

62719-221

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

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

Subject: Amended labeling to implement required spray drift mitigation measures  
Product Name: Lorsban® 50W in Water Soluble Packets  
EPA Registration No. 62719-221  
Your submission dated August 28, 2012; resubmission dated December 20, 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 comments:

1. Under the Personal Protective Equipment (PPE) and Engineering Controls sections, add the N filter for NIOSH-approved respirators.
2. The various use restrictions on the label for Pecan Orchard Floors are conflicting. The restrictions state a maximum single application rate of 1 lb ai chlorpyrifos per acre, and a maximum of 2 applications. This would be a total of 2 lb ai per acre per season. However, the restrictions list a seasonal limit of 6 lb ai chlorpyrifos per acre. These statements are conflicting.

The chlorpyrifos RED permits a single application rate of 1 lb ai chlorpyrifos per acre, and a maximum of 5 applications, with a seasonal total of 5 lb ai chlorpyrifos per acre. You must correct the information so that the restrictions for maximum single application rate, maximum number of applications, and seasonal total are consistent. The information specified must not exceed the limits imposed by the RED.

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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,



for

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

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[Sub Label A: Ag Uses]

Box label:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

Insecticide

**For control of listed insects on certain fruit, nut and vegetable crops**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients .....	50%
Total .....	100%

**Keep Out of Reach of Children**

## DANGER PELIGRO

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 label booklet under "Agricultural Use Requirements" in the Directions for Use section for information 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.

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

EPA Reg. No. 62719-221

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

®Trademark of Dow AgroSciences LLC

Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Net Weight \_\_\_ x \_\_\_ x 1 lb

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:

62719-221

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Overpack label:

# Lorsban® 50W in Water Soluble Packets

**Insecticide**

**For control of listed insects on certain fruit, nut and vegetable crops**

**The contents of this package are not for individual resale. This product is not for residential use.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children**

## DANGER PELIGRO

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

**Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

#### Personal Protective Equipment (PPE)

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders** must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant apron

**Applicators using aerial application equipment** must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear (goggles or face shield)

See Engineering Controls for additional requirements.

All **other handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks

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- Protective eyewear (goggles or face shield)
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with 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

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When applicators use closed cab motorized ground equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(e)(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 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 swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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.

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**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 sites. 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. Refer to the Endangered Species Restrictions section of this label for any geographic restrictions.

**Endangered Species Restrictions**

The use of Lorsban 50W may pose a hazard to certain federally endangered fish species. This product cannot be used on sour cherry trees in the following counties:

- Colorado:** Delta, Larimer and Mesa
- Ohio:** Washington
- Utah:** Emery, Grand, Utah and Washington
- Wisconsin:** Iowa, Pierce, Richland and Vernon

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

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

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. 62719-221

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

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**Produced for**  
**Dow AgroSciences LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

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**Net Weight \_\_\_\_\_ XX x 1 lb water soluble pouches**

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Bulk base label:

**Lorsban<sup>®</sup> 50W in Water Soluble Packets****Insecticide****For control of listed insects on certain fruit, nut and vegetable crops**

## Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro- 2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children****DANGER PELIGRO**

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****Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

**Personal Protective Equipment (PPE)**

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant apron

**Applicators using aerial application equipment must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear (goggles or face shield)

See Engineering Controls for additional requirements.

**All other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter



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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

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When applicators use closed cab motorized ground equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(e)(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 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.

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**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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

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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. Refer to the Endangered Species Restrictions section of this label for any geographic restrictions.

**Endangered Species Restrictions**

The use of Lorsban 50W may pose a hazard to certain federally endangered fish species. This product cannot be used on sour cherry trees in the following counties:

- Colorado:** Delta, Larimer and Mesa
- Ohio:** Washington
- Utah:** Emery, Grand, Utah and Washington
- Wisconsin:** Iowa, Pierce, Richland and Vernon

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

**(Storage and Disposal for refillable rigid containers greater 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.  
**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.  
**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.

**(Storage and Disposal for nonrefillable 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.  
**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.  
**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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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.

**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. 62719-221

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

®Trademark of Dow AgroSciences LLC

**Produced for**  
**Dow AgroSciences LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

**[Editor's Note:** The net weight of the bulk label must be more than 25 lb. The specific amount will be filled in at the time of production.]

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WSP label:

# Lorsban® 50W in Water Soluble Packets

**Insecticide**

**This bag [container] is not for individual resale. This product is not for residential use.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro- 2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children**

**DANGER PELIGRO**

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.)

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

EPA Reg. No. 62719-221

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Label booklet cover:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

**Insecticide**

**For control of listed insects on certain fruit, nut and vegetable crops**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

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**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

**[Editor's Note:** The specific amount will be filled in at the time of production depending upon whether the product is in water soluble packets or a bulk container.]

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(Page 1 through end):

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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

# DANGER

**Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

### Personal Protective Equipment (PPE)

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Chemical-resistant apron
- Protective eyewear (goggles or face shield)

**Applicators using aerial application equipment must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
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See Engineering Controls for additional requirements.

**All other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants
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- Chemical-resistant footwear plus socks
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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.

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### 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 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 swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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. Refer to the Endangered Species Restrictions section of this label for any geographic restrictions.

### Endangered Species Restrictions

The use of Lorsban 50W may pose a hazard to certain federally endangered fish species. This product cannot be used on sour cherry trees in the following counties:

**Colorado:** Delta, Larimer and Mesa

**Ohio:** Washington

**Utah:** Emery, Grand, Utah and Washington

**Wisconsin:** Iowa, Pierce, Richland and Vernon

### 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.

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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.

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 to treated areas that is permitted under the Worker Protection Standard and 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 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. Open dumping is prohibited.

**Pesticide Storage:** Store in original container in secured dry storage area. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

#### **Nonrefillable nonrigid containers:**

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

#### **Refillable rigid containers larger than 5 gal:**

**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 rigid containers larger than 5 gal:**

**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**

Lorsban<sup>®</sup> 50W in Water Soluble Packets insecticide is designed for use as a cover or foliar spray to control various pests. The pests controlled are listed in the rate table in each section.

**Use Precautions and Restrictions**

Insect control may be reduced at low spray volumes under high temperature and wind conditions.

Some reduction in insect control may occur under unusually cool conditions.

**Flood Irrigation:** To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours following application of Lorsban 50W.

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

**Handling Precautions for Water Soluble Packets:** Do not remove water soluble packet from the overpack except for immediate use. Do not allow water soluble packets to come into contact with water prior to use. Do not handle water soluble packets with wet hands or wet gloves. Do not open water soluble packets. Do not remove packets from overwrap except to add the intact packet directly into the spray tank. Do not split packets. Partial use of packets is not allowed. Carefully reseal package containing unopened water soluble packets and protect package from moisture.

**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 Lorsban 50W 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 buffer zones must be utilized for all applications around the above listed aquatic areas with the following application equipment:

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Application Method	Required Setback (Buffer Zone) (ft)
ground boom	25
orchard airblast	50
aerial (fixed wing or helicopter)	150

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.

#### Aerial Application

- The boom width must not exceed 75% of the wingspan or 90% of the rotor blade.
- Nozzles must always point backward, parallel with the air stream, and never be pointed downward more than 45 degrees.
- Nozzles must produce a medium or coarser droplet size (255 to 340 microns volume median diameter) per ASABE Standard 572.1 under application conditions. Airspeed, pressure, and nozzle angle can all effect droplet size. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.

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- Do not make applications at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- Use upwind swath displacement and apply only when wind speed is 3 to 10 mph as measured by an anemometer. Do not apply product when wind speed exceeds 10 mph.
- If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

### **Aerial Drift Reduction Advisory**

**This section is advisory in nature and does not supercede the mandatory label requirements.**

**Information on Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

### **Controlling Droplet Size:**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

#### **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 4 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.
- Apply only when wind speed is 3 to 10 mph 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.

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- 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 Lorsban 50W in a spray volume of not less than 2 gallons per acre (gpa) for aerial application equipment (fixed wing or helicopter) or not less than 10 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.

### Broadcast Soil Application

Apply with conventional power-operated spray equipment that will apply the product uniformly to the soil surface. Use nozzles that produce medium or coarse droplets (255 to 400 microns). Unless otherwise indicated, a spray volume of 10 gpa or more is needed. For band application, use proportionally less spray volume.

### Aerial Application

Use a minimum spray volume of 2 gpa. Marking of swaths by flagging, permanent markers or use of GPS equipment is recommended.

## Mixing Directions

### Lorsban 50W - Alone

Lorsban 50W mixes readily with water to form a suspension. Do not apply Lorsban 50W (in water soluble packets) with liquid fertilizer or oil as a carrier. Thorough mixing is required. To prepare the spray mixture:

1. Fill the tank with 1/3 full of the total amount of water required for the load.
2. Start agitation. Maintain agitation throughout mixing and application.
3. Add the required number of water soluble packets (product in transparent film) directly into the spray tank. Water soluble packets will float on the surface until the water soluble film dissolves and releases the product. Minimize the handling of packets. **Important: Do not open water soluble packets.**
4. Continue agitation and complete filling the tank.
5. Before spraying, make sure packets have completely disintegrated and product is thoroughly and uniformly mixed. Depending upon the water temperature and the degree of agitation, the packet and product should be completely dispersed within 10 minutes from the time they were added to the water.

To ensure a uniform spray mixture, continuous agitation is required during mixing and spraying. Apply the same day as mixing, especially at high concentrations (low carrier rates). If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying.

### Lorsban 50W - Tank Mix

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Apply within the same day of mixing. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. If product is allowed to settle, thoroughly agitate to

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resuspend the mixture before spraying, especially if held overnight. Settled materials may be more difficult to resuspend than when originally mixed.

Lorsban 50W is compatible with commonly recommended insecticides, miticides, and fungicides. Lorsban 50W is not compatible with alkaline materials, such as Bordeaux mixture and lime or with mixtures containing boron. Do not apply with micronutrient solutions containing boron. Thoroughly clean spray equipment used to apply any spray mixture containing boron before applying this product.

**Mixing Order:**

1. Fill the spray tank with water to 1/4 to 1/3 of the total spray volume required.
2. Start agitation. Maintain agitation throughout mixing and application.
3. Add different formulation types in the following order, allowing time for complete mixing and dispersion after addition of each product: Lorsban 50W, other dry flowables, wettable powders, aqueous suspensions, flowables and liquids.
4. Maintain agitation and fill spray tank to 3/4 of total spray volume.
5. Add emulsifiable concentrates and any solutions and finish filling the spray tank. Allow extra mixing and dispersion time for dry flowable products.

**Tank Mix Compatibility Test:** Test compatibility of the intended tank mixture before adding Lorsban 50W 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, 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.

**Tank Mixing Precautions:**

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

**Uses**

**Apple Tree Trunk  
(Not for use in Mississippi)**

**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 post-bloom application to the lower 4 feet of the apple tree trunk for borer control in states east of the Rockies only (except Mississippi). Mix with water and apply directly to trunk from a distance of no more than 4 feet using low volume handgun or shielded spray equipment. Do not allow spray to contact foliage or fruit.

Target Pests	Lorsban 50W (lb/100 gal)
American plum borer apple bark borer broad necked root borer dogwood borer flatheaded appletree borer roundheaded apple tree borer tilehorned prionus	3

**Specific Use Restrictions:**

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- **Preharvest Interval:** Do not apply within 28 days before harvest.
- Do not make more than one application of Lorsban 50W to the apple tree trunk per year as either a prebloom or post-bloom application.
- This product may not be used if a prebloom application of any other product containing chlorpyrifos has been made during the year.
- Do not allow meat or dairy animals to graze in treated orchards.
- Treat only the lower 4 feet of the apple tree trunk.
- Do not apply when wind speed is greater than 10 mph.

**Brassica (Cole) Leafy Vegetables<sup>1</sup>**

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours (3 days for cauliflower) unless PPE required for early entry is worn.

<sup>1</sup>Brassica (cole) leafy vegetables including broccoli, broccoli raab, Brussels sprout, cabbage, cauliflower, cavalo broccolo, Chinese broccoli, Chinese cabbage, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens

**Foliar Application**

Apply with conventional power-operated spray equipment in 20 to 150 gpa of water. For aerial applications, apply in a minimum of 5 gpa of water. Control may be reduced at low spray volumes. Consult your state agricultural experiment station, extension service specialist, or integrated pest control advisor for proper time to treat in your area.

To avoid phytotoxicity, do not treat plants under stress from extreme heat and/or lack of moisture. For best results, tank mix only if previous experience indicates that the combination will not result in phytotoxicity under the current conditions of use and the other pesticides and spray adjuvants are registered for this use. Read and carefully follow all applicable directions, restrictions, and precautions on other product labels used in combination with Lorsban 50W. Tank mixing Thiodan 3EC, Thiodan 50WP, or cottonseed oil is not recommended.

Target Pests	Lorsban 50W (lb/acre)
armyworms (including beet armyworm)	2
cabbage aphid	
cutworms	
diamondback moth (1)	
imported cabbage worm	
striped flea beetle (adult)	

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

**Pest-Specific Use Directions:**

1. **Diamondback moth:** Significant organophosphate insecticide resistance has been reported for diamondback moth populations in Texas. Lorsban 50W will not control organophosphate-resistant populations of diamondback moth. Consult your local extension service for resistance management information.

**Specific Use Restrictions:**

- **Preharvest Interval:** Do not apply within 21 days before harvest.
- Do not make more than three applications of any product containing chlorpyrifos per crop.
- Maximum single application rate is 1 lb ai chlorpyrifos (2 lb of Lorsban 50W) per acre.
- Do not apply more than 3 lb ai chlorpyrifos (6 lb of Lorsban 50W) per acre per year.

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- Do not make a second application of Lorsban 50W or other product containing chlorpyrifos within 10 days of the first application.
- Do not aerially apply this product in Mississippi.

**Christmas Trees (Nurseries and Plantations)**

**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 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. Trees, or any parts of the trees treated with this product cannot be sold or distributed directly to consumers or the general public through retail sales.

Unless otherwise indicated, apply as a foliar spray using power-operated ground equipment at the dosages indicated to control pests listed in the following table in plantations and wholesale nursery operations only. Thorough coverage of foliage is essential. Use a minimum 10 gpa of finished spray with ground equipment. Use higher volume of finished spray, 20 gpa or more, when foliage is dense and/or pest density is high and/or under high temperature and wind conditions.

Target Pests		Lorsban 50W
adelgids	pales weevil (adult)	2 lb/acre
cooley	pine needle midge	
eastern spruce gall	pine spittlebug	
ants (4)	plant bugs	
aphids	scale (2)	
Douglas fir needle midge	black pine	
European pine sawfly	pine needle	
European pine shoot moth	pine tortoise	
grasshoppers	spruce bud	
gypsy moth	striped pine	
mites (1)	spittlebugs	
European red spider	spruce budworm	
two spotted spider	spruce needleminer	
pales weevil (3)		

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 7 to 10 days may be required to control newly hatched nymphs and maintain effective control. **Not for control of mites in Washington and Oregon.**
2. **Scale:** For control, apply when scale crawlers are active.
3. **Pales weevil:** Apply as a cut stump drench. Do not exceed 1 lb ai chlorpyrifos (2 lb of Lorsban 50W) per acre per application.
4. Excludes ants of significant public health importance such as fire ants, harvester ants, carpenter ants, and pharaoh ants.

**Specific Use Precautions:**

**Phytotoxicity:** Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence potential phytotoxic expression. **Testing has shown that Lorsban 50W may be used at specified rates on the following conifer species without serious phytotoxicity: balsam fir, concolor fir, Douglas fir, eastern white pine, Fraser fir, grand fir, noble fir, Scotch pine, white spruce.** Before treating large numbers of other conifer species, treat a small block of plants and observe them 7 to 10 days for symptoms of phytotoxicity. **Note:** The user assumes



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responsibility for determining if it is safe to treat other conifer species with Lorsban 50W under commercial growing conditions.

**Specific Use Restrictions:**

- Do not make more than three applications of Lorsban 50W or other product containing chlorpyrifos per season.
- Do not make a second application of Lorsban 50W or other product containing chlorpyrifos within 7 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

**Citrus Fruits<sup>1</sup>**

(Not for use in Mississippi)

**Worker Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days unless PPE required for early entry is worn.

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

Use Lorsban 50W to control the pests listed in the following table at the rates indicated. Use a higher rate in the rate range when there is increased pest pressure. Treat when pests become a problem or in accordance with the local spray schedule as specified by your state agricultural experiment station, certified pest control advisor, or extension service specialist.

**Use of Spray Oils:** To improve control of aphids, mealybugs, scale isects, and thrips, 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.

Target Pests		Lorsban 50W (lb/acre)	
aphids (including brown citrus aphid)	scale insects	2 - 7	
grasshoppers (1)	black scale		
katydids	brown soft scale		
lepidopterous larvae	California red scale (see below for California and Arizona)		
avocado leafroller	chaff scale		
cutworms	Florida red scale		
fruittree leafroller	long scale		
orange dogs	purple scale		
orange tortrix	snow scale		
western tussock moth	thrips (see below for California and Arizona)		
mealybugs (see below for California and Arizona)			
citrus rust mites (2) (Florida only)			4 - 7
thrips suppression and mealybugs (California and Arizona, see restrictions)			6 - 12
California red scale (California and Arizona, see restrictions)		8 -12	

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

**Pest-Specific Use Directions:**

1. **Lubber grasshoppers:** Effective control requires direct contact with spray when grasshoppers are small (less than 1 inch in length).
2. **Citrus rust mites,** For control, use a spray concentration of at least 1 lb of Lorsban 50W per 100 gallons.

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**Specific Use Precautions:**

- Observe local recommendations for tank mix combinations especially with regard to use of Lorsban 50W with spray oil. Consult with a county farm advisor, county agency, extension service personnel, agricultural commissioner, pest control advisor, or local Dow AgroSciences representative for local recommendations.
- Do not apply when trees are stressed by drought or high temperatures.
- Lorsban 50W is highly toxic to bees exposed to direct treatment and must not be applied when bees are actively visiting the area. During the citrus bloom period in California, apply from 1 hour after sunset until 2 hours before sunrise.
- Do not use Lorsban 50W in combination with spray oil when temperatures are expected to exceed 95°F on the day of application or for several consecutive days thereafter. Do not apply during the months of December, January, or February.

**Specific Use Restrictions:**

- **Preharvest Interval:** Do not apply within 21 days before harvest for applications of up to 7 lb of Lorsban 50W per acre or within 35 days for application of rates above 7 lb per acre.
- Do not make more than two applications of Lorsban 50W or other product containing chlorpyrifos per year (does not include citrus orchard floors)
- Do not apply more than a total of 7.5 lb ai chlorpyrifos (15 lb of Lorsban 50W) per acre per year.
- Do not make a second foliar application of Lorsban 50W or other product containing chlorpyrifos within 30 days of the first application.
- The use of application rates greater than 6 lb ai chlorpyrifos (12 lb of Lorsban 50W) per acre are allowed only in the following counties in California: Fresno, Tulare, Kern, Kings, and Madera.
- Do not allow meat or dairy animals to graze in treated areas.

**Pecan Orchard Floors**

**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 as a ground broadcast spray directed to the orchard floor using ground application equipment that will apply the spray uniformly. Do not allow spray to contact foliage or fruit. Treat when ant activity (excluding fire, harvester, carpenter, and pharaoh ants) becomes evident in the orchard. Since worker ants (excluding fire, harvester, carpenter, and pharaoh ants) cease most of their foraging activity at temperatures above 90°F, best results will be achieved if applied at a time of day when temperatures are below 90°F.

Target Pests	Lorsban 50W (lb/acre)
ants (1)	2

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.

Eliminate weed growth that would prevent uniform coverage of the orchard floor by mowing or herbicide treatment. Foliar applications of Lorsban 50W may be made in addition to the orchard floor treatment.

**Specific Use Precautions:**

- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 50W.

**Specific Use Restrictions:**

- **Preharvest Interval:** Do not apply within 28 days before harvest.

- Do not make more than two applications of Lorsban 50W or other product containing chlorpyrifos per season to the orchard floor.
- Maximum single application rate is 1 lb ai chlorpyrifos (2 lb of Lorsban 50W) per acre.
- Do not apply more than 6 lb ai chlorpyrifos (12 lb of Lorsban 50W) per acre per season to pecan orchard floors.
- Do not make a second application of Lorsban 50W or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated orchards.

### Sour Cherry and Tree Nuts<sup>1</sup> (Foliar 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 sour cherry and 24 hours for tree nuts unless PPE required for early entry is worn.

<sup>1</sup>Almond, filbert, pecan, walnut

Apply Lorsban 50W as a foliar spray at the dosages indicated to control pests listed in the following table. Mix the required dosage in sufficient water to ensure thorough and complete coverage of the foliage and crop and apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays applied to tree nut crops, mix the required dosage in sufficient water to allow for spray to runoff. For concentrate sprays, apply an equivalent amount of Lorsban 50W per acre. Treat when pests appear or in accordance with local conditions. Aerial application may result in less effective insect control because of reduced coverage. Consult your State agricultural experiment station, certified Pest control advisor, or Extension service specialist for specific use information in your area.

Crop	Target Pests		Lorsban 50W
almond	navel orangeworm peach twig borer	San Jose scale	4 lb/acre
cherry (sour)	borers, such as: American plum lesser peachtree Pacific flatheaded peach twig peachtree shothole climbing cutworm eyespotted bud moth green fruitworm	leafrollers, such as: fruittree obliquebanded pandemis redbanded lesser appleworm mineola moth scales, such as: European fruit lecanium San Jose stink bug	2 – 3 lb/acre
	black cherry aphid cherry fruit fly	plum curculio rose chafer	2 lb/acre
filbert	eye-spotted bud moth filbert aphid filbert leafroller filbertworm	obliquebanded leafroller omnivorous leaftier winter moth	3 – 4 lb/acre
pecan	black pecan aphid hickory shuckworm	pecan leaf scorch mite (1) (suppression)	2 lb/100 gal
	fall webworm pecan nut casebearer	<i>Phylloxera</i> spp. (2) spittlebug	1 lb/100 gal
walnut	codling moth walnut husk fly	walnut scale	4 lb/acre

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

**Pest-Specific Use Directions:**

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1. **Pecan leaf scorch mite:** For suppression, use a preventative program.
2. **Phylloxera spp.:** For best control, make two applications at 7- to 10-day intervals starting at bud swell and ending by early leaf expansion.

**Specific Use Precautions:**

- Lorsban 50W is highly toxic to bees exposed to direct treatment and should not be applied when bees are actively foraging in the treated area.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 50W.

**Specific Use Restrictions:**

Crop	Preharvest Interval (Days)	Total Number of Sprays	Maximum Single Application Rate (lb ai/acre)	Total Amount per Season (lb ai/acre)	Total Amount per Season (Lorsban 50W/acre)
almond	14	3	2	6	12
filbert	14	2	2	4	8
pecan	28	3	1	6	12
sour cherry	14	8	1.5	12	24 lb
walnut	14	2	2	4	8

- Do not make a second application of Lorsban 50W or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated orchards.
- Do not use on almond, filbert or walnut in Mississippi.
- Do not aerially apply this product in Mississippi.
- Do not use as a foliar spray on sweet cherries.

**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. 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 Lorsban 50W per acre.

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

- Cold or dry conditions may cause Lorsban 50W 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.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 50W.

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

- Make only one application of chlorpyrifos during the dormant season.
- For apple, do not make more than one application of Lorsban 50W to the apple tree trunk per year as either a prebloom or post-bloom application.

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- Do not use more than a total of 2 lb ai chlorpyrifos (4 lb of Lorsban 50W) per acre per season as a dormant/delayed dormant application.
- Do not allow meat or dairy animals to graze in treated orchards.

### Almond

Lorsban 50W performs best in an almond pest control program that includes winter sanitation (removal of mummy nuts) and regular monitoring of target pests. Complete coverage of the entire bark area is essential. If scale infestations are severe, apply as a dilute spray to ensure complete coverage.

Consult your state agricultural experiment station, certified pest control advisor, or extension service specialist for specific use information in your area.

Target Pests	Lorsban 50W (lb/acre)
navel orangeworm peach twig borer San Jose scale	4

### Specific Use Restrictions for Almond:

- Do not make a soil or foliar application of Lorsban 50W or other product containing chlorpyrifos within 10 days of a dormant/delayed dormant application of chlorpyrifos to the orchard.

### Apple

Target Pests	Lorsban 50W (lb/acre)
climbing cutworms dogwood borer (trunk spray) obliquebanded leafroller pandemis leafroller rosy apple aphid San Jose scale	3

### 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 (for post-bloom application instructions and restrictions on apple, refer to Apple Tree Trunk section of the label).

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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 Limitations of Remedies.

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### Warranty Disclaimer

To the extent permitted by law, Dow AgroSciences 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, Dow AgroSciences 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**

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It is impossible to eliminate all risks associated with use of this product. Crop 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 temperatures, 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 Dow AgroSciences or 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 Dow AgroSciences' 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

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

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

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EPA accepted \_\_\_/\_\_\_/\_\_\_

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[Sub Label B: Non-Ag Uses]

Box label:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

## Insecticide

**For use in commercial seed treating operations only as a preplant slurry treatment of bean, corn, cucumber and pumpkin seeds to protect germinating seeds and seedlings from injury by seed corn maggots and seed corn beetles and to protect stored seeds from injury by stored product insects.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children**

## DANGER PELIGRO

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.)

**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.

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

EPA Reg. No. 62719-221

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

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

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight \_\_ x \_\_ x 1 lb**

32/45

Overpack label:

**Lorsban<sup>®</sup> 50W in Water Soluble Packets****Insecticide**

**For use in commercial seed treating operations only as a preplant slurry treatment of bean, corn, cucumber and pumpkin seeds to protect germinating seeds and seedlings from injury by seed corn maggots and seed corn beetles and to protect stored seeds from injury by stored product insects.**

**The contents of this package are not for individual resale. This product is not for residential use.**

## Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children****DANGER PELIGRO**

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**

**Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

**Personal Protective Equipment (PPE)**

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders** must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant apron

See Engineering Controls for additional requirements.

**All other handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant headgear for overhead exposure



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- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with 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

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

### 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 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 swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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.

### 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is

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damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

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

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. 62719-221

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

®Trademark of Dow AgroSciences LLC

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight \_\_\_\_\_ XX x 1 lb water soluble pouches**

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Bulk base label:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

## Insecticide

**For use in commercial seed treating operations only as a preplant slurry treatment of bean, corn, cucumber and pumpkin seeds to protect germinating seeds and seedlings from injury by seed corn maggots and seed corn beetles and to protect stored seeds from injury by stored product insects.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

### Keep Out of Reach of Children

## DANGER PELIGRO

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

**Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

#### Personal Protective Equipment (PPE)

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant apron

See Engineering Controls for additional requirements.

**All other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

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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

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

### 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 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 swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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.

### (Storage and Disposal for refillable rigid containers greater 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

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**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**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.

**(Storage and Disposal for nonrefillable 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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Handling:** 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 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.

**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. 62719-221

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

®Trademark of Dow AgroSciences LLC

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road**

38/45

**Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

**[Editor's Note:** The net weight of the bulk label must be more than 25 lb. The specific amount will be filled in at the time of production.]

59/95

WSP label:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

**Insecticide**

**This bag [container] is not for individual resale. This product is not for residential use.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro- 2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

**Keep Out of Reach of Children**

**DANGER            PELIGRO**

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.)

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

EPA Reg. No. 62719-221

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Label booklet cover:

# Lorsban<sup>®</sup> 50W in Water Soluble Packets

## Insecticide

**For use in commercial seed treating operations only as a preplant slurry treatment of bean, corn, cucumber and pumpkin seeds to protect germinating seeds and seedlings from injury by seed corn maggots and seed corn beetles and to protect stored seeds from injury by stored product insects.**

Active Ingredient:

chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate.....	50%
Other Ingredients.....	50%
Total .....	100%

### Keep Out of Reach of Children

## DANGER PELIGRO

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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. 62719-221

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

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**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

**[Editor's Note:** The specific amount will be filled in at the time of production depending upon whether the product is in water soluble packets or a bulk container.]



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(Page 1 through end):

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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

# DANGER

**Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Work to windward to stay out of spray drift or mist. Keep away from food, feedstuffs, and water supplies.**

### Personal Protective Equipment (PPE)

Materials that are chemical-resistant to this product are barrier laminate and viton.

**Mixers and loaders** must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant apron

See Engineering Controls for additional requirements.

All **other handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks
- Protective eyewear (goggles or face shield)
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with 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

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

### 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.

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- 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 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 swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

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.

### 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.

**Not for on-farm use. Not for use on agricultural establishments in hopper-box, planter-box, slurry-box, or other seed treatment applications at or immediately before planting.**

### Storage and Disposal

Do not contaminate water, food or feed by storage and disposal. Open dumping is prohibited.

**Pesticide Storage:** Store in original container in secured dry storage area. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

#### Nonrefillable nonrigid containers:

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

#### Refillable rigid containers larger than 5 gal:

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

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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.

**Nonrefillable rigid containers larger than 5 gal:**

**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.

**Commercial Seed Treatment**

Lorsban® 50W in Water Soluble Packets insecticide is designed as a preplant slurry seed treatment prior to planting to protect the germinating seeds and seedlings. Treated seed may be stored for up to 14 months without loss of insecticidal effectiveness.

Disperse the required amount of Lorsban 50W in sufficient water to give an applied slurry rate of 8 to 12 fl oz per 100 lb of seed to be treated. The slurry rate for sweet corn is 20 to 40 fl oz per 100 lb of seed. Apply using standard slurry equipment by mixing the slurry with the seed using a rotating blender or other suitable mixing equipment that will ensure each seed is uniformly coated. Uniform application to seed is necessary to ensure seed safety and best insect control.

Target Pests	Seeds	Lorsban 50W (oz/100 lb of seed)
seed-corn beetles seed-corn maggots	black-eyed pea cucumber field bean field corn field pea garden pea green bean kidney bean lima bean navy bean pumpkin snap bean string bean sweet corn wax bean	2  (1 1-lb packet per minimum 800 lb seed)

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**Specific Use Precautions:**

- Seed should be sound and well cured prior to treatment.
- Exposed treated seeds may be hazardous to birds and other wildlife. Dispose of all excess treated seeds and seed packaging by burial away from bodies of water.

**Specific Use Restrictions:**

- Not for on-farm use.
- Not for use on agricultural establishments in hopper-box, planter-box, slurry-box, or other seed treatment applications at or immediately before planting.
- Do not use treated seed for human consumption, as feed for livestock or poultry, or for oil purposes.
- Do not allow meat or dairy animals to graze or feed bean hay or pea hay grown from treated seed.
- Do not mix the seed and product with bare hands.
- Label treated seed as follows: THIS SEED HAS BEEN TREATED WITH CHLORPYRIFOS. DO NOT USE FOR FOOD, FEED OR OIL. STORE AWAY FROM FOOD AND FOODSTUFF.
- Make only one application of chlorpyrifos.
- The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21 CFR Part 2.25. Any dye added to treated seed must be cleared for use under 40 CFR Part 180.1001.

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**Terms and Conditions of Use**

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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 Limitations of Remedies.

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**Warranty Disclaimer**

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To the extent permitted by law, Dow AgroSciences 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, Dow AgroSciences 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**

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It is impossible to eliminate all risks associated with use of this product. Crop 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 temperatures, 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 Dow AgroSciences or 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 Dow AgroSciences' 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

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

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

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