

62719-363

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Dave Barnekow  
Regulatory Leader-Regulatory Affairs  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

MAY 26 2010

Subject: Cordon  
EPA Registration No. 62719-363  
Your Amendment dated August 14, 2009 revising the basic confidential statement  
of formula and product labeling  
PRIA Decision No. 418647

Dear Mr. Barnekow:

Product Labeling:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

1. On the final printed label, insure that the headers "Precautionary Statements" and "Hazards to Humans and Domestic Animals" appears above the precautionary text and is not separated from it.
2. On page 4 and 10, in the "User Safety Requirements" box, requirement #3, add the word "exist" prior to the word, "use" so that the sentence reads, "Follow manufacturer's instructions... If no such instructions for washables exist, use detergent and hot water..."
3. On page 8, move the "First Aid" statement to page 7 above the "Agricultural Use Requirements" statement.
4. On page 8, delete the sentence, "See additional precautionary statements elsewhere in the label."

Basic Confidential Statement of Formula:

The basic Confidential Statement of Formula (CSF) dated November 18, 2009 referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable and will be added to the regulatory file. This basic CSF supercedes all previous CSF's.

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MAY 26 2010

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
62719-363

# Cordon™

EPA Reg. No. 62719-363

## Registration Notes:

Source label text based on EPA accepted text dated February 1, 2008.

### Proposed changes by amendment:

1. Revised ingredients statement.
2. Deleted reference to web site.
3. General Information: Revised second paragraph to read "Cordon may be applied as a postplant soil treatment to suppress. . . ."
4. General Use Precautions and Restrictions: Revised third paragraph.
5. Recontamination Prevention: (1) In first and second sentences replaced "control" with "suppress"; (2) added new last sentence.
6. Fertility Interactions: Revised last paragraph.
7. Drip Application: (1) Revised second sentence; (2) added new last sentence.
8. Application Rate: Changed from "0.5 to 2.0" to "0.7 to 2.7."
9. Dilution Rates as Applied: Changed from "0.5 to 2.0" to "0.7 to 2.7."
10. Other Requirements: (1) In second bullet point, changed from "4" to "5.4"; (2) added new last bullet point.
11. Drip Irrigation Design: (1) Revised second and third bullet points; (2) deleted "Emitter spacing in . . . the targeted pest." and "Planting should occur within the treated area."
12. Step 2, Drip Fumigant Application: (1) Deleted "The concentration of Cordon must be between 500 and 1500 ppm in the drip irrigation lines." and "Do not exceed a concentration of 1500 ppm of Cordon."; (2) changed "control" to "suppress" in fourth bullet point.
13. Step 3, Post Application: Deleted "Do not plant if Cordon is detected."

### 23Apr10 – Additional proposed changes per March 16, 2010 EPA acute tox review:

1. Signal word: Changed to "Danger."
  2. Restricted Use Pesticide: Revised first sentence to read "Due to toxicity categories."
  3. Precautionary Statements: (1) Revised first bullet point to read "Corrosive. Causes skin burns and irreversible eye damage. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing."; (2) revised second bullet point by deleting "Do not swallow any of this product."; (3) deleted third and fourth bullet points; (4) added new bullet point "Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals."
  4. First Aid: Deleted "If inhaled."
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1. Restricted Use Pesticide: Revised first sentence to read "Due to acute toxicity and carcinogenicity." First Aid: (1) Moved section above Precautionary Statements; (2) added statement "See additional precautionary statements elsewhere in the label."; (3) reinstated "If inhaled" statement.
  3. Precautionary Statements: Revised order of statements.
  4. Personal Protective Equipment: (1) In #1, added "must wear" to heading; (2) in #1, revised fourth bullet point to read "full face shield"; (3) in #1, revised first paragraph to read "In case of emergency, the following PPE must be immediately available and the handler must wear"; (4) in #2, revised ninth bullet point to read "Coveralls over long-sleeved shirt and long pants."; (5) in #1, #2, #3 and #4, deleted "MSHA"; (6) in #3, added "must wear" to heading.
  5. General Use Precautions and Restrictions: (1) Moved paragraphs "Do not apply. . . Group A." and "Use of Cordon. . . of Florida." to fourth and fifth paragraphs in section; (2) moved "Not for use in greenhouses or other enclosed areas." to third paragraph in section.

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(Base label):

**RESTRICTED USE PESTICIDE**

Due to acute toxicity and carcinogenicity.

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

**Cordon™****Soil Fumigant****For suppression of nematodes and grape phylloxera in established vineyards using drip irrigation systems only.**

Active Ingredient:	(by weight)
1,3-dichloropropene.....	70.7%
Other Ingredients .....	29.3%
Total .....	100.0%

1 gallon of Cordon contains 6.8 lb ai at 70°F.

**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.)

**First Aid****If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.**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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.**Note to physician:** Because rapid adsorption may occur through lungs if product is aspirated and cause systemic effects, the decision to induce vomiting or not should be made by a physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

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

See additional precautionary statements elsewhere in the label.

**Precautionary Statements****Hazards to Humans and Domestic Animals**

### Hazardous Liquid and Vapor

- Corrosive. Causes skin burns and irreversible eye damage.
- May be fatal if swallowed.
- May be fatal if inhaled. Do not breathe vapor. May cause lung, liver, and kidney damage and respiratory system irritation upon prolonged contact.
- Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing.
- Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
- The use of this product may be hazardous to your health. This product contains 1,3-dichloropropene, which has been determined to cause tumors in laboratory animals. Risks can be reduced by exactly following directions for use, precautionary statements, and by wearing the personal protective equipment specified in this labeling.

### Personal Protective Equipment (PPE)

**Chemical-Resistant Materials:** Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category H on an EPA chemical resistance category selection chart. PPE constructed of saranex, neoprene, and chlorinated polyethylene provide short-term contact or splash protection against liquid in this product. Longer-term protection is provided by PPE constructed of viton, Teflon, and EVAL barrier laminates (for example, responder suits manufactured by Life-guard or Silvershield gloves manufactured by North). Where chemical-resistant materials are required, leather, canvas, or cotton materials offer no protection from this product and must not be worn when contact with this product is possible. Coveralls must be loose-fitting and constructed of woven fabrics (e.g., tight knit cotton or cotton/polyester), non-woven fabrics (e.g., tyvek or sontara), or fabrics containing microporous Teflon.

#### 1. Handlers Performing Mechanical Transfer of Product – Closed Delivery Systems must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical resistant footwear and socks
- Full face shield

In case of emergency, the following PPE must be immediately available and the handler must wear:

- Coveralls
- Full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

#### 2. Handlers Performing Tasks with Liquid Contact Potential

Tasks with liquid contact potential are tasks performed outdoors. These tasks are:

- Equipment calibration or adjustment
- Equipment clean-up and repair
- Product sampling
- Rinsate disposal
- Fumigant transfer – open delivery systems
- Clean-up of small spills
- Preparing containers for aeration
- Any activity less than 6 feet from an unshielded pressurized hose containing this product

Handlers performing tasks with liquid contact potential must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron

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- A face shield or safety glasses with brow and temple shields (do not wear chemical goggles)
- A half-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

**3. Handlers in the treated area within 5 days after application must wear:**

Only the following handler tasks may be performed in the treated area within 5 days after the application is complete:

- Assessing pest control, application technique, or application efficacy
- Sampling air or soil for this product
- Assessing/adjusting the soil seal, including plastic or tarp
- Removal of tarp or plastic film

**All other tasks are prohibited until the 5-day period has expired.**

Handlers performing the above tasks in the treated area within 5 days after the application must wear:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

**4. Handlers exposed to high concentrations**

Handlers exposed to high airborne concentrations of this product, such as cleanup following large spills, must wear:

- Chemical-resistant suit
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear
- Supplied-air respirator with NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the User Safety Requirements section on this label.

**Note:** In-tank cleaning of bulk tanks must be performed only by persons who have been specifically trained for this activity. Refer to OSHA 29 CFR Part 1910.146.

**Engineering Controls**

With all bulk and mini-bulk containers, Cordon must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with liquid Cordon.

- All hoses, piping, and tanks used in connection with Cordon shall be of the type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of Cordon when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.

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- The pressure in hoses used to move Cordon beyond a pump must not exceed the manufacturer's maximum pressure specification.

### User Safety Requirements

- 1. Respirator Requirements:** When a respirator is required for use with this product, the following criteria must be met:
  - a. Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).
  - b. Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner.
  - c. Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).
  - d. Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- 2. Dispose of Contaminated Clothing:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.
- 3. Clean and Maintain PPE:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash PPE after each day's use.
- 4. Contact with Mouth:** Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.
- 5. Heat Illness Avoidance:** Use measures to avoid or minimize heat illness while using this product. These measures include gradual adjustment to heat and respirator stress, fans for cooling, cooling vests, frequent breaks to cool down, frequent intake of drinking water, and maintaining weight from day to day.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment washwaters. See Storage and Disposal section. In case of spills properly dispose of contaminated materials.

**Groundwater advisory:** 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach groundwater as a result of agricultural use. Application in areas where soils are permeable and groundwater is near the surface could result in groundwater contamination.

### Physical or Chemical Hazards

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

### Agricultural Use Requirements

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

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

### Storage and Disposal

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

**Pesticide Storage:** Store in tightly closed original container in a cool, secure place away from dwellings. Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide 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.

Because Cordon is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. **Do not use water.** Dispose of rinsate by applicable federal, state and local regulations. Never introduce rinsate or unused Cordon into surface or underground water supplies.

**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. 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 rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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

##### **Storage and Disposal**

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

**Pesticide Storage:** Store in tightly closed original container in a cool, secure place away from dwellings. Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide 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.

Because Cordon is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. **Do not use water.** Dispose of rinsate by applicable federal, state and local regulations. Never introduce rinsate or unused Cordon into surface or underground water supplies.

**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 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 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 a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refer to label booklet for Directions for Use.

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

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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. 62719-363

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

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Produced for

Dow AgroSciences LLC

9330 Zionsville Road

Indianapolis, IN 46268

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



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(Label booklet cover)

**RESTRICTED USE PESTICIDE**

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

**Cordon™**

**Soil Fumigant**

**For suppression of nematodes and grape phylloxera in established vineyards using drip irrigation systems only.**

Active Ingredient:	(by weight)
1,3-dichloropropene.....	70.7%
Other Ingredients .....	29.3%
Total .....	100.0%

1 gallon of Cordon contains 6.8 lb ai at 70°F.

**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 the 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. 62719-363

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

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(Page 1 to end)

**First Aid**

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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

**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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Note to physician:** Because rapid adsorption may occur through lungs if product is aspirated and cause systemic effects, the decision to induce vomiting or not should be made by a physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

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

See additional precautionary statements elsewhere in the label.

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****DANGER****Hazardous Liquid and Vapor**

- **Corrosive. Causes skin burns and irreversible eye damage.**
- **May be fatal if swallowed.**
- **May be fatal if inhaled. Do not breathe vapor. May cause lung, liver, and kidney damage and respiratory system irritation upon prolonged contact.**
- **Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing.**
- **Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.**
- **The use of this product may be hazardous to your health. This product contains 1,3-dichloropropene, which has been determined to cause tumors in laboratory animals. Risks can be reduced by exactly following directions for use, precautionary statements, and by wearing the personal protective equipment specified in this labeling.**

**Personal Protective Equipment (PPE)**

**Chemical-Resistant Materials:** Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category H on an EPA chemical resistance category selection chart. PPE constructed of saranex, neoprene, and chlorinated polyethylene provide short-term contact or splash protection against liquid in this product. Longer-term protection is provided by PPE constructed of viton, Teflon, and EVAL barrier laminates (for example, responder suits manufactured by Life-guard or Silvershield gloves manufactured by North). Where chemical-resistant materials are required, leather, canvas, or cotton materials offer no protection from this product and must not be worn when contact with this product is possible. Coveralls must be loose-fitting and constructed of woven fabrics (e.g., tight knit cotton or cotton/polyester), non-woven fabrics (e.g., tyvek or sontara), or fabrics containing microporous Teflon.

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**1. Handlers Performing Mechanical Transfer of Product – Closed Delivery Systems must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical resistant footwear and socks
- Full face shield

In case of emergency, the following PPE must be immediately available and the handler must wear:

- Coveralls
- Full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

**2. Handlers Performing Tasks with Liquid Contact Potential**

Tasks with liquid contact potential are tasks performed outdoors. These tasks are:

- Equipment calibration or adjustment
- Equipment clean-up and repair
- Product sampling
- Rinsate disposal
- Fumigant transfer – open delivery systems
- Clean-up of small spills
- Preparing containers for aeration
- Any activity less than 6 feet from an unshielded pressurized hose containing this product

Handlers performing tasks with liquid contact potential must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron
- A face shield or safety glasses with brow and temple shields (do not wear chemical goggles)
- A half-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

**3. Handlers in the treated area within 5 days after application must wear:**

Only the following handler tasks may be performed in the treated area within 5 days after the application is complete:

- Assessing pest control, application technique, or application efficacy
- Sampling air or soil for this product
- Assessing/adjusting the soil seal, including plastic or tarp
- Removal of tarp or plastic film

**All other tasks are prohibited until the 5-day period has expired.**

Handlers performing the above tasks in the treated area within 5 days after the application must wear:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate (EVAL) or Viton
- Chemical-resistant footwear plus socks
- Full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

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#### 4. Handlers exposed to high concentrations

Handlers exposed to high airborne concentrations of this product, such as cleanup following large spills, must wear:

- Chemical-resistant suit
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear
- Supplied-air respirator with NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the User Safety Requirements section on this label.

**Note:** In-tank cleaning of bulk tanks must be performed only by persons who have been specifically trained for this activity. Refer to OSHA 29 CFR Part 1910.146.

#### Engineering Controls

With all bulk and mini-bulk containers, Cordon must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with liquid Cordon.

- All hoses, piping, and tanks used in connection with Cordon shall be of the type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of Cordon when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move Cordon beyond a pump must not exceed the manufacturer's maximum pressure specification.

#### User Safety Requirements

- 1. Respirator Requirements:** When a respirator is required for use with this product, the following criteria must be met:
  - a. Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).
  - b. Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner.
  - c. Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).
  - d. Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
- 2. Dispose of Contaminated Clothing:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.
- 3. Clean and Maintain PPE:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash PPE after each day's use.
- 4. Contact with Mouth:** Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.
- 5. Heat Illness Avoidance:** Use measures to avoid or minimize heat illness while using this product. These measures include gradual adjustment to heat and respirator stress, fans for cooling, cooling

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vests, frequent breaks to cool down, frequent intake of drinking water, and maintaining weight from day to day.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment washwaters. See Storage and Disposal section. In case of spills properly dispose of contaminated materials.

**Groundwater advisory:** 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach groundwater as a result of agricultural use. Application in areas where soils are permeable and groundwater is near the surface could result in groundwater contamination.

### Physical or Chemical Hazards

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

### Directions for Use

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

Do not apply this product in a way that will contact workers or other persons. 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 intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

#### Entry Restriction:

Entry (including early entry that would otherwise be permitted under the WPS) by any person -- other than a correctly trained and equipped handler who is performing a handling task permitted on this labeling -- is **prohibited** from the start of application until 5 days after application. Non-handler entry is prohibited while tarps are being removed.

#### Notification:

Notify workers of the application by warning them orally and by posting fumigant warning signs at entrances to treated areas. The sign must bear the skull and crossbones symbol and state: (1) "DANGER/PELIGRO," (2) Areas under fumigation, **DO NOT ENTER/NO ENTRE**," (3) the date and time of fumigation, (4) "Cordon fumigant in use," and (5) name, address, and telephone number of the applicator." Post the fumigant warning sign instead of the WPS sign for this application, but follow all WPS requirements pertaining to location, legibility, size and timing of posting and removal.

#### PPE for Reentry During the Entry-Restricted Period:

PPE for entry that is permitted by this labeling is listed in the Hazards to Humans and Domestic Animals section of this labeling.

#### POSTING REQUIREMENTS

Posting of areas to be chemigated is required when any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads.

Posting must conform to the following requirements: Treated areas shall be posted with sign at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of signs should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted for 14 days. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color that sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

#### Storage and Disposal

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

**Pesticide Storage:** Store in tightly-closed original container in a cool, secure place away from dwellings.

Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide 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.

Because Cordon is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. **Do not use water.** Dispose of rinsate by applicable Federal, state and local regulations. Never introduce rinsate or unused Cordon into surface or underground water supplies.

#### Refillable containers 5 gallons or larger:

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

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment. 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 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 containers 5 gallons or larger:

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

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into 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

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over onto its other end and tip it back and forth several times. Empty the rinsate into 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 a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over 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.

### General Information

Cordon™ soil fumigant is a liquid fumigant for use in established vineyards using drip irrigation systems only.

Cordon may be applied as a postplant soil treatment to suppress grape phylloxera and the following types of plant parasitic nematodes: burrowing, citrus, cyst (golden, sugar beet, soybean, carrot and wheat), dagger, lance, pin, needle, reniform, ring, root knot, root lesion, spiral, sting and stubby root.

Consult State Agricultural Experiment Station or Extension Service specialists for information on other practices such as weed control or other cultural practices, and use of resistant crop varieties that may aid in reducing crop losses from soil borne pests.

### General Use Precautions and Restrictions

Soil fumigation using Cordon must be conducted according to directions and conditions of use described in this label.

**Do not formulate and/or tank mix this product into other end-use agricultural products.**

**Not for use in greenhouses or other enclosed areas.**

Do not apply within 100 feet of any well used for potable water. Do not apply this product within 100 feet from the edge of karst topographical features. Karst topography is identified from landscape features that result from the dissolving activity of water in carbonate rock formations (limestone, dolomite and marble). Surface features that are associated with karst topography include sinkholes, caverns, springs, and sinking or disappearing streams. In North Dakota, South Dakota, Wisconsin, Minnesota, New York, Maine, New Hampshire, Vermont, Massachusetts, Utah, and Montana: Where groundwater aquifers exist at a depth of 50 feet or less from the surface, do not apply this product where soils are Hydrologic Group A.

**Use of Cordon is prohibited in Broward and Dade counties in the state of Florida.**

Vineyard berms must be free of excessive weed growth and undecomposed plant material that could impair the contact of treated water with the soil surface. A weed control program is encouraged as certain weed species are known nematode hosts. Soil must be in good seed bed condition, free of clods.

**Recontamination Prevention:** Cordon will suppress pests that are present in the soil treatment zone at time of fumigation. It will not suppress pests that are introduced into soil after fumigation. To avoid reinfestation of treated soil, do not use irrigation water, transplants, or equipment that could carry soil borne pests from infested land. Avoid contamination from moving infested soil through cultivation, movement of soil from below the treated zone, dumping contaminated tare soil in treated fields and soil contamination from equipment or crop remains. Clean equipment carefully before entering treated fields. Berms should be kept weed free as certain weed species are known nematode hosts.

**Fertility Interactions:** Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. This is most likely to occur when high rates of fertilizer and fumigant are applied to soils that are either cold, wet, acidic, or high in organic matter. To avoid crop injury, fertilize when possible as

indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation (or both) to crops grown on high organic soils, do not use fertilizers containing ammonium salts.

### Application Directions

**Buffer Zone:** An application of Cordon shall not be made within 100 feet of an occupied structure, such as a school, hospital, business or residence. No person shall be present at this structure at any time during the seven consecutive day period following application.

**Drip Application:** Apply only through delivery systems that can precisely control the concentration of the active ingredient (1,3-D). Apply only through drip irrigation systems that are trellis mounted or located on the soil surface, or buried. For best results, drip emitters should be aligned with the root zone.

**Application Rate:** 0.7 to 2.7 gallons of Cordon per acre per application.

**Dilution Rate as Applied:** Apply 100 to 200 ppm 1,3-D in sufficient water volume to saturate the desired treatment zone. Depending upon vineyard age and the design of the drip irrigation system, this will generally apply 0.7 to 2.7 gallons of Cordon per acre.

**Frequency/Timing of Application:** Do not make more than 1 in season and 1 post-harvest application during the growing season. The post-harvest application should be made within three weeks of harvest. Apply when soil temperatures in the root zone are between 40°F and 80°F.

**Preharvest Interval:** Do not apply within 60 days of harvest.

#### Other Requirements:

- Do not apply to vines planted within the previous three years.
- Do not exceed 5.4 gallons of Cordon per acre per use season.
- If plant tissue comes in contact with water treated with Cordon, crop injury may result.

**Compatible Materials:** The following materials are recommended for use in drip systems where applications of Cordon are to be made:

- Copper, stainless steel, stainless steel braided hose, steel, brass, Kynar, Kalrez, Chemraz, Santoprene, Hasteloy, Monel, polypropylene, polyethylene, nylon, Teflon, rigid PVC and viton (F/G best).
- Rigid PVC should not be exposed to undiluted Cordon or more than 1500 ppm of Cordon in the diluted form.

The following materials are **not** recommended for use with Cordon and/or drip systems where Cordon is to be applied:

- Do not use containers, pumps, drip tube or other transfer or drip equipment made of aluminum, magnesium, zinc (including galvanized), cadmium, tin and alloys, or vinyl under certain conditions. Cordon may be severely corrosive to such metals.
- Buna-N, neoprene and fiberglass have the potential to disintegrate and should not be used in a system where Cordon is to be applied.

#### Drip Irrigation Design:

- A drip irrigation specialist should be consulted on the design of a drip system to insure irrigation and fumigant application uniformity.
- A drip irrigation specialist should be consulted in the selection of a proper drip tubing and emitter (online or inline, compensation or non-compensation) based upon the water needs of the vineyard with the understanding that the water delivery system will also be used for drip fumigation.
- Selection of the proper emitter spacing- and flow rate is important in obtaining a quality drip fumigant application. During drip fumigation, only the wetted zones are treated. The fumigant does not move past the wetted zone; therefore, areas of dry soil between emitters remain untreated.



- It is important to note that drip tubing installed on top of the soil surface has the potential to kink, twist and snake when water is introduced. This could result in tape damage and a lack of irrigation and fumigation uniformity.

**Drip Fumigation Procedures:****Step 1, Pre-Irrigation:**

- To obtain more uniform water movement, insure quality fumigant distribution and to test for leaks, a pre-irrigation prior to the planned drip fumigation application is recommended.
- During pre-irrigation, use sufficient water to increase soil moisture throughout the treatment zone to near or at field capacity.
- Allow the soil moisture to return to below field capacity before making the drip fumigant application.
- The pre-irrigation may enhance coverage in very sandy soils, very dry soils, or in soil with deep buried tape (5 inches in depth or greater).

**Step 2, Drip Fumigant Application:**

- Apply appropriate rate of Cordon in enough water so that soil moisture throughout the treatment zone, including near the soil surface, is again at or near field capacity.
- Water flow and chemical flow rates must be known in order to calculate the correct ppm.
- Cordon must be metered into the water supply.
- Calculating the correct flow rate of Cordon is important in achieving the correct dose rate to suppress the targeted pest. Calibration of the chemical flow and water meters is recommended. A chemical flow totalizer and/or scale are recommended to validate the chemical flow.
- Fumigant injections made within 50 feet of the first "T" and/or under conditions of low velocity water flow (less than 2 feet per second) must pass through a mixing device (such as a centrifugal pump or static mixer, coarse filter or fine strainer) to assure proper agitation.
- A separate mixing device is not needed if the chemical injection point is at least 50 feet in front of the first "T" junction point and significant turbulent flow is present to insure mixing.
- For low velocity (laminar) flows, more distance or a mixing device is needed to insure thorough mixing of the fumigant and water before it reaches the site to be treated.
- The minimum turbulent flow that is required for adequate mixing and to prevent damage to PVC pipe is 2 feet per second.
- Do not allow treatment solution to accumulate on the soil surface. If ponding, puddling or run-off occurs, then discontinue application immediately and cover with soil to absorb.

**Step 3, Post Application:**

- After application of Cordon, continue to irrigate the area with sufficient untreated water to flush the mixture from the irrigation system.
- Do not allow Cordon to remain in the irrigation system.
- Make sure that any PVC dead ends or low spots are flushed completely.
- Leave the soil undisturbed for at least 14 days. Then proceed with normal crop management activities.

**Special Use Precautions for Chemigation Application Equipment**

- Apply only through drip irrigation systems (root-targeted above-ground systems, on the soil surface, or buried). Do not apply this product through any other type of irrigation system.
- Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
- Do not connect irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- Only a person knowledgeable of the chemigation system and responsible for its operation, or a person under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise.

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- The system must contain a functional check valve, vacuum relief valve and low pressure drain or approved backflow prevention valve appropriately located on the irrigation pipeline to prevent backflow contamination of the water source.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the chemical supply or injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, automatic valve located on the intake side of the injection pump and connected to the system interlock to prevent fumigant from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The valve must be compatible with the fumigant.
- The system must contain a functional inter-lock to automatically shut off the pesticide injection pump if used when the water pressure drops too low for acceptable irrigation uniformity or the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- A hydraulic interlock valve operated by irrigation water pressure may be used in lieu of a functional pressure switch and/or an automatic functional inter-lock.
- Injection systems must use a metering system, such as a positive displacement injection pump or diaphragm pump, or venturi system, and/or a pressure-safe cylinder containing Cordon equipped with a metering valve and flow meter. This equipment must be constructed of materials that are compatible with Cordon and capable of being fitted with a system interlock.
- Cordon should be injected into the center of the irrigation water stream by using a suitable dip tube. This will prevent damage from undiluted fumigant contacting PVC pipe at the point of injection.

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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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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. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, 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.

To the extent permitted by law, 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. To the extent permitted by law, 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 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 Limitation of Remedies in any manner.

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