

62719-254

12-31-2007

126



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:

62719-254

Date of issuance:

DEC 31 2007

NOTICE OF PESTICIDE:

Registration
Reregistration (checked)
(under FIFRA, as amended)

Term of Issuance: Unconditional

Name of Pesticide Product:

Dursban 4E-N

Name and Address of Registrant (include ZIP Code):

Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268

Note: 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.

Based on your response to the Reregistration Eligibility Decision, EPA has reregistered the product listed above. This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Generic data requirements that have been identified in the RED as confirmatory data for the active ingredient contained in the subject product will continue to be tracked and assessed in the Agency's continual reassessment of pesticides.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable with the following comments:

Please see page 2 for label comments.

You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this Notice or the next printing of the label whichever occurs first, must bear the new revised label.

A stamped copy of the label is enclosed for your records. Should you have any questions, please contact Kable Bo Davis at (703) 306-0415.

Signature of Approving Official:

Meredith F. Laws (handwritten signature)

Meredith F. Laws, Chief
Insecticide-Rodenticide Branch
Registration Division

Date:

DEC 31 2007

2/26

**Label Comments:**

1. Throughout the label, revise "ants" to read "ants (excluding fire, harvester, carpenter and pharaoh ants)."
2. All references to "carpenter ants" and "centipedes" must be deleted from the label.
3. Within the Personal Protective Equipment (PPE) section of the label, revise the sentence "All other mixers, loaders, applicators and handlers must wear:" to read "All mixers, loaders, applicators and handlers must wear:"
4. Revise the header "General Use Precautions and Restrictions" to read "Use Precautions and Restrictions."
5. Within the Warranty Disclaimer section of the label, revise the sentence "Seller makes no other express or implied warranty of merchantability..." to read "To the extent consistent with applicable law, Seller makes no other express or implied warranty of merchantability..."
6. Within the Limitation of Remedies section of the label, revise the sentence "To the extent permitted by law, the exclusive..." to read "To the extent consistent with applicable law, the exclusive..."
7. Due to differences in REIs and maximum rates, the application table within the Non-Bearing Citrus, Fruit, and Nut Trees in Nurseries section of the label must be revised to list all specific crops.
8. Within the Specific Use Restrictions portion of the Non-Bearing Citrus, Fruit, and Nut Trees in Nurseries section of the label, include the following restrictions:
  - a. For nectarines and peaches, only one application of up to 3 lbs ai/A per season is allowed.
  - b. For apples, only one application of up to 2 lbs ai/A per season.
  - c. For apples, include the disclaimer: "Only one application of any chlorpyrifos containing product can be made per year. The application is for a pre-bloom dormant/dormant delayed to the canopy or to the lower 4 feet of the trunk."
9. Revise the header "Trees in Nurseries and Orchards (Dormant/Delayed Dormant Sprays)" to read "Tree Nuts and Tree Fruits (Dormant/Delayed Dormant Sprays)." In addition, relocate the entire section to immediately after the section Non-Bearing Citrus, Fruit, and Nut Trees in Nurseries.
10. The Tree Nuts and Tree Fruits (Dormant/Delayed Dormant Sprays) section of the label must be revised as follows:
  - a. The application table must be split. A separate table and a list of restrictions for apples must be arranged with the restriction "Only one application of any chlorpyrifos containing product can be made per year. The application is for

*a pre-bloom dormant/dormant delayed to the canopy or to the lower 4 feet of the trunk."*

- b. The application table must be revised to list all specific crops.
- c. Include the additional text:

*"Additional Restrictions Specific to California*

- *Do not use more than 1% dormant oil in almond orchards less than 4 years old.*
- *Use a minimum of 250 gpa of total spray volume.*
- *Use up to 2% supreme oil with no more than 4 gpa on almonds.*
- *Use up to 2% supreme oil with no more than 6 gpa on peaches and nectarines.*
- *Refer to the University of California pest management guide for apples, pears, plums, and prunes.*
- *In orchards with high overwintering populations of European red mite or brown almond mite, use higher spray volumes that allow for the use of higher per acre rates of oil.*
- *Do not use any adjuvants or surfactants in additions to, or as a substitute for, a petroleum spray oil in a tank mix with Dursban 4E-N.*
- *Do not apply on almonds in the following counties in California: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo, and Yuba."*

- 11. Within the Ornamentals Grown in Nurseries section of the label, delete all references to non-bearing fruit, nut and citrus trees. Alternatively, revise the Worker Restricted Entry Interval statement to specify 5 days for citrus trees and 4 days for fruit trees.
- 12. Throughout the label, revise "miscellaneous pests" to read "listed pests."
- 13. Revise the header "Turfgrass" to read "Commercial Turfgrass."
- 14. Within the Commercial Turfgrass section of the label, include the restriction "For golf courses (turf only), road medians and industrial plant sites."
- 15. Within the Commercial Turfgrass section of the label, revise the application rate table so as the maximum application rate is 1 lb ai per acre.

4/26

(Base label for rigid containers 5 gal or less):

**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® 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%

**ACCEPTED  
with COMMENTS  
in EPA Letter Dated:**

**DEC 31 2007**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-254

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.)

---

### Precautionary Statements

---

#### 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)

Some materials that are chemical-resistant to this product are barrier laminate and viton (≥14 mils). For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

**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:**

S/26

- 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.

### 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 may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. 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.

### 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

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.

**Container Reuse:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 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.

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 • Indianapolis, IN 46268 USA

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

(Base label for rigid containers larger than 5 gal):

### 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.)

#### Precautionary Statements

##### 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)

Some materials that are chemical-resistant to this product are barrier laminate and viton ( $\geq 14$  mils). For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

**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:

8/26

- 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.

### 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 may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This product is highly toxic to

9/26

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.

### 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

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.

**Container Reuse:** 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.

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 • Indianapolis, IN 46268 USA

Net Contents \_\_

10/26

(Label Booklet):

**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.**

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

EPA Reg. No. 62719-254

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

<sup>®</sup>Trademark of Dow AgroSciences

Produced for Dow AgroSciences • Indianapolis, IN 46268 USA

Net Contents \_\_\_\_

11/26

(page 1 through end):

<b>Table of Contents</b>	<b>Page</b>
Precautionary Statements	--
Hazards to Humans and Domestic Animals	--
Personal Protective Equipment (PPE)	--
Engineering Controls	--
User Safety Recommendations	--
First Aid	--
Environmental Hazards	--
Physical or Chemical Hazards	--
Directions for Use	--
Agricultural Use Requirements	--
Storage and Disposal	--
General Information	--
General Use Precautions and Restrictions	--
Spray Drift Management	--
Application Guidelines	--
Mixing Directions	--
Uses	--
Non-Bearing Citrus, Fruit, and Nut Trees in Nurseries	--
Ornamentals Grown in Nurseries	--
Ornamentals (Pre-Plant Incorporation Treatment of Field Grown Nursery Stock)	--
Ornamentals [Soil Treatment of Containerized (Potted) or Balled and Burlapped Nursery Stock]	--
Trees in Nurseries and Orchards (Dormant/Delayed Dormant Sprays)	--
Turfgrass	--
Terms and Conditions of Use	--
Warranty Disclaimer	--
Inherent Risks of Use	--
Limitation of Remedies	--

D/PL

---

**Precautionary Statements**

---

**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)**

Some materials that are chemical-resistant to this product are barrier laminate and viton ( $\geq 14$  mils). For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

**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.

13/26

**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 may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. 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.

**Directions for Use**

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

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.

14/26

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.

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.

#### Nonrefillable containers 5 gallons or less:

**Container Reuse:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 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.

#### Refillable containers 5 gallons or larger:

**Container Reuse:** 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.

#### Nonrefillable containers 5 gallons or larger:

**Container Reuse:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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

15/26

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 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.

### General Information

Dursban® 4E-N specialty insecticide is an emulsifiable concentrate for use as a spray to control various insect pests injurious to turfgrass grown for sod or seed, ornamentals, and fruit, nut, and citrus trees, and trees in nurseries and orchards. The pests controlled are listed in the accompanying tables.

### General 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 livestock 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 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 from the above listed aquatic areas with the following application equipment:

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

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

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

16/26

### 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.

1. Choose only nozzles and pressures that produce a medium or coarse droplet size (255 to 400 microns volume median diameter) per ASABE Standard 572. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
2. Make applications with nozzle tips no more than 2 feet above the ground or crop canopy. Making applications at the lowest height reduces exposure of droplets to evaporation and wind.
3. Do not apply product when wind speed exceeds 10 mph.

### 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.

1. Nozzles must be directed so spray is not projected above the canopies.
2. Do not apply product when wind speed exceeds 10 mph for aerial and ground applications.
3. 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.

1. 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. Airblast equipment should be adjusted 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.
2. The following steps should be taken 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 Guidelines

### Broadcast Foliar Application

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

**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

17/26

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 is compatible with insecticides, miticides, and fungicides commonly recommended except for alkaline materials such as Bordeaux mixture and lime. It is always recommended that a small jar compatibility test be run prior to tank mixing. Prepare tank mixtures in the same manner as recommended 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 pint or quart jar, cap, shake, and let set 15 minutes. Formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used.

**Uses**

**Non-Bearing Citrus, Fruit, and Nut 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 tree nuts unless PPE required for early entry is worn.

Apply to non-bearing almond, apple, cherry, filbert, nectarine, peach, pecan, walnut and citrus trees or tree fruit (such as grapefruit, lemon, orange). Use sufficient spray volume to completely wet tree foliage, but not to point of runoff. A petroleum spray oil is recommended for use only on citrus trees to improve control of aphids, mealybugs, scale insects, and thrips. See precautions for use of oil below. Treat when insects become a problem or in accordance with the local spray schedule recommended by your State Extension Service Specialist.

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

18/26

aphids (such as: apple, black cherry, black pecan, filbert, rosy apple, woolly apple, yellow pecan) (1) apple maggot borers (such as: American plum, dogwood, lesser peachtree, pacific flatheaded, peach twig, peachtree, shothole) cherry fruit fly climbing cutworm codling moth European apple sawfly European corn borer eyespotted bud moth fall webworm filbert worm grasshoppers (such as: lubber) (2) green fruitworm hickory shuckworm katydids leafrollers and tiers (such as: avocado leafroller, filbert leafroller, fruittree leafroller, obliquebanded leafroller, omnivorous leaftier, orange tortrix, pandemis leafroller, redbanded leafroller, variegated leafroller)	lepidopterous larvae lesser appleworm <i>Lygus</i> sp. mealybugs (1) mineola moth mites (such as: citrus rust, European red, pecan leaf scorch, twospotted spider) (3) navel orangeworm oriental fruit moth pecan nut casebearer pecan weevil periodical cicada <i>Phylloxera</i> spp. plum curculio potato leafhopper rose chafer scale insects (such as: European fruit lecanium, San Jose, walnut) (1) spittlebug spotted tentiform leafminer stinkbug tarnished plant bug thrips (such as: citrus) (1) tufted apple budmoth walnut husk fly western tussock moth white apple leafhopper winter moth	1/6 - 1/3	16 - 32	32 - 64
scale insects (such as: black scale, brown soft scale, California red scale, chaff scale, Florida red scale, long scale, purple scale, snow scale) (1,4)		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 trees only:** To improve control, it is recommended to add petroleum spray oil to spray mixtures at a rate of up to 1.8 gallons per 100 gallons of water.
2. **Lubber grasshoppers:** Effective control requires direct contact with spray when grasshoppers are small (less than 1 inch in length).
3. **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. For **scale control**, 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.
- **Do not** apply when trees are stressed by drought.
- Avoid contact with foliage in sweet cherries as premature leaf drop may result.
- **Do not** apply Dursban 4E-N in combination with oil to walnuts.

19/26

- Observe local use directions for tank mix combinations especially with applications of Dursban 4E-N plus spray oil.

**Specific Use Restrictions:**

- 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 more than 8 pints of Dursban 4E-N (4 lb ai chlorpyrifos) per acre per season as a foliar spray.
- Do not make more than 2 applications of Lorsban-4E or other products containing chlorpyrifos per year (does not include citrus orchard floors).

**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 24 hours unless PPE required for early entry is worn.

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 Miscellaneous 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 recommended 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:** Environmental factors and varietal differences significantly influence phytotoxic expression. Dursban 4E-N has been tested on numerous ornamental plants without causing serious phytotoxicity at recommended 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), it is recommended that a small block of plants be treated and observed 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
adelgids (such as: cooley and eastern spruce galls, pine bark)	1/12 - 1/6	8 - 16	16 - 32
aphids (such as: 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			

20/26

leafhoppers mealybugs (such as: citrus, taxus) mites (such as: clover, red spider, southern red, spruce spider, twospotted spider) (1) thrips (exposed)	1/6	16	32
scale insects (such as: cottonycushion, cottony maple, dearness, euonymus, fletcher, Florida wax, golden oak, hemispherical, lecanium, magnolia, oak kermes, oak lecanium, oystershell, pine needle, San Jose, tea, white birch) (2)	1/3	32	32 - 64

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. For **scale control**, 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 (such as: fall, yellowstriped) bagworms (1) cankerworms catalpa sphinx elm spanworms fall webworms (2) grasshoppers greenstriped mapleworms green fruitworms hornworms jackpine budworms juniper webworms katydids leafrollers (3) maple leafcutters (4) oak skeletonizers	oleander caterpillars orange tortrix poplar tentmaker puss caterpillars rose chafers sawflies, exposed (such as: European pine, pine, pin oak, redheaded) spring elm caterpillars springtails spruce budworms (such as: eastern, western) tent caterpillars (such as: eastern, forest, western) walnut caterpillars yellownecked caterpillars	1/12 - 1/6	8 - 16	16 - 32
balsam gall midge beet armyworms beetles (such as: fuller rose) (5) 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 (such as: California, orangestriped, redhumped) pandora moth pitch pine tip moth redhumped caterpillars subtropical pine tip moth tussock moth	1/6	16	32
beetles (such as: cottonwood leaf (7), elm leaf, flea, willow leaf)		1/6 - 1/3	16 - 32	32
leafminers needleminers (such as: 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.

2/26

**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:** Spray should be applied before leaves are tightly rolled.
4. For **maple leafcutter** on maple trees, spray larvae as cases are formed. Do not treat sugar maple trees intended for maple syrup production.
5. To reduce twig and branch feeding by **beetles**, apply in the spring or early summer.
6. To control migrating and invading **gypsy moth 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 (such as: blackvine (1), cranberry girdler) (2), pine reproduction, yellow poplar)	1/6	16	32 - 64
borers: clearwing moths (such as: ash, dogwood, lesser peachtree, lilac, oak, peachtree, rhododendron), longhorned beetles (such as: cottonwood, locust, red oak), metallic wood (such as: bronze birch, flatheaded appletree, twolined chestnut) (3) pales weevil adults zimmerman pine moth	1/3	16	-
northern pine weevil (4) pales weevil (4)	1	96	-
beetles (5): (such as: ambrosia, anobiidae, black turpentine, blister, cottonwood leaf, elm leaf, European elm bark, fuller rose, Japanese, june, mountain pine, native elm bark (6), southern pine, spruce, western pine, willow leaf)	2 2/3	256	-
weevils (such as: northern pine, pitch eating, twig) (7)	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. For **cranberry girdler 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.
4. **Northern pine and pales weevil larvae:** Apply as a cut stump spray or drench in winter or early spring.
5. For **preventive treatment**, spray the 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. To prevent **native elm bark beetles** 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

22/26

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.

- 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 Miscellaneous Pests (Ornamentals Grown in Nurseries)**

Pests	Amount of Dursban 4E-N (fl oz) per		
	Gallon	100 Gallons	Acre
ants sowbugs springtails	1/6	16	32
carpenter ants (1)	2 2/3	256	-

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

**Pest-Specific Use Directions:**

- If possible, locate **carpenter ant** nests and drench thoroughly.

**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:**

- 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.
- 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:** 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 recommended use rates. However, because of the numerous varieties grown, growers should prepare a small test plot as indicated above, seed or transplant the test species or variety, and observe for symptoms of phytotoxicity for a minimum of 14 days following emergence or transplanting. Do not blend Dursban 4E-N with dry bulk fertilizer materials. **Note:** The user 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.

23/26

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
coffee root mealybug (1)	1/6	16
weevils (such as: black vine) (1) white grubs (2)	2/3	32

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

#### Pest-Specific Use Directions:

1. An alternative to submerging the plants is to drench the container with the solution by applying approximately 10 to 12 fl oz of solution per gallon of container size (4 to 5 fl oz per 100 cubic inches of container). The container media should be pre-moistened by irrigation or rainfall before drenching. Do not remove container from plants prior to treatment.
2. An alternative to submerging the plants is to inject Dursban 4E-N into the root ball. Equally distribute 1 to 3 quarts of the solution per cubic foot of soil volume through an injection rod inserted into the soil ball surrounding the plant roots. Uniform distribution of the insecticide throughout the soil of the root ball is critical for effective control. Insert the injection rod in at least four locations, equally spaced around the stem of the plant, at a 30 to 45° angle from the plant between the stem and the upper outer perimeter of the ball. This technique is most effective with small root balls (up to 1.5 ft diameter). Larger root balls may require more injection points to ensure thorough soil distribution of the insecticide. The injection rod should be coupled to a flow meter to monitor the correct volume applied per root ball using an injection pressure of at most 30 psi. Minimize splash-back and runoff when using this method.

#### Specific Use Precautions:

**Phytotoxicity:** Environmental factors and varietal differences significantly influence phytotoxic expression. Dursban 4E-N has been tested on numerous ornamental plants without causing serious phytotoxicity at recommended use rates. Before treating large numbers of plants, it is recommended that a small group of plants be treated and observed 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.

#### Trees in Nurseries and Orchards (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 unless PPE required for early entry is worn.

Apply as a dormant or delayed dormant spray. While Dursban 4E-N may be used without oil, oil is recommended to control additional pests such as European red mite. See precautions for use of oil below. 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.

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

24/26

aphids (such as: mealy plum, rosy apple, woolly apple) borers (such as: peach twig) cutworms (such as: climbing) dioryctria spp leafrollers (such as: obliquebanded, pandemis) pear psylla adults scale insects (such as: San Jose) sequoia pitch moth	1/12 - 1/6	8 - 16
---	------------	--------

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

**Pest-Specific Use Directions:**

1. Application rate is based on 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:**

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.

**Specific Use Restrictions:**

- Do not use more than 4 pints of Dursban 4E-N (2 lb ai chlorpyrifos) per acre per season as a dormant/delayed dormant application.
- Do not make a soil or foliar application of Dursban 4E-N or products containing chlorpyrifos within 10 days of a dormant/delayed dormant application of chlorpyrifos to the orchard.
- Make only 1 application of chlorpyrifos during the dormant season except for control of the apple ermine moth.
- Do not allow meat or dairy animals to graze in treated areas.

**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.

Apply to turfgrass grown for sod or seed. Use Dursban 4E-N to control the pests listed in the following table at the rates indicated. Dilute Dursban 4E-N in water and apply using suitable application equipment. For best results, turf should be moist at time of treatment.

Pests	Amount of Dursban 4E-N (fl oz) per	
	1000 sq ft	Acre
ants armyworms (such as: beet, fall, yellowstriped) centipedes chinch bugs crickets cutworms earwigs European crane fly larvae fiery skipper gnats grasshoppers	greenbug aphids green june beetle grubs leafhoppers lucerne moth millipedes mites (such as: clover, Bermudagrass stunt, winter grain) pillbugs sod webworms (lawn moths) (1) sowbugs	3/4 32
billbug adults (such as: bluegrass, Denver, hunting) (2)	3/4 - 1 1/2	32 - 64

25/26

annual bluegrass weevil ( <i>Hyperodes</i> ) (3) black turfgrass ataeenius adults (4) mole crickets (5)	1 1/2	64
white grubs (such as: black turfgrass ataeenius, European chafer, Japanese beetle larvae, northern and southern masked chafers) (6)	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. To control **annual bluegrass weevil**, spray suspected problem areas in mid-April and again in mid-May, or as recommended by your local Agricultural Extension Service Specialist.
4. **Black turfgrass ataeenius** 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 application equipment. Follow the manufacturer's recommendations 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 turf 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. Irrigate immediately after application with 1/2 to 1 inch of water to move the insecticide into the top 1 to 2 inches of soil.

**Certification Period:** 42 days from day of application.

**Specific Use Precautions:**

To prevent repeated skin exposure to treated sod, wear elbow-length chemical-resistant gloves in addition to the PPE listed elsewhere on this label.

---

**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.

---

**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. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

---

**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), 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.

26/26

---

### **Limitation of Remedies**

---

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.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of the Seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

®Trademark of Dow AgroSciences  
EPA accepted   /  /