

352-834

11/8/2012

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

OFFICE OF CHEMICAL, SAFETY
AND POLLUTION PREVENTION

Lesley Czocho
Dupont
Stine Haskell Research Center 300/429
1090 Elkton Rd
PO Box 30
Newark, DE 19714

NOV 08 2012

Subject: Labeling Amendment to Dupont Fontelis Fungicide
EPA Registration No. 352-834
Decision No. 469667
Submission Date: 8/31/12 and resubmissions on 10/25/12 and 11/8/12

Dear Ms Czocho:

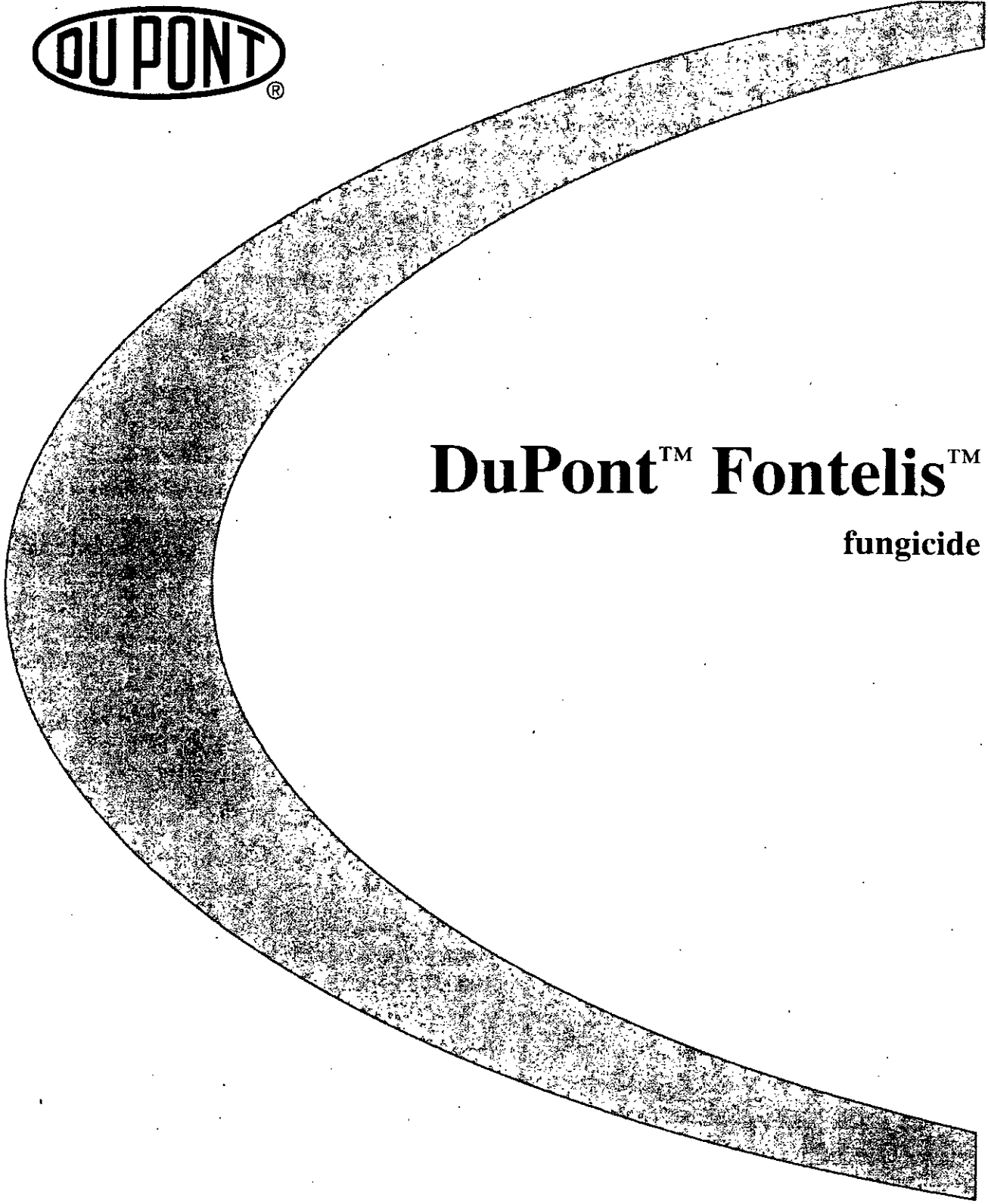
The labeling referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended to revise the environmental hazards statement, is acceptable. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions, please contact Dominic Schuler at (703) 347-0260 or via email at schuler.dominic@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tony Kish".
(Cer)

Tony Kish
Product Manager 22
Fungicide Branch
Registration Division (7504P)

MASTER



DuPont™ Fontelis™

fungicide

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DuPont™
Fontelis™

ACCEPTED
NOV 08 2012
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 352-834

fungicide

GROUP	7	FUNGICIDE
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Suspension Concentrate

<i>Active Ingredient</i>	<i>By Weight</i>
Penthiopyrad	20.4%
<i>Other Ingredients</i>	79.6%
TOTAL	100.0%

Contains 1.67 pounds of penthiopyrad per gallon of product

EPA Reg. No. 352-834

EPA Est. No. _____

Nonrefillable Container

Net: _____

OR

Refillable Container

Net: _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

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 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 by a poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **For medical emergencies involving this product, call toll-free 1-800-441-3637.** See Label for Additional Precautions and Directions for Use.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. May be harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

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

See engineering control statements for additional 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 fish, aquatic invertebrates, and oysters. 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. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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 12 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
- Chemical resistant gloves (made of any waterproof material)

DuPont™ FONTELIS™ fungicide (i.e., FONTELIS™), a suspension concentrate containing penthiopyrad, is recommended for use as a spray for the control of many important listed plant diseases.

Restrictions

- Use this product only in commercial and farm plantings.
- Do not use for home plantings.
- May be used in greenhouse production of tomatoes, peppers, and edible-peel cucurbits.

FONTELIS™ must be used only in accordance with this label.

Do not formulate this product into other end-use products.

PRODUCT INFORMATION

FONTELIS™ is a broad-spectrum fungicide, recommended for control of foliar and soil-borne plant diseases, and has preventive, curative, and locally systemic activity. FONTELIS™ must be applied in a regularly scheduled protective spray program in rotation with other fungicides. See directions below for specific crop/disease recommendations.

FONTELIS™ can be applied with commonly used ground equipment, hose-end, pressurized, greenhouse and hand-held sprayers, air or chemigation equipment, except as otherwise directed, using sufficient water to obtain thorough coverage of plants. Thorough coverage of all foliage is essential for effective disease control. Maintain agitation during mixing and application to assure uniform product suspension.

Application Volumes

- For conventional ground application, apply a minimum of 15 gallons per acre, increasing the spray volume as the plants mature to ensure thorough coverage of foliage.
- For air-assisted ground application, apply a minimum of 10 gallons per acre.
- For aerial application, apply a minimum of 2 gallons per acre (10 gallons per acre for trees and orchards).

Rainfastness: DuPont™ FONTELIS™ rapidly penetrates into plant tissues and is rainfast within 1 hour after application.

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 FONTELIS™ 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. FONTELIS™ may be used as part of an Integrated Pest Management (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

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. Penthiopyrad, the active ingredient in FONTELIS™, is one of EPA's Target Site of Action Group 7 fungicides (carboxamides). A disease management program that includes rotation and/or tank mixing with non-Group 7 fungicides is essential to reduce the risk of fungicide resistance development. For guidance on a particular crop and disease control situation, consult your state extension specialist for official state recommendations.

TANK MIXTURES

Tank mixtures with other fungicides may be used to broaden spectrum and/or manage potential resistance. Use tank mixtures with effective fungicides from different target site of action groups (FONTELIS™ is in Group 7, carboxamide fungicides) that are registered for the same crop use. Apply at least the minimum labeled rate of each fungicide in the tank mix. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

APPLICATION INFORMATION

Mixing Instructions

1. Fill clean spray tank 1/4 - 1/2 full of water.
2. While agitating, add the required amount of FONTELIS™, continuing agitation until the product is completely dispersed.
3. Continue filling the tank, with agitation, adding desired additives or tank mix partners, following the sequence listed below in 'tank mixing sequence.'

Adjuvants

FONTELIS™ fungicide may be used with adjuvants, for example, nonionic surfactants, crop oils, methylated seed oils, and blends at typical agricultural use rates for these adjuvants.

Compatibility

FONTELIS™ is compatible with many commonly used fungicides, liquid fertilizers, herbicides, insecticides, and biological control products. However, since the formulations of products are always changing, it is advisable to test the physical compatibility of desired tank mixes and check for adverse effects like settling out or flocculation. To determine the physical compatibility, add the recommended

proportions of the tank mix products to water, mix thoroughly and allow to stand for 20 minutes. If the combination remains mixed, or can be re-mixed readily, it is considered physically compatible.

The crop safety of all potential tank-mixes, including additives and other pesticides, on all crops has not been tested. Before applying any tank-mixture not specifically recommended on this label or other DuPont supplemental labeling, the safety to the target crop must be confirmed. To test for crop safety, apply the combination to a small area of the target crop in accordance with the label instructions to ensure that a phytotoxic response will not occur.

Tank Mixing Sequence

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
2. water-dispersible granules
3. wettable powders
4. water-based suspension concentrates (DuPont™ FONTELIS™)
5. water-soluble concentrates
6. oil-based suspension concentrates
7. emulsifiable concentrates
8. adjuvants, surfactants, and oils
9. soluble fertilizers
10. drift retardants

CROP ROTATION

The following list of crops and crop groups may be planted immediately after harvest:

Alfalfa, Brassica (cole) leafy vegetables crop group, bulb vegetables crop group (onion, garlic), canola, cereal grains crop group (barley, oats, rye, sorghum, wheat; except rice), corn (all types), cotton, cucurbit vegetables crop group (cucumber, melons, squash), fruiting vegetables crop group (tomato, pepper), leafy vegetables crop group (lettuce, celery, spinach), legume vegetables crop subgroup 6A (edible podded), legume vegetables crop subgroup 6B (succulent shelled), legume vegetables crop subgroup 6C (dried shelled), low-growing berries crop subgroup (strawberries, lowbush blueberries), peanuts, pome fruits, root vegetables crop subgroup (carrot, radish, turnip), soybean, stone fruits, sugarbeet, sunflower, tree nuts crop group (almond, filbert, pecan, pistachio), tuberous and corm vegetables and leaves crop subgroup (potato).

All other crops cannot be planted until 120 days after the last application of FONTELIS™ fungicide.

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Table 1. DuPont™ FONTELIS™ fungicide labeled Crop and Crop Groups, Pre-Harvest Intervals, Maximum Single Application Rates, and Total Rates allowed per year

Crop, 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)
Alfalfa	14 days	24 fl oz	48 fl oz
Berry, low growing strawberry, lowbush blueberry	0 day	24 fl oz	72 fl oz
Bulb vegetables (green, dry) onion, garlic, chives	3 days	24 fl oz	72 fl oz
Brassica (Cole) leafy vegetables cabbage, broccoli, cauliflower, mustard greens	0 day	30 fl oz	72 fl oz
Cucurbit vegetables cucumber, cantaloupe, watermelon, squashes	1 day	16 fl oz	67 fl oz
Fruiting vegetables tomato, peppers	0 day	24 fl oz	72 fl oz
Leafy vegetables lettuce, celery, spinach	3 days	24 fl oz	72 fl oz
Legume vegetables bean, pea (subgroup 6A edible podded and subgroup 6B succulent shelled)	0 day	30 fl oz	72 fl oz
Peanut	14 days	24 fl oz	72 fl oz
Pome fruits apple, pear	28 days	20 fl oz	61 fl oz
Root vegetables and leaves (except sugarbeet) carrot, garden beet, radish, turnips	0 day	30 fl oz	61 fl oz
Stone fruits cherries, peaches, plums	0 day	20 fl oz	61 fl oz
Tree nuts plus pistachios almonds, cashew, filbert	14 days	20 fl oz	61 fl oz

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USE RATES AND APPLICATION INSTRUCTIONS

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Alfalfa*	Powdery mildew (<i>Erysiphe pisi</i> , <i>Leveillula taurica</i>)	14 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
	Sclerotinia crown and stem rot (<i>Sclerotinia</i> spp.)	16 to 24 fl oz	
<p>Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 14 days. Do not exceed 48 fl oz/acre per year.</p>			

Berry, low-growing Strawberry, bearberry, bilberry, cloudberry, cranberry, lingonberry, muntries, partridgeberry	Botrytis fruit rot, gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Sphaerotheca</i> spp.)	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
Lowbush blueberry*	Botrytis fruit rot, gray mold (<i>Botrytis cinerea</i>) Brown leaf spot (<i>Septoria</i> spp.) Leaf rust (<i>Thekospora minima</i>) Powdery Mildew (<i>Microsphaera vaccinii</i>) Disease suppression Mummy berry (<i>Monilinia vaccinii-corymbosi</i>)	16 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
<p>Make no more than 2 sequential applications of FONTELIS™ before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 72 fl oz/acre per year.</p>			

*Not for use in California.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Bulb vegetables (green, dry) Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves	Botrytis blight and neck rot (<i>Botrytis</i> spp.) Powdery mildew* (<i>Leveillula taurica</i> , <i>Oidiopsis</i> spp.) Purple blotch* (<i>Alternaria porri</i>) Stemphylium leaf blight and stem rot* (<i>Stemphylium vesicarium</i>)	16 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.

Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 3 days. Do not exceed 72 fl oz/acre per year.

Brassica (Cole) leafy vegetables* Broccoli; broccoli, Chinese (gailon); broccoli raab (rapini); Brussels sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens; turnip greens	Alternaria (<i>Alternaria brassicicola</i>) Gray mold (<i>Botrytis cinera</i>) Powdery mildew (<i>Erysiphe cruciferarum</i> , <i>Erysiphe polygoni</i>)	14 to 30 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
	Sclerotinia stem rot (<i>Sclerotinia</i> spp.)	16 to 30 fl oz	

Make no more than 2 sequential applications of FONTELIS™ before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 72 fl oz/acre per year.

*Not for use in California.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Cucurbit vegetables Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber (field and greenhouse); gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon (includes cantaloupe); pumpkin; squash, summer (field and greenhouse); squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon	Alternaria leaf spot and blight* (<i>Alternaria</i> spp.) Gray mold* (<i>Botrytis cinerea</i>) Gummy stem blight* (<i>Didymella bryoniae</i>) Powdery mildew (<i>Sphaerotheca fuliginea</i> , <i>Erysiphe cichoracearum</i>)	12 to 16 fl oz	Begin applications prior to disease development and continue on a 5- to 14-day interval. Use higher rate and shorter interval when disease pressure is high. For disease control in greenhouse cucurbits, use FONTELIS™ at a rate range of 0.375 - 0.5 fl oz of product (0.75 - 1 tablespoons) per gallon of spray per 1360 sq ft. These rates equal field rates of 12-16 fl oz/acre.
	Sclerotinia stem rot* (<i>Sclerotinia sclerotiorum</i>)	16 fl oz	
Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. For control of Gummy stem blight where Group 7 fungicide resistance is suspected, tank mix FONTELIS™ with a minimum of 1.5 lb active chlorothalonil/acre. Minimum time from application to harvest (PHI) is 1 day. Do not exceed 67 fl oz/acre per year.			

Fruiting vegetables Eggplant; groundcherry (<i>Physalis</i> spp.); pepino; pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper) (field and greenhouse); tomatillo; tomato (field and greenhouse)	Alternaria blights and leaf spots* (<i>Alternaria</i> spp.) Early blight* (<i>Alternaria solani</i>) Gray mold* (<i>Botrytis cinerea</i>) Powdery mildew (<i>Leveillula taurica</i>) Septoria leaf spot* (<i>Septoria</i> spp.) Target spot* (<i>Corynespora cassiicola</i>)	10 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high. For disease control in greenhouse peppers and tomatoes, use FONTELIS™ at a rate range of 0.5 - 0.75 fl oz of product (1 - 1.5 tablespoons) per gallon of spray per 1360 sq ft. These rates equal field rates of 16-24 fl oz/acre.
	Disease suppression: Anthracnose* (<i>Colletotrichum</i> spp.)	24 fl oz	
Make no more than 2 sequential applications of FONTELIS™ before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 72 fl oz/acre per year.			

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Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Leafy vegetables Amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard	Alternaria leaf spot* (<i>Alternaria sonchi</i>) Cercospora leaf spot* (<i>Cercospora</i> spp.) Early blight* (<i>Cercospora apii</i>) Gray mold* (<i>Botrytis cinerea</i>) Late blight* (<i>Septoria apicola</i>) Powdery mildew* (<i>Erysiphe cichoracearum</i>) Rust* (<i>Puccinia</i> spp.) Septoria leaf spot* (<i>Septoria</i> spp.)	14 to 24 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
	Lettuce drop (<i>Sclerotinia minor</i> , <i>Sclerotinia sclerotiorum</i>)	16 to 24 fl oz	

Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 3 days. Do not exceed 72 fl oz/acre per year.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Legume vegetables and foliage* Subgroup 6A edible podded Bean (<i>Phaseolus</i> spp) includes runner bean, snap bean, wax bean; bean (<i>Vigna</i> spp) includes asparagus bean, Chinese longbean, moth bean, yardlong bean; jackbean; pea (<i>Pisum</i> spp) includes dwarf pea, edible-pod pea, snow pea, sugar snap pea; pigeon pea; soybean (immature seed); sword bean Subgroup 6B succulent shelled Bean (<i>Phaseolus</i> spp) includes lima bean (green); broad bean (succulent); bean (<i>Vigna</i> spp) includes blackeyed pea, cowpea, southern pea; pea (<i>Pisum</i> spp) includes English pea, garden pea, green pea; pigeon pea	Alternaria blight, leaf spot (<i>Alternaria</i> spp.) Angular leaf spot (<i>Phaeoisariopsis griseola</i>) Anthracnose (<i>Colletotrichum lindemuthianum</i>) Ascochyta blight, leaf spot (<i>Ascochyta</i> spp.) Cercospora leaf spot (<i>Cercospora</i> spp.) Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Erysiphe</i> spp.) Rust (<i>Uromyces</i> spp., <i>Phakopsora pachyrhizi</i>) Septoria blotch (<i>Septoria</i> spp.)	14 to 30 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
	Sclerotinia rot, white mold (<i>Sclerotinia</i> spp.)	16 to 30 fl oz	

Make no more than 2 sequential applications of FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 72 fl oz/acre per year.

*Not for use in California.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Peanut*	Alternaria leaf spot (<i>Alternaria</i> spp.) Early leaf spot (<i>Cercospora arachidicola</i>) Late leaf spot (<i>Cercosporidium personatum</i>) Leaf scorch (<i>Leptosphaerulina crassiacca</i>) Pepper spot (<i>Leptosphaerulina crassiacca</i>) Rhizoctonia pod and stem blight, limb rot (<i>Rhizoctonia solani</i>) Rust (<i>Puccinia arachidis</i>) Southern stem rot, blight (<i>Sclerotium rolfsii</i>)	12 to 24 fl oz	Begin applications prior to disease development and continue on a 14- to 21-day interval. Use higher rate and shorter interval when disease pressure is high.
	Sclerotinia blight (<i>Sclerotinia</i> spp.) Web blotch (<i>Phoma arachidicola</i>)	16 to 24 fl oz	
	Disease suppression Cylindrocladium black rot (<i>Cylindrocladium crotalariae</i>)	16 to 24 fl oz	
Make no more than 3 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 14 days. Do not exceed 72 fl oz/acre per year.			

Pome fruits Apple; crabapple; loquat; mayhaw; pear; pear, oriental; quince	Alternaria leaf spots* (<i>Alternaria</i> spp.) Scab, apple or pear (<i>Venturia inaequalis</i> (apple), <i>Venturia pirina</i> (pear)) Powdery mildew* (<i>Podosphaera leucotricha</i>) Rusts* (<i>Gymnosporangium</i> spp.)	14 to 20 fl oz	Begin applications prior to disease development and continue on a 7- to 21-day interval depending on the targeted diseases. Use higher rate and shorter interval when disease pressure is high. - Application interval for scab is 7 to 10 days. For apple scab, a reliable disease forecasting system should be used. - Application interval for powdery mildew is 14 to 21 days.
	Apple scab (<i>Venturia inaequalis</i>)	10 to 12 fl oz	
Make no more than 2 sequential applications of FONTELIS™ before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 28 days. Do not exceed 61 fl oz/acre per year.			

*Not for use in California.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Root vegetables and leaves* (except sugarbeet) Beet, garden; burdock, edible; carrot; celeriac; chervil, turnip-rooted; chicory; ginseng; horseradish; parsley, turnip-rooted; parsnip; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; turnip	Alternaria leaf spot and blight, brown spot, early blight (<i>Alternaria</i> spp.) Cercospora leaf spot (<i>Cercospora</i> spp.) Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Erysiphe</i> spp.) Southern blight (<i>Sclerotium rolfsii</i>) Rust (<i>Uromyces</i> spp.) White mold (<i>Sclerotinia</i> spp.)	16 to 30 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.

Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 61 fl oz/acre per year.

Stone fruits Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune (fresh)	Alternaria rot* (<i>Alternaria</i> spp.) Botrytis rots (<i>Botrytis cinerea</i>) Brown rot blossom blight and fruit rot (<i>Monilinia</i> spp.) Cherry leaf spot* (<i>Blumeriella jaapii</i>) Green fruit rot* (<i>Sclerotinia sclerotiorum</i>) Powdery mildew, rusty spot on peaches* (<i>Podosphaera clandestina</i> , <i>Sphaerotheca pannosa</i>) Rust* (<i>Tranzschelia discolor</i>) Scab* (<i>Cladosporium carpophilum</i>) Shot hole (<i>Wilsonomyces carpophilus</i>)	14 to 20 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
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Make no more than 2 sequential applications of FONTELIS™ before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 0 days. Do not exceed 61 fl oz/acre per year.

*Not for use in California.

Crop/Crop Group	Target Diseases	Use Rate per Acre (fl oz)	Remarks
Tree nuts Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; walnut, black and English; pistachio	Alternaria leaf spot, blight (<i>Alternaria</i> spp.) Anthracnose (<i>Colletotrichum</i> spp.) Brown rot blossom blight and fruit rot, green fruit rot (jacket rot) (<i>Monilinia</i> spp.) Botrytis rots, blights, green fruit rot (jacket rot) (<i>Botrytis cinerea</i>) Panicle and shoot blight (<i>Botryosphaeria dothidea</i>) Powdery mildew* (<i>Podosphaera tridactyla</i> var. <i>tridactyla</i> , <i>Sphaerotheca pannosa</i> , <i>Phyllactinia</i> <i>angulata</i> , <i>Phyllactinia guttata</i> f. sp. <i>coryli</i> , <i>Microsphaera</i> spp., <i>Oidium</i> spp.) Rust* (<i>Tranzschelia discolor</i> , <i>Uromyces</i> spp., <i>Pucciniastrum coryli</i>) Scab (<i>Cladosporium carpophila</i>) Sclerotinia shoot blight, green fruit rot (jacket rot)* (<i>Sclerotinia sclerotiorum</i>) Seedling blight* (<i>Rhizoctonia solani</i>) Septoria leaf spot* (<i>Septoria</i> spp.) Shot-hole (<i>Wilsonomyces carpophilus</i>)	14 to 20 fl oz	Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.
Make no more than 2 sequential applications of DuPont™ FONTELIS™ fungicide before switching to a fungicide with a different mode of action. Minimum time from application to harvest (PHI) is 14 days. Do not exceed 61 fl oz/acre per year.			

*Not for use in California.

Chemigation

Apply DuPont™ FONTELIS™ fungicide only through sprinkler irrigation systems (such as center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move irrigation systems).

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Specific Instructions for Public Water Systems:

1. 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 daily at least 60 days out of the year.
2. 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Specific Instructions for Sprinkler Irrigation 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 pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Good agitation is required in the injection tank.
8. In moving systems, apply specified dosage of DuPont™ FONTELIS™ fungicide as a continuous injection. In nonmoving systems inject FONTELIS™ for 15 to 30 minutes at end of cycle. Use the least amount of water possible consistent with uniform coverage.
9. Mix the amount of FONTELIS™ needed for acreage to be treated into the quantity of water determined during prior calibration. For moving systems inject into the system continuously for one complete revolution of the field. For nonmoving systems inject into system for the time established during calibration.
10. Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all FONTELIS™ is flushed from system.

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 way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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!** See **Wind, Temperature and Humidity**, and **Temperature Inversions** sections of this label.

Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH AND HEIGHT

- **Boom Length (aircraft)** - The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- **Boom Height (aircraft)** - Application more than 10 ft above the canopy increases the potential for spray drift.
- **Boom Height (ground)** Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes 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. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while 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 preventing drift 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, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

SENSITIVE AREAS

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

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™ FONTELIS™ fungicide containing penthiopyrad 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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DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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