



# DuPont™ Fontelis®

## FUNGICIDE

### Technical Information

**Active Ingredient:**

200 g/L PENTHIOPYRAD in the form of a suspension concentrate.

**Pack Sizes:**

5 L



GROUP	<b>7</b>	FUNGICIDE
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**HARMFUL**

Keep out of reach of children

**ECOTOXIC**

FOR THE CONTROL OF BLACK SPOT AND POWDERY MILDEW IN APPLES AND PEARS.

Registered pursuant to the ACVM Act 1997 No. P8528

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to the HSNO Act 1996 Code HSR100718

READ LABEL BEFORE MIXING AND APPLYING

**HAZARD CLASSIFICATION**

6.5B, 6.9B, 9.1A

**APPROVED HANDLER**

This product must be under the control of an approved handler during use.

Use of this product in any manner contrary to this label may be an offence under the HSNO Act.

**HARMFUL**

May cause sensitisation from prolonged skin contact. May cause liver damage from repeated oral exposure at high doses.

**ECOTOXIC**

Very toxic to aquatic organisms.

**PRECAUTIONS**

Keep out of reach of children. Avoid skin contact. **DO NOT** breathe concentrate or spray mist. When mixing or applying wear waterproof gloves, hat, overalls and footwear. **DO NOT** eat, drink or smoke while using. Wash hands and face before meals and after work. Wash contaminated clothing before re-use. **DO NOT** apply into/onto water. Avoid contamination of any water supply with product or empty container. **DO NOT** allow spray drift outside the target area. Store in original container, tightly closed and under lock and key. Store in a cool, well ventilated area. **DO NOT** store for prolonged periods in direct sunlight. **DO NOT** store with Class 1, 2, 3.2, 4 or 5 substances or feed, seeds or foodstuffs. Stores containing more than 100 L of this product require secondary containment and are subject to signage. When stored appropriately, this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

**DISPOSAL**

Container disposal: Ensure container is empty. Triple rinse, and add rinsate to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, burn if circumstances, especially wind direction permit, otherwise bury in an approved landfill. **DO NOT** reuse container. Dispose of this product only by using according to this label. Always follow local Authority requirements.

**FIRST AID**

If on the skin wash with plenty of soap and water. If skin irritation or rash occurs get medical advice/attention. For advice, contact the National Poisons Centre 0800 POISON (0800 764766) or a doctor if feeling unwell.

**SPILLAGE**

Wear appropriate protective clothing. Prevent liquid from entering sewers or bodies of water. Absorb spills in earth or sand and sweep up. Dispose of waste material at an approved landfill.

## GENERAL INSTRUCTIONS

DuPont™ Fontelis® fungicide is a suspension concentrate containing 200 g/L penthiopyrad for the control of Black spot and Powdery mildew in Apples and Pears. Fontelis® fungicide controls plant diseases by blocking both spore germination and mycelial growth. It has protectant activity with extended residual control. Fontelis® fungicide must be applied in a regular protectant spray programme in rotation with other fungicides. See “Directions for Use” section.

## FUNGICIDE RESISTANCE WARNING

Fontelis® fungicide is a member of the pyrazole carboximide group of fungicides. For resistance management the product is a Group 7 fungicide.

Some naturally occurring individual fungi resistant to Fontelis® and other Group 7 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if Fontelis® or other Group 7 fungicides are used repeatedly. These resistant fungi will not be controlled by Fontelis® or other Group 7 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, DuPont (New Zealand) Limited accepts no liability for any losses that may result from the failure of this product to control resistant fungi.

## MIXING INSTRUCTIONS

Fill spray tank to ¼ to ½ full of water. Measure the amount of Fontelis® fungicide required for the area to be sprayed. Add Fontelis® fungicide directly to the spray tank with the agitation engaged. Mix thoroughly to disperse the fungicide. Once dispersed, the material must be kept in suspension at all times by continuous agitation. Use mechanical or hydraulic means, **DO NOT** use air agitation, premix or slurry.

If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. **DO NOT** allow spray mix to sit overnight, as resuspension may be difficult.

## MIXING ORDER

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules, wettable powders, water based suspension concentrates, water soluble concentrates, oil based suspension concentrates (such as Fontelis® fungicide), soluble fertilisers.

## SURFACTANT/WETTING AGENT

Not required.

## COMPATIBILITY

Fontelis® fungicide is compatible with many commonly used fungicides, liquid fertilisers, 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. Fontelis® fungicide is compatible with Altacor®, Avaunt®, mancozeb, Polyram<sup>1</sup> and Systhane<sup>2</sup>.

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 labelling, 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.

Fontelis® fungicide contains a percentage of mineral oil in the formulation which may predispose oil sensitive products (such as captan) to crop damage if they are not applied according to the restrictions referring to summer oils on their label.

Fontelis® fungicide should not be applied within 14 days of folpet, captan, Euparen<sup>3</sup> Multi, sulphur or lime sulphur.

## RAINFASTNESS

**DO NOT** apply if rainfall is expected within 1 hour of application.

## APPLICATION

Use a ground sprayer fitted with high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size, DOES NOT improve canopy penetration and may increase drift potential. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE. 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. Avoid directing spray above trees and always turn-off outward pointing nozzles at row ends and outer rows.

## Dilute Spraying

Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.

The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.

Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of run-off. The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows. Always apply sufficient water to cover the crop to the point of runoff, otherwise under dosing will occur and disease control may be inadequate.

## Concentrate Spraying

For concentrate spraying adjust dilution rate accordingly. The rate of product applied must be equal to the rate that would be applied per hectare with dilute application. **DO NOT** use a concentration factor greater than 3X, for concentrate application.

## MINIMISING SPRAY DRIFT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions.

The most effective way to reduce drift potential is to apply large droplets (volume mean diameter (VMD) > 250 - 300 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT MINIMISE DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVOURABLE ENVIRONMENTAL CONDITIONS. When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

The minimum droplet size for application should be coarse, as specified in NZS:8409 Management Agrichemicals.

**DO NOT** apply in orchards when wind speed is less than 3 or more than 20 kilometres per hour are measured 15 metres outside of the orchard on the upwind side.

#### SPRAY EQUIPMENT 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 spray equipment. Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water.

Clean all other associated application equipment. 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..

#### RECORD KEEPING

Records of use, as described in The New Zealand Management of Agrichemicals (NZS8049) must be kept.

#### MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet.

#### NOTICE TO BUYER

To the extent permitted by law all conditions and warranties and statutory or other rights of action which buyer or any other user may have against DuPont or Seller are hereby excluded. DuPont hereby give notice to buyer and other users that it will not accept responsibility for any indirect or consequential loss arising from reliance on product information or advice provided by DuPont or on its behalf unless it is established that such information or advice was provided negligently and that the product has been used strictly as directed. DuPont's liability shall in all circumstances be limited to replacement of the product or a refund of the purchase price paid therefore.

**This product should not be used off label.**

#### DIRECTIONS FOR USE

**It is an offence to use this product on animals.**

**IMPORTANT:** 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 DuPont™ Fontelis® fungicide on all varieties, 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.

All rates are for dilute spraying. For concentrate spraying rates, refer to the Mixing/Application section. Thorough coverage is essential.			
CROP	DISEASE	RATE	CRITICAL COMMENTS
Apples, Pears	Black spot ( <i>Venturia inaequalis</i> , <i>Venturia pyrina</i> )  Powdery mildew ( <i>Podosphaera spp.</i> )	<u>Dilute Spraying</u> 75 mL/100 L water  <u>Concentrate Spraying</u> Refer to the Mixing/Application Section	Begin applications prior to Black spot disease development and continue on a 7 - 10 day interval between open cluster and 50 % petal fall and/or before fruitlet formation. Use the shorter interval during periods of heavy disease infection and/or during periods of rapid growth. Fontelis® fungicide should only be used as a preventative application.  Resistance management: Always tank mix with a Black spot protectant fungicide from a different mode of action group. <b>DO NOT</b> apply more than two consecutive applications of Fontelis® fungicide. <b>DO NOT</b> use more than three applications in any one season. Further treatments should be made with fungicides from a different mode of action group.

#### WITHHOLDING PERIODS

**APPLES, PEARS: DO NOT** apply after 50% petal fall.

#### GRAZING

**DO NOT** feed treated produce to livestock or allow livestock to graze within treated orchards.

**It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards**

#### EXPORT OF TREATED PRODUCE:

Growers should note that suitable Maximum Residue Levels (MRLs) or import tolerances may not be established in all markets for produce treated with Fontelis® fungicide. If you are growing produce for export, please check with DuPont for the latest information on MRLs and export tolerances before using this product.

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<sup>1</sup> Bayer SE

<sup>2</sup> Dow Agrosciences LLC

<sup>3</sup> Bayer Aktiengesellschaft

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