acre per year for almond, cherry, citrus fruits, filbert, pear, pecan, plum, prune, and walnut.
- Do not make a second application of Dursban 4E-N or other product containing chlorpyrifos within 10 days of the first application.
- Do not apply when trees are stressed by drought or high temperatures.
- Do not allow meat or dairy animals to graze in treated areas.
- **Walnuts:** Do not apply Dursban 4E-N in combination with oil to walnuts.
- **Nectarine and peach:** Do not make more than one application of up to 3 lb ai chlorpyrifos (6 pints of Dursban 4E-N) per season.
- **Apple:**
  - Do not make more than one application of up to 2 lb ai chlorpyrifos per season.
  - Do not make more than one application of Dursban 4E-N or other any chlorpyrifos product per year. The application can be either a prebloom dormant/delayed dormant spray to the canopy or the trunk, or a post-bloom application to the lower 4 feet of the trunk.

### Ornamentals Grown in Nurseries

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days for citrus, 4 days for tree fruit, and 24 hours for all other ornamentals unless PPE required for early entry is worn.

Apply to ornamentals grown only in wholesale nursery operations. Wholesale nursery operations are commercial agricultural operations which do not sell or distribute directly to consumers or the general public through retail sales. Plants, trees, fruit, vegetables, or any parts of the plants, trees, fruits, or vegetables treated with this product cannot be sold or distributed directly to consumers or the general public through retail sales.

Use Dursban 4E-N to treat flowers, shrubs, evergreens (including those grown in conifer seedling nurseries), vines, shade and flowering trees, and non-bearing fruit, nut and citrus trees to control the pests listed in the following tables including: (1) Sucking Insects and Mites; (2) Defoliators and Leafminers; (3) Borers, Bark Beetles and Weevils; and, (4) Ants and Other Pests.

Apply using suitable hand- or power-operated spray equipment to ensure thorough and complete coverage. Attempt to penetrate dense foliage, but avoid over spraying to the point of runoff. When using spray equipment delivering less than 200 gallons of spray per acre, use the rate specified in the per acre column. Thorough 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.

#### Specific Use Precautions:

**Phytotoxicity:** Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence phytotoxic expression. Dursban 4E-N has been tested on numerous ornamental plants without causing serious phytotoxicity at specified use rates. Some varieties of azaleas, camellias, poinsettias, roses, and variegated ivy have shown varying degrees of phytotoxicity following treatment with Dursban 4E-N. Before treating large numbers of plants (especially those above), treat a small block of plants and observe them for 7 to 10 days for symptoms of phytotoxicity. **Note:** The user assumes responsibility for determining if it is safe to treat other ornamental plants with Dursban 4E-N under commercial growing conditions.

#### (1) Sucking Insects and Mites (Ornamentals Grown in Nurseries)

Pests	Amount of Dursban 4E-N (fl oz) per		
	Gallon	100 Gallons	Acre

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adelgids cooley and eastern spruce galls pine bark aphids apple balsam twig black pecan chrysanthemum cottonwood crape myrtle elm leaf melon peach rose spirea white pine woolly woolly apple yellow pecan boxelder bugs lace bugs (such as: hawthorn) periodical cicada plant bugs psyllids spittlebugs thornbug whiteflies	1/12 - 1/6	8 - 16	16 - 32
leafhoppers mealybugs citrus taxus mites (1) clover red spider southern red spruce spider twospotted spider) thrips (exposed)	1/6	16	32



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scale insects (2)	1/3	32	32 - 64
cottoncushion			
cottony maple			
dearness			
euonymus			
fletcher			
Florida wax			
golden oak			
hemispherical			
lecanium			
magnolia			
oak kermes			
oak lecanium			
oystershell			
pine needle			
San Jose			
tea			
white birch			

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

**Pest-Specific Use Directions:**

1. **Spider mites:** When large numbers of eggs are present at the time of the first application, a second application after 3 to 5 days in the south or 7 to 10 days in the north may be required to control newly hatched nymphs and maintain effective control.
2. **Scale insects:** Apply when scale crawlers or first two stages of settled nymphs are present.

**(2) Defoliators and Leafminers (Ornamentals Grown in Nurseries)**

Pests		Amount of Dursban 4E-N (fl oz) per		
		Gallon	100 Gallons	Acre
armyworms	poplar tentmaker	1/12 - 1/6	8 - 16	16 - 32
fall	puss caterpillars			
yellowstriped	rose chafers			
bagworms (1)	sawflies, exposed			
cankerworms	European pine			
catalpa sphinx	pine			
elm spanworms	pin oak			
fall webworms (2)	redheaded			
grasshoppers	spring elm caterpillars			
greenstriped mapleworms	springtails			
green fruitworms	spruce budworms			
hornworms	eastern			
jackpine budworms	western			
juniper webworms	tent caterpillars			
katydids	eastern			
leafrollers (3)	forest			
maple leafcutters (4)	western			
oak skeletonizers	walnut caterpillars			
oleander caterpillars	yellownecked caterpillars			
orange tortrix				

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balsam gall midge beet armyworms beetles (5) fuller rose browntail moth cutworms cypress tip moth Douglas fir tussock moth European pine shoot moth gypsy moth (6) holly bud moth mahogany webworms	mimosa webworms Nantucket pine tip moth oakworms California orangestriped redhumped pandora moth pitch pine tip moth redhumped caterpillars subtropical pine tip moth tussock moth	1/6	16	32
beetles cottonwood leaf (7) elm leaf flea willow leaf		1/6 - 1/3	16 - 32	32
leafminers needleminers Jeffrey pine lodgepole pine spruce pine needle midge rhododendron gall midge		1/3	32	32 - 64

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

**Pest-Specific Use Directions:**

1. **Bagworms:** Treat when larvae are small and actively feeding.
2. **Fall webworms:** Direct spray into web and immediate surrounding foliage.
3. **Leafrollers:** Apply spray before leaves are tightly rolled.
4. **Maple leafcutter:** On maple trees, spray larvae as cases are formed. Do not treat sugar maple trees intended for maple syrup production.
5. **Beetles:** To reduce twig and branch feeding, apply in the spring or early summer.
6. **Gypsy moth larvae:** To control migrating and invading larvae, treat trunks and foliage.
7. **Cottonwood leaf beetles:** Apply to control larvae and adults infesting cottonwoods. Treat when field counts indicate damaging beetle populations are developing or present.

**(3) Borers, Bark Beetles, and Weevils (Ornamentals Grown in Nurseries)**

Pests	Amount of Dursban 4E-N (fl oz) per		
	Gallon	100 Gallons	Acre
weevils blackvine (1) cranberry girdler (2) pine reproduction yellow poplar	1/6	16	32 - 64

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borers: (3) clearwing moths ash dogwood lesser peachtree lilac oak peachtree rhododendron longhorned beetles cottonwood locust red oak metallic wood bronze birch flatheaded appletree twolined chestnut pales weevil adults zimmerman pine moth	1/3	16	-
northern pine weevil (4) pales weevil (4)	1	96	-
beetles (5) 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)	2 2/3	256	-
weevils (7) northern pine pitch eating twig	5 1/3	512	-

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

**Pest-Specific Use Directions:**

1. **Blackvine weevils** are night feeders. Late afternoon spraying will give control in some areas.
2. **Cranberry girdler larvae:** For larvae infesting Douglas fir seedlings, direct spray at lower crown and stems following egg laying during summer. Apply a minimum of 50 gallons of dilute spray per acre and irrigate immediately after application to move the insecticide into the top 1 to 2 inches of soil.
3. **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 *Prunus* as a trunk spray before newly-hatched larvae enter the trees. 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.

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4. **Northern pine and pales weevil larvae:** Apply as a cut stump spray or drench in winter or early spring.
5. **Beetles:** For preventive treatment, spray the upper half of the tree trunk and into the lower 1/3 of the crown 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 when damage occurs, but before adult beetles begin to emerge.
6. **Native elm bark beetles:** To prevent from over-wintering in uninfested trees, apply a dilution of 1 gallon per 100 gallons of water (1 1/3 fl oz per gallon) as a spray to the bottom 9 feet of trunk. Wet the trunk thoroughly, but do not spray to runoff. Apply the spray directly to the base of the root flare from spring to early fall. To reduce twig and branch feeding on high value trees, apply a dilution of 1 gallon per 100 gallons of water (1 1/3 fl oz per gallon) as a spray to the tree crown. Apply in the spring or early summer using a sprayer that will give thorough coverage to the tree crown.
7. **Pine seedlings:** Treat immediately after transplanting with enough spray to thoroughly wet the foliage and stems to the point of runoff. Do not use more than 6 gallons of spray per acre.

#### (4) Ants and Other Pests (Ornamentals Grown in Nurseries)

Pests	Amount of Dursban 4E-N (fl oz) per		
	Gallon	100 Gallons	Acre
ants (1) sowbugs springtails	1/6	16	32

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

#### Pest-Specific Use Directions:

1. Excludes ants of significant public health importance such as fire ants, harvester ants, carpenter ants, and pharaoh ants.

#### Ornamentals (Pre-Plant Incorporation Treatment of Field Grown Nursery Stock)

Pests	Amount of Dursban 4E-N (fl oz) per Acre
garden symphylans (1)	64 - 128
white fringed beetles (2) white grubs (2)	128

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

#### Pest-Specific Use Directions:

1. **Garden symphylans:** Apply to the soil surface as a broadcast spray in at least 10 gpa of water. On the same day of treatment, incorporate the insecticide to a depth of up to 8 inches of the soil using a disc, rotovator, or equivalent incorporation equipment. Use the higher rate in the rate range for longer residual or where deeper incorporation is necessary.
2. **White fringed beetles and white grubs:** Apply and incorporate before transplanting or planting to control insects during transplant or seedling establishment. Apply to the soil surface as a broadcast spray using sufficient water to obtain adequate coverage. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of the soil using a tandem disc, field cultivator, or equivalent incorporation equipment capable of thorough soil mixing.

#### Specific Use Precautions:

**Phytotoxicity:** Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence phytotoxic expression. Dursban 4E-N has been tested on numerous ornamental plants and loblolly pine without causing serious phytotoxicity at specified use rates. Before treating large numbers of plants, treat a small block of plants, seed or transplant the test species or variety, and observe them for a minimum of 14 days following emergence or transplanting for symptoms of phytotoxicity. Do not blend Dursban 4E-N with dry bulk fertilizer materials. **Note:** The user

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assumes responsibility for determining if it is safe to treat other ornamental plants with Dursban 4E-N under commercial growing conditions.

### Ornamentals [Soil Treatment of Containerized (Potted) or Balled and Burlapped Nursery Stock]

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Use in nurseries is permitted for USDA quarantine purposes only.

Completely submerge the container with drain holes or root ball stabilized by burlap in a tank containing diluted Dursban 4E-N. Do not remove burlap wrap or containers prior to submerging. Keep the container or root ball submerged about 30 seconds until the soil is completely saturated.

Pests	Amount of Dursban 4E-N (fl oz) per	
	Gallon	100 Gallons
Japanese beetles	2/3	32

#### Specific Use Precautions:

**Phytotoxicity:** Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence phytotoxic expression. Dursban 4E-N has been tested on numerous ornamental plants without causing serious phytotoxicity at specified use rates. Before treating large numbers of plants, treat a small block of plants and observe them for at least 7 days for symptoms of phytotoxicity. **Note:** The user assumes responsibility for determining if it is safe to treat other ornamental plants with Dursban 4E-N under commercial growing conditions.

### Tree Fruits<sup>1</sup> and Almond (Dormant/Delayed Dormant Sprays)

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days for tree fruits and 24 hours for almond unless PPE required for early entry is worn.

<sup>1</sup>Apple, cherry, nectarine, peach, pear, plum, prune

Apply as a dormant or delayed dormant spray. While Dursban 4E-N may be used without oil, for best results, use oil to control additional pests, such as European red mite. See precautions for use of oil below. Apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays (greater than 200 gpa), use sufficient spray volume to completely wet tree foliage, but not to point of runoff. For concentrate sprays (less than 200 gpa), uniformly apply an equivalent amount of Dursban 4E-N per acre.

Use a higher rate in the rate range when there is increased pest pressure.

#### Use Precautions for Tree Fruits and Almond:

- Cold or dry conditions may cause Dursban 4E-N plus oil sprays to infuse into trees, resulting in bud damage or bud drop. Do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.

#### Use Restrictions for Tree Fruits and Almond:

- Do not make more than one application of Dursban 4E-N or other product containing chlorpyrifos during the dormant season except for control of the apple ermine moth.
- For apple, do not make more than one application of Lorsban-4E to the apple tree trunk per year as either a prebloom or post-bloom application
- Maximum single application rate is 2 lb ai chlorpyrifos (4 pints of Dursban 4E-N) per acre.

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- Do not apply more than a total of 2 lb ai chlorpyrifos (4 pints of Dursban 4E-N) per acre per season as a dormant/delayed dormant application.
- Do not allow meat or dairy animals to graze in treated orchards.

**Almond, Cherry, Nectarine, Peach, Pear, Plum, Prune**

Pests	Amount of Dursban 4E-N (fl oz) per	
	Gallon	100 Gallons (1)
apple ermine moth (2)	1/12	8
aphids	1/12 - 1/6	8 - 16
mealy plum		
rosy apple		
woolly apple		
borers		
peach twig		
cutworms		
climbing		
dioryctria spp		
leafrollers		
obliquebanded		
pandemis		
pear psylla adults		
scale insects		
San Jose		
sequoia pitch moth		

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

**Pest-Specific Use Directions:**

1. Application rate is based upon 200 to 600 gpa as a dilute spray depending on the size of the trees.
2. **Apple ermine moth** (*Malus* species): Make two applications, 7 to 14 days apart, in combination with a petroleum spray oil at the rate of 2 to 4% (volume:volume). When using tank mixtures, also follow all label directions for the mixing partner (oil). Use appropriate application equipment and spray volumes to ensure complete coverage of the trees or control will be compromised.

**Specific Use Precautions for Almond, Cherry, Nectarine, Peach, Pear, Plum, Prune:**

- Avoid contact with foliage in sweet cherries as premature leaf drop may result.

**Specific Use Restrictions for Almond, Cherry, Nectarine, Peach, Pear, Plum, Prune:**

- Do not make a soil or foliar application of Dursban 4E-N or other product containing chlorpyrifos within 10 days of a dormant/delayed dormant application of chlorpyrifos to the orchard.

**Apple**

Pests	Amount of Dursban 4E-N (fl oz) per	
	Gallon	100 Gallons (1)
apple ermine moth (2)	1/12	8

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aphids mealy plum rosy apple woolly apple borers peach twig cutworms climbing dioryctria spp leafrollers obliquebanded pandemis pear psylla adults scale insects San Jose sequoia pitch moth	1/12 - 1/6	8 - 16
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Numbers in parentheses (-) refer to Pest-Specific Use Directions.

**Pest-Specific Use Directions:**

1. Application rate is based upon 200 to 600 gpa as a dilute spray depending on the size of the trees.
2. **Apple ermine moth** (*Malus* species): Make two applications, 7 to 14 days apart, in combination with a petroleum spray oil at the rate of 2 to 4% (volume:volume). When using tank mixtures, also follow all label directions for the mixing partner (oil). Use appropriate application equipment and spray volumes to ensure complete coverage of the trees or control will be compromised.

**Specific Use Restrictions for Apple:**

- Only one application of any chlorpyrifos containing product can be made per year. The application can be either a prebloom dormant/delayed dormant spray to the canopy or the trunk, or a post-bloom application to the lower 4 feet of the trunk.

**Turfgrass**

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Dilute Dursban 4E-N in water and apply to turfgrass grown for sod or seed using suitable application equipment. For best results, turfgrass should be moist at time of treatment.

Pests		Amount of Dursban 4E-N (fl oz) per	
		1000 sq ft	Acre
ants (7)	green june beetle grubs	3/4	32
armyworms	leafhoppers		
beet	lucerne moth		
fall	millipedes		
yellowstriped	mites		
chinch bugs	Bermudagrass stunt		
crickets	clove		
cutworms	winter grain)		
earwigs	pillbugs		
European crane fly larvae	sod webworms (lawn moths)		
fiery skipper	(1)		
gnats	sowbugs		
grasshoppers			
greenbug aphids			

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billbug adults (2 bluegrass Denver hunting)	3/4 - 1 1/2	32 - 64
annual bluegrass weevil ( <i>Hyperodes</i> ) (3) black turfgrass ataenius adults (4) mole crickets (5)	1 1/2	64
white grubs (6) black turfgrass ataenius European chafer Japanese beetle larvae northern and southern masked chafers)	1 1/2 - 3	64 - 128

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

#### Pest-Specific Use Directions:

1. **Sod webworms:** Delay watering or mowing of the treated area for 12 to 24 hours after treatment.
2. **Billbugs:** Spray early in the season just prior to or coinciding with, the first appearance of adults as recommended by your local Agricultural Extension Service Specialist.
3. **Annual bluegrass weevil:** To control, spray suspected problem areas in mid-April and again in mid-May, or as recommended by your local Agricultural Extension Service Specialist.
4. **Black turfgrass ataenius adults:** Spray early in the season as recommended by your local Agricultural Extension Service Specialist. Re-treat as needed 1 to 2 weeks later.
5. **Mole crickets:** Apply through high pressure injection or other suitable subsurface placement application equipment. Depending upon the application equipment used, follow the manufacturer's directions for calibration and the volume of spray per acre needed to provide control or as recommended by your local Agricultural Extension Service Specialist. Apply when young nymphs are active. Efficacy may be enhanced by spraying late in the afternoon or early evening and irrigating the turfgrass prior to treatment to move mole crickets to the soil surface.
6. **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 into the thatch and underlying soil.
7. Excludes ants of significant public health importance such as fire ants, harvester ants, carpenter ants, and pharaoh ants.

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#### Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

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#### Warranty Disclaimer

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT PERMITTED BY LAW, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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#### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes),



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presence of other materials, the manner of application, or other factors, all of which are beyond the control of the Seller. All such risks shall be assumed by buyer.

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**Limitation of Remedies**

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To the extent permitted by law, 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 Seller'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

Seller shall not be liable for losses or damages resulting from handling or use of this product unless Seller is promptly notified of such loss or damage in writing. In no case shall Seller be liable for consequential or incidental damages or losses.

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