



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

August 14, 2017

Lesley Palmer Czochor
DuPont Crop Protections
Stine Haskell Research Center
P.O. Box 30
Newark, DE 19714

Subject: Label Amendment – Adds “This product is toxic to aquatic invertebrates” to the “Environmental Hazards” section
Product Name: DUPONT Zorvec Epicaltrin Fungicide
EPA Registration Number: 352-892
Application Date: 4/4/2017
Decision Number: 528231

Dear Ms. Czochor:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Page 2 of 2
EPA Reg. No. 352-892
Decision No. 528231

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. If you have any questions, you may contact myself at 703-308-9443 or via email at kish.tony@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Tony Kish". The signature is written in a cursive style with a large, stylized initial "T".

Tony Kish, Product Manager 22 Fungicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure



DuPont™ Zorvec™ Epicaltrin™

FUNGICIDE

GROUP U15 FUNGICIDE

Suspension Concentrate

<i>Active Ingredient</i>	<i>By Weight</i>
Oxathiapiprolin	18.7%
<i>Other Ingredients</i>	81.3%
TOTAL	100.0%

Contains 1.67 pounds of oxathiapiprolin per gallon of product

EPA Reg. No. 352-892

Nonrefillable Container

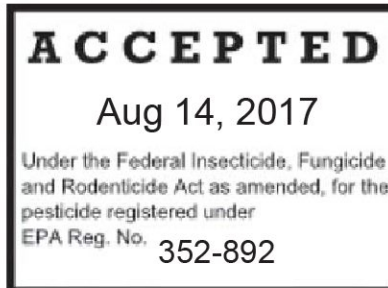
Net: _____

OR

Refillable Container

Net: _____

EPA Est. No. _____



KEEP OUT OF REACH OF CHILDREN

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

For questions regarding emergency medical treatment, you may contact 1-800-441-3637 for information.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Shoes and socks

User Safety Requirements

Follow the 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 CONTROL STATEMENTS:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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

This product is toxic to aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. DuPont™ ZORVEC™ EPICALTRIN™ fungicide (referred to below as DuPont™ ZORVEC™ EPICALTRIN™ fungicide, ZORVEC™ EPICALTRIN™ fungicide, or ZORVEC™ EPICALTRIN™) must be used only in accordance with instructions on this label, in separately issued labeling or exemptions under FIFRA (Supplemental Labels, Special Local Need Registration, FIFRA Section 18 exemptions), or as otherwise permitted by FIFRA. Always read the entire label including the Limitation of Warranty and Liability.

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 the label about personal protective equipment (PPE), and restricted-entry interval, and notification to workers (as applicable). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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 State or Tribal agency responsible for pesticide regulation.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes and socks

ZORVEC™ EPICALTRIN™ fungicide, is a suspension concentrate containing oxathiapiprolin, and is recommended for use by soil application for the control or suppression of the diseases listed on this label.

Restrictions

- Different application methods (foliar and soil) must not be combined when protecting a crop during a growing season.
- Use this product only in commercial and farm plantings. Do not use in greenhouses.
- Do not use for home plantings.
- DuPont™ ZORVEC™ EPICALTRIN™ fungicide must be used only in accordance with this label.
- Do not formulate this product into other end-use products.

PRODUCT INFORMATION

ZORVEC™ EPICALTRIN™ fungicide is active against selective Oomycete diseases listed on this label and has preventive, residual, curative, eradicated and antispore activity. ZORVEC™ EPICALTRIN™ is locally systemic, translaminar, and moves systemically in the xylem. See directions below for specific crop/disease recommendations.

Mode-of-action

Oxathiapiprolin, the active ingredient in ZORVEC™ EPICALTRIN™, acts as an oxysterol binding protein modulator in fungal cells.

Cultivar/Varietal Crop Safety

Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops, have been individually tested for crop safety. It is not possible to evaluate for crop safety all applications of ZORVEC™ EPICALTRIN™ on all crops within a crop group, on all varieties, cultivars, or hybrids of those crops, or under all environmental conditions and growing circumstances. To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator.

INTEGRATED PEST MANAGEMENT

DuPont recommends the use of Integrated Pest Management (IPM) programs to control pests. ZORVEC™ EPICALTRIN™ may be used as part of an IPM program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when disease forecasting models reach locally determined action levels. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine the appropriate management, cultural practice and treatment threshold levels for the specific crop, geography and diseases.

RESISTANCE MANAGEMENT

ZORVEC™ EPICALTRIN™ contains the active ingredient oxathiapiprolin which is novel and is currently assigned the Code U15 by the Fungicide Resistance Action Committee (FRAC). Oxathiapiprolin inhibits the oxysterol-binding protein (OSBP). Repeated use of products for control of specific plant pathogens may lead to selection of resistant strains of fungi and result in a reduction of disease control. A disease management program for ZORVEC™ EPICALTRIN™ that includes rotation and tank mixing with fungicides with a different mode of action is essential to reduce the risk of fungicide resistance development. Do not tank mix ZORVEC™ EPICALTRIN™ with any fungicide for which resistance to the target disease has developed. Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Do not follow soil applications of ZORVEC™ EPICALTRIN™ with foliar applications of DuPont™ ZORVEC™ ENICADE™. Different application methods (foliar and soil) must not be combined when protecting a crop during a growing season. For guidance on a particular crop and disease control situation, consult your state extension specialist for official state recommendations.

TANK MIXTURES

Always follow the tank mix instructions of the product label that is most restrictive. Apply at least the minimum labeled rate of each fungicide in the tank mix.

The crop safety of all tank mixtures with DuPont™ ZORVEC™ EPICALTRIN™ which may include physically compatible pesticides, fertilizers, adjuvants, and/or additives, has not been tested. When using a tank mixture with ZORVEC™ EPICALTRIN™, it is important to understand crop safety. To test for crop safety prepare a small volume of the intended tank mixture, apply it to an area of the target crop as directed by both this label and the tank mix partner product labels, and observe the treated crop to ensure that a phytotoxic response does not occur. DuPont will not be responsible for any crop injury arising from the use of a tank mixture that is not specifically described on ZORVEC™ EPICALTRIN™ product labeling or in other DuPont product use instructions.

Some materials including oils, surfactants, adjuvants, and pesticide formulations when applied individually, sequentially, or in tank mixtures may solubilize the plant cuticle, facilitate penetration into plant tissue, and increase potential for crop injury.

Always follow the tank mix instructions of the product label that is the most restrictive. Consult a DuPont representative or local agricultural authorities for more information concerning tank mixtures.

PHYSICAL COMPATIBILITY

ZORVEC™ EPICALTRIN™ is physically compatible with many commonly used fungicides, herbicides, insecticides, biological control products, liquid fertilizers, non-ionic surfactants, crop oils, methylated seed oils and drift control additives. However, since the formulations of products change, it is important to test the physical compatibility of desired tank mixes and check for undesirable physical effects, including settling out or flocculation. To determine physical compatibility, add the proportions of the tank mix products and water to a small container, mix thoroughly and allow to stand for 20 minutes. If the combination remains mixed, or can be re-mixed readily, it may be considered physically compatible.

APPLICATION INFORMATION

Mixing Instructions - ZORVEC™ EPICALTRIN™ alone

1. Fill clean spray tank 1/2 - 2/3 full of water
2. While agitating, add the required amount of ZORVEC™ EPICALTRIN™, continuing agitation until the product is completely dispersed.
3. Continue filling the tank, with agitation. Spray immediately after preparation, continuing agitation during spraying.

Tank Mixing Sequence

When using in a tank-mix, add different formulation types in the sequence indicated below. Allow time for complete mixing and dispersion after addition of each product.

1. Water soluble bag (WSB).
2. Water soluble granules (SG).
3. Water dispersible granules (WG).
4. Wettable powders (WP).
5. Water-based suspension concentrates (SC). (ZORVEC™ EPICALTRIN™).
6. Capsule suspension (CS)
7. Suspo emulsion (SE).
8. Oil dispersion (OD).
9. Emulsion in water (EW).
10. Emulsifiable concentrates (EC).
11. Water-soluble concentrates (SL).
12. Adjuvants, surfactants, oils.

13. Soluble fertilizers.

14. Drift retardants.

SOIL APPLICATIONS

For suppression or control of soil borne diseases, as recommended in this label, DuPont™ ZORVEC™ EPICALTRIN™ must be applied in a manner that ensures the product solution adequately saturates the target crop root/crown zone. When applied to the root/crown zone before, during, or soon after sowing or transplanting the crop, ZORVEC™ EPICALTRIN™ will suppress or control certain seedling root rot and crown diseases that limit crop stand establishment.

For soil application, apply ZORVEC™ EPICALTRIN™ using drip application, transplant water application (water wheel or continuous stream transplanters), surface band or directed application, or in-furrow application. If the application method does not move the product to the target root/crown disease zone, the application must be followed with irrigation or cultivation to correctly place the product for disease control.

Drip application

See Table 1, below, and specific drip chemigation instructions under Chemigation.

Transplant Water application

Transplants should be adequately watered before transplanting. Ensure transplant water volume is sufficient to thoroughly wet the root zone.

See Table 1 for Continuous Stream Transplanters. Ensure 4-8 oz transplant water/ transplant depending on sandy (4 oz) vs silty soil (6-8 oz).

For Water Wheel transplanters, use the plant population to determine the rate per plant.

Example: 38.6 fl oz product/acre x acre/4356 squash plants = 0.00886 fl oz product/squash plant

Surface Band or Directed application

Apply in a 4- to 12-inch band. See Table 1 for rates. Follow application with cultivation or irrigation (0.5 - 1 inch) to move ZORVEC™ EPICALTRIN™ to the target disease zone.

Table 1. Soil application rates for ZORVEC™ EPICALTRIN™ product/1000 feet of row, based on plant row spacing.

ZORVEC™ EPICALTRIN™ Conversion Chart for Drip (Trickle) Chemigation, Continuous Transplant Water, and Directed/Banded/In-Furrow application							
Corresponding field rate fl oz/acre	Rate in fl oz product/1000 row ft; based on planted row spacing (in inches) of:						
	30	34	36	48	60	72	84
2.4	0.14	0.16	0.17	0.22	0.28	0.33	0.39
4.8	0.28	0.31	0.33	0.44	0.55	0.66	0.77
9.6	0.55	0.62	0.66	0.88	1.10	1.32	1.54
19.2	1.10	1.25	1.32	1.76	2.20	2.65	3.09

Transplant Tray Application

Apply as a foliar spray to the transplants in the transplant tray 24-48 hours prior to transplanting.

Immediately water the spray off the foliage into the transplant tray soil, not watering past soil saturation.

Wait 24 hours to transplant.

For this application, the acre of transplants receives the full recommended acre rate for transplant tray application, applied as a foliar spray, which is then washed into the transplant cubes. Transplant cubes should be on the dry side at the beginning of this treatment.

CROP ROTATION

Table 2. Crop Rotation Intervals for DuPont™ ZORVEC™ EPICALTRIN™

Crop, Crop Group, or Subgroup	Plantback Restriction (in Days) following Last Application of ZORVEC™ EPICALTRIN™
Tuberous and Corm Vegetables (Subgroup 1C)	0
Bulb Vegetables (Group 3-07)	0
Leafy Greens (Subgroup 4A)	0
Brassica, Head and Stem (Subgroup 5A)	0
Peas, Succulent Shelled	0
Peas, Edible-Podded	0
Fruiting Vegetables (Group 8-10)	0
Cucurbit Vegetables (Group 9)	0
Strawberries	0
Herbs and Spices (Group 19)	0
Oilseed (Group 20)	0
Ginseng	0
Tobacco	0
Cereals (Group 15,16)	30
Grass Animal Feeds (Group 17)	30
Legume Vegetables, except succulent shelled and edible-podded peas	180
Non-grass Animal Feed (Group 18)	180
Peanuts	180
All other crops not listed	180

Table 3. ZORVEC™ EPICALTRIN™ fungicide labeled Crop and Crop groups, Pre-Harvest Intervals, Maximum Single Application Rates, and Total Rates allowed per year.

Crop or Crop Group or Subgroup, with examples	Minimum Time from Application to Harvest (PHI days)	Maximum Rate per Acre per Application (fl oz product)	Maximum Product per Acre per Year (fl oz product)
Cucurbit Vegetables (Crop Group 9) cucumber, cantaloupe, watermelon, squash	0	19.2	38.6
Fruiting Vegetables (Crop Group 8-10) tomato, pepper	0	19.2	38.6
Leafy Greens (Crop Subgroup 4A) lettuce, spinach	0	19.2	38.6
Tobacco*	7	19.2	38.6

* Not for use in California on Tobacco

USE RATES AND APPLICATION INSTRUCTIONS

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Cucurbit Vegetables (Crop Group 9) Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon (includes cantaloupe - other examples in footnote (1)); pumpkin; squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon	Phytophthora Blight (<i>Phytophthora capsici</i>)	2.4 - 19.2 fl oz	Apply at plant, in furrow, drip or in transplant water. See specific Soil Application Directions in this label. Use the higher rates for 'heavier' soils, for longer application intervals, or for susceptible varieties.

Restrictions

Soil application

The minimum time from application to harvest (PHI) is 0 days. Do not follow soil applications of DuPont™ ZORVEC™ EPICALTRIN™ with foliar applications of DuPont™ ZORVEC™ ENICADE™. Use either soil applications or foliar applications but not both for disease control. Do not make more than four applications of product per crop. Do not exceed 38.6 fl oz ZORVEC™ EPICALTRIN™ soil use per acre per year.

Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Do not use ZORVEC™ EPICALTRIN™ for more than 33% of the total soil fungicide applications. The minimum soil application interval is 7 days.

(1) Muskmelon: includes true cantaloupe, cantaloupe, casaba, Santa Claus melon, crenshaw melon, honeydew melon, honey balls, Persian melon, golden pershaw melon, mango melon, pineapple melon, snake melon.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Fruiting Vegetables (Crop Group 8-10) African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; nonbell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato	Phytophthora Blight and Crown Rot <i>(Phytophthora capsici)</i>	2.4 - 19.2 fl oz	Apply at plant, in furrow, drip or in transplant water. See specific Soil Application Directions in this label. Use the higher rates for 'heavier' soils, for longer application intervals, or for susceptible varieties.

Restrictions

Soil application

The minimum time from application to harvest (PHI) is 0 days. Do not follow soil applications of DuPont™ ZORVEC™ EPICALTRIN™ with foliar applications of DuPont™ ZORVEC™ ENICADE™. Use either soil applications or foliar applications but not both for disease control. Do not make more than four applications of product per crop. Do not exceed 38.6 fl oz ZORVEC™ EPICALTRIN™ soil use per acre per year.

Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Do not use ZORVEC™ EPICALTRIN™ for more than 33% of the total soil fungicide applications. The minimum soil application interval is 7 days.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Leafy Greens (Crop Subgroup 4A) Amaranth; arugula; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock; endive; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio; spinach; spinach, New Zealand; spinach, vine	Downy Mildew (<i>Bremia lactucae</i>)	4.8 - 19.2 fl oz	Apply at plant, in furrow, drip or in transplant water. See specific Soil Application Directions in this label. Use the higher rates for 'heavier' soils, for longer application intervals, or for susceptible varieties.

Restrictions

Soil applications

The minimum time from application to harvest (PHI) is 0 days. Do not follow soil applications of DuPont™ ZORVEC™ EPICALTRIN™ with foliar applications of DuPont™ ZORVEC™ ENICADE™. Use either soil applications or foliar applications but not both for disease control. Do not make more than four applications of product per crop. Do not exceed 38.6 fl oz ZORVEC™ EPICALTRIN™ soil use per acre per year.

Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Do not use ZORVEC™ EPICALTRIN™ for more than 33% of the total soil fungicide applications. The minimum soil application interval is 7 days.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Tobacco*	Black Shank (<i>Phytophthora parasitica</i> var. <i>nicotianae</i>)	2.4 fl oz	Apply as a foliar spray to the tobacco transplants in the transplant tray 24-48 hours prior to transplanting. Immediately water the spray off the foliage into the transplant tray soil, not watering past soil saturation. Wait 24 hours to transplant. See specific Tray Transplant Directions in this label for further details.
	Black Shank (<i>Phytophthora parasitica</i> var. <i>nicotianae</i>)	4.8 - 19.2 fl oz	Apply at plant in furrow, or in transplant water. See specific Soil Application Directions in this label. Use the higher rates for 'heavier' soils, for longer application intervals, or for susceptible varieties.
	Black Shank (<i>Phytophthora parasitica</i> var. <i>nicotianae</i>)	4.8 - 19.2 fl oz	Apply soil directed or banded applications at 1st cultivation and layby. See specific Soil Application Directions in this label. Use the higher rates for 'heavier' soils, for longer application intervals, or for susceptible varieties.

Restrictions

Soil or soil-directed application (includes Transplant Tray application)

The minimum time from application to harvest (PHI) is 7 days. Do not follow soil applications of DuPont™ ZORVEC™ EPICALTRIN™ with foliar applications of DuPont™ ZORVEC™ ENICADE™. Use either soil applications or foliar applications but not both for disease control. Do not make more than four applications of product per crop. Do not exceed 38.6 fl oz ZORVEC™ EPICALTRIN™ soil use per acre per year.

Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. The minimum soil application interval is 7 days.

* Not for use in California on Tobacco

Chemigation

Apply DuPont™ ZORVEC™ EPICALTRIN™ only through drip (trickle) or strip tubing irrigation systems. Do not connect any irrigation system (including greenhouse systems) used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

See "Required System Safety Devices for All Chemigation and Public Water Systems" at the end of the Chemigation section.

APPLICATION INSTRUCTIONS

DRIP (TRICKLE)

ZORVEC™ EPICALTRIN™ must be applied in a manner that ensures the product is in the root zone. ZORVEC™ EPICALTRIN™ must be in the root zone to provide effective control of target pests. ZORVEC™ EPICALTRIN™ is most effective when it is applied so that the roots are at or near the site of application; manage irrigation so that significant quantities of ZORVEC™ EPICALTRIN™ remain in the root zone.

1. Do not begin applications until after crop emergence in direct seeded crops.
2. Do not make applications if soil moisture is below the level required for active plant growth.
3. This product must be applied uniformly in the root zone or poor performance may result. Drip tape or emitters must be located within or directly adjacent to the root zone.
4. The drip system must be properly designed, free of leaks, and operated in a manner that provides uniform application of water throughout the field.
5. In most situations, this product should be applied during the first 1/3 of the irrigation cycle, starting just after the system has come up to pressure.
6. The minimum injection period is the time that it takes water to move from the injection point to the furthest emitter in the irrigation zone (propagation time). If this time is not known, it can be calculated by measuring the time for a soluble dye to move from the injection point to the farthest emitter. A longer injection improves uniformity throughout the zone, but needs to allow for at least an equal period of water to flush the system and move the product through the soil.
7. ZORVEC™ EPICALTRIN™ must not be applied at the same time that a drip irrigation line clean out product is being used as performance may be reduced.

Directions for Chemigation:

Preparation

A pesticide tank is recommended for the application of ZORVEC™ EPICALTRIN™ in drip chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank 1/4 to 1/2 full with water and the agitator running, measure the required amount of ZORVEC™ EPICALTRIN™ and add it to the tank. Then add additional water to bring your total pesticide mixture up to the desired volume for your application. Note: Always add the ZORVEC™ EPICALTRIN™ to water, never put ZORVEC™ EPICALTRIN™ into a dry tank or other mixing equipment without first adding water. See "Tank Mixing Sequence" section of the container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation; do not use air agitation.

Injection into Chemigation Systems

Inject the proper amount of ZORVEC™ EPICALTRIN™ into the irrigation water flow using a positive displacement injection pump or a Venturi injector. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water.

Uniform Water Distribution

The irrigation system used for application of DuPont™ ZORVEC™ EPICALTRIN™ must provide for uniform distribution of ZORVEC™ EPICALTRIN™ treated water. Non-uniform distribution can result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the drip chemigation system is operating properly to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

Monitoring of Chemigation Applications

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when ZORVEC™ EPICALTRIN™ is in the irrigation water.

Operation

Start the water pump and let the system achieve the desired pressure before starting the injector. Start the injector. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

Cleaning the System

Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Consult your owner's manual or your local equipment dealer for cleanout procedures for your injection system.

Required System Safety Devices and Instructions For All Chemigation and Public Water Systems

1. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering device, such as a positive displacement pump or a Venturi injector, that provides uniform injection of the product, is effectively designed and constructed of materials compatible with the product, and is capable of being fitted with a system interlock.
7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe

SPRAY TANK CLEANOUT

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain application equipment. Thoroughly rinse and flush all application equipment with clean water. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

IMPORTANCE OF DROPLET SIZE

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions.

A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and lower drift potential.

CONTROLLING DROPLET SIZE - GROUND APPLICATION

- Nozzle Type - Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.
- Pressure - The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.
- Flow Rate/Orifice Size - Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.

CONTROLLING DROPLET SIZE – AIRCRAFT

- Nozzle Type - Solid stream, or other low drift nozzles produce the coarsest droplet spectra.
- Number of Nozzles - Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum
- Nozzle Orientation - Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.
- Pressure – Selecting the pressure that produces the coarsest droplet spectrum for a particular nozzle and airspeed reduces spray drift potential. For some nozzle types such as solid streams, lower pressures can produce finer droplet spectra and increase drift potential

BOOM LENGTH (AIRCRAFT), AND APPLICATION HEIGHT

- Boom Length (aircraft) - Using shorter booms decreases drift potential. Boom lengths are expressed as a percentage of an aircraft's wingspan or a helicopter's rotor blade diameter. Shorter boom length and proper positioning can minimize drift caused by wingtip or rotor vortices.
- Application Height (aircraft) - Applications made at the lowest height that are consistent with pest control objectives and the safe operation of the aircraft will reduce the potential for spray drift.
- Application Height (ground) - Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize

bounce, will reduce the exposure of spray droplets to evaporation and wind, and reduce spray drift potential.

WIND

Drift potential is lowest when applications are made in light to gentle sustained winds (2-10 mph), which are blowing in a constant direction. Many factors, including droplet size and equipment type also determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

TEMPERATURE AND HUMIDITY

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which may cause small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature 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. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are minimizing drift potential, and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers and Distributors of Agrotechnology

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container closed when not in use. Always store pesticides in the original container only, away from other pesticides, food, pet food, feed, seed, fertilizers, and veterinary supplies. If a leaky container must be contained within another, mark the outer container to identify the contents. Storage areas must be locked and secure from vandalism, with precautionary signs posted. The storage area must be dry, well-lit, and well-ventilated. Keep pesticide storage areas clean. Clean up any spills promptly. Protect pesticide containers from extreme heat and cold. Store herbicides, insecticides and fungicides in separate areas within the storage unit. Place liquid formulations on lower shelves and dry formulations above. Maintaining a spill kit and fire extinguisher on hand and having emergency phone numbers posted will allow you to be prepared for emergencies. If spill cleanup PPE is stored nearby, but outside the pesticide storage area, it will be accessible when needed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Rigid Plastic and Metal Containers (Capacity Equal to or Less Than 5 Gallons): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Rigid Plastic and Metal Containers (Capacity Greater Than 5 Gallons): Nonrefillable container. Do not reuse or refill this container. Triple 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Rigid Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

All Refillable Containers: Refillable container. *Refilling Container:* Refill this container with DuPont™ ZORVEC™ EPICALTRIN™ fungicide containing oxathiapiprolin only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

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