Pentathlon* DF

Fungicide

Dispersible Granules

GROUP M3 FUNGICIDE

SePRO

SPECIMEN

A broad spectrum fungicide for use as a spray for the control of many important plant diseases on flowers, foliage plants, ornamentals and turfgrasses.

Active Ingredient	
Mancozeb, a coordination product of zinc ion and manganese ethylenebisdithiocarbamate in which the ingredients are:	75.0%
Manganese++	15.0%
Zinc++	1.9%
Ethylenebisdithiocarbamate ion ($C_4H_6N_2S_4$)--	58.1%
Other Ingredients	25.0%
TOTAL	100.0%

Contains 0.75 pound of mancozeb per pound of product.

Keep Out of Reach of Children

CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

Refer to the label booklet for additional precautionary information and directions for use.

NOTICE: Read the entire label before using. Use only according to label directions. **Before buying or using this product, read *Terms and Conditions of Use, Warranty Disclaimer, Inherent Risks of Use* and *Limitation of Remedies* inside label booklet.**

EPA Reg. No. 67690-39
FPL20110721

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Manufactured by Certis USA LLC for:
SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032 U.S.A.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053**.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

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

- Long-sleeved shirt and long pants;
- Shoes and socks; and
- Chemical-resistant gloves made of any waterproof material (except pilots).

See engineering controls 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. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)].

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or 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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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; and
- Chemical resistant gloves made of any waterproof material.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are **NOT** within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Do not enter treated areas until sprays have dried.

RESISTANCE MANAGEMENT RECOMMENDATIONS

Pentathlon DF contains a Group M3 fungicide. Fungal isolates with acquired resistance to Group M3 may eventually dominate the fungal population if Group M3 fungicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of these species by Pentathlon DF or other Group M3 fungicides.

SePRO Corporation will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by SePRO Corporation. User assumes all risks associated with such non-recommended use.

Pentathlon DF, a dispersible granule containing mancozeb, is recommended for use as a spray for the control of many important plant diseases.

Application Instructions

As A Spray (Ground or Aerial Equipment) - Apply Pentathlon DF at the rate shown; use sufficient water to provide thorough coverage, use 20 to 100 gallons per acre for ground equipment and no less than 2 gallons per acre for aircraft. Add Pentathlon DF slowly to water in the spray tank with agitation, or premix thoroughly in separate holding tank for concentrate or aircraft sprayers. Continuous agitation is required to keep the product in suspension. A spreader-sticker spray adjuvant may be used with this product if needed; contact your local product distributor or SePRO Corporation representative for specific recommendations.

Spray Drift Management

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Wind Speed: Do not apply at wind speeds greater than 15 mph.

Temperature Inversions: If applying at wind speeds less than 3 mph, the applicator must determine if: (1) conditions of temperature inversion exist, or (2) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Other State and Local Requirements: Applicators must follow all state and local pesticide drift requirements regarding application of mancozeb. Where states have more stringent regulations, they must be observed.

Equipment: All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Aerial application (not permitted on sod farms and golf courses)

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
3. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

Ground Boom Application:

1. Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Restrictions

This product may not be used on turfgrass in residential settings and athletic fields.

Foliar Applications

- **Where EBDC Products Used Allow the Same Maximum Poundage of Active Ingredient per Acre per Season** - If more than one product containing an EBDC active ingredient (maneb, mancozeb or metiram) is used on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any one of the specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.
- **Where EBDC Products Used Allow Different Maximum Poundage of Active Ingredient per Acre per Season** - If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

Chemigation

Chemigation Information

- Apply Pentathlon DF only through sprinklers including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move irrigation systems. Do not apply Pentathlon DF through any other type of irrigation system.
- 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:

- 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.
- 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- 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.
- 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.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Instructions for Sprinkler Irrigation Systems:

- 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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.
- 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.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Good agitation is required in the injection tank.
- In moving systems, apply specified dosage of Pentathlon DF as a continuous injection. In non-moving systems inject Pentathlon DF for 15 to 30 minutes at end of cycle. Use the least amount of water possible consistent with uniform coverage.
- Mix the amount of Pentathlon DF 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 non-moving systems inject into system for the time established during calibration.
- Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all Pentathlon DF is flushed from system.

FLOWERS, FOLIAGE PLANTS, AND ORNAMENTALS

Not intended for use on fruit trees by non-professional applicators. Treated plants must not be used for food or feed purposes.

Apply in the field, nursery or greenhouse as a thorough coverage spray, using 1 to 2 lbs. Pentathlon DF per acre (1-½ to 3 tsp. per gal). **A maximum of twenty (20) applications of Pentathlon DF can be made per year to flowers, foliage plants, and ornamentals.**

Note: Plant sensitivities to Pentathlon DF have been found to be acceptable in specific genera and species listed on this label, however, phototoxicity may occur. Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test each one for sensitivity to Pentathlon DF. Neither the manufacturer or seller has determined whether or not Pentathlon DF can be safely used on ornamental or nursery plants not listed on this label. The user should determine if Pentathlon DF can be used safely prior to commercial use. In a small area, apply the recommended rates to the plants in question, i.e. bedding plants, foliage, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use. Use Pentathlon DF in commercial greenhouses and nurseries for control of fungal diseases of flowers, foliage and ornamentals.

Aerial Application: For aerial applications made to field-planted ornamentals, apply 1 to 2 lbs. per acre; a minimum rate of 5 gals of spray per acre should be used during aerial applications.

Application of Dilute Sprays: Apply as thorough coverage spray using 1 to 2 lbs. per acre or 1 to 2 lbs. per 100 gals of water. Begin application at first sign of disease and repeat at 7 to 10 day intervals or as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist. Pentathlon DF may be used alone or in combination with other fungicides as a maintenance spray. Use higher rate and shorter intervals during periods of excessive wetness and rapid plant growth.

Pentathlon DF is recommended for use on certain flower, foliage and ornamental plants listed in Table 1 below for control of the following diseases and pathogens:

TABLE 1

PLANT	PATHOGEN CONTROLLED
Abutilon	Alternaria, Cercospora, Cladosporium†††, Colletotrichum, Puccinia
African violet	Alternaria, Botrytis
Ageratum	Alternaria, Puccinia, Rhizoctonia, Sclerotium
Aglaonema	Alternaria
Almond, ornamental	Botrytis, Cladosporium†††, Coryneum, Gloeosporium, Monilinia
Alyssum	Microsphaera alni
Andromeda	Exobasidium, Rhytisma, Venturia
Anthurium	Colletotrichum, Gloeosporium
Apple, ornamental	Alternaria, Cephalosporium, Colletotrichum, Coryneum, Elsinoe, Fusarium, Gloeosporium, Gymnosporangium, Helminthosporium, Leptosphaeria, Monilinia, Monochaetia, Mycosphaerella, Pestalotia, Venturia
Arborvitae	Alternaria, Botrytis, Cercospora, Coryneum, Lophodermium, Mycosphaerella, Pestalotia
Ash	Cercospora, Cylindrosporium, Gloeosporium, Puccinia, Rhizoctonia, Sphaeropsis
Aster	Alternaria, Ascochyta, Botrytis, Colletotrichum, Fusarium, Phomopsis, Phyllosticta, Puccinia, Ramularia, Rhizoctonia, Septoria, Uromyces
Aucuba japonica	Alternaria, Cercospora, Gloeosporium, Phomopsis, Phyllosticta
Azalea	Alternaria, Botrytis, Cladosporium†††, Colletotrichum, Cylindrocladium, Ovulinia
Baby's breath	Botrytis, Rhizoctonia
Basswood†††	Cercospora, Phyllosticta
Begonia	Botrytis, Cercospora, Gloeosporium, Rhizoctonia
Birch	Cylindrosporium, Gloeosporium, Glomerella, Melampsoridium, Taphrina
Bougainvillea	Colletotrichum
Boxwood	Fusarium, Volutella
Buckeye	Cercospora, Glomerella, Guignardia, Monchaetia, Phyllosticta, Septoria, Taphrina
Buffaloberry	Cylindrosporium, Puccinia, Rhizoctonia, Septoria
Catalpa †††	Alternaria, Cercospora, Gloeosporium, Phomopsis, Rhizoctonia
Camellia	Botrytis, Cercospora, Elsinoe, Exobasidium, Glomerella, Pestalotia, Phomopsis, Phyllosticta
Carnation	Alternaria, Botrytis, Cladosporium†††, Colletotrichum, Fusarium, Helminthosporium, Septoria, Stemphylium, Uromyces
Cedar	Gymnosporangium, Lophodermium
Cherry, ornamental	Alternaria, Cercospora, Cladosporium†††, Coccomyces†††, Coryneum, Fusicladium, Monilinia, Phomopsis, Phyllosticta, Taphrina
Chinese evergreen	Colletotrichum, Gloeosporium
Christmas cactus	Alternaria, Cercospora, Colletotrichum, Fusarium, Phomopsis
Chrysanthemum	Alternaria, Ascochyta, Bipolaris, Botrytis, Cercospora, Cylindrosporium, Helminthosporium, Phyllosticta, Septoria, Stemphylium
Cockscomb (Celosia)	Alternaria, Cercospora
Coleus	Alternaria, Botrytis, Phyllosticta
Columbine	Ascochyta, Botrytis, Cercospora, Puccinia, Rhizoctonia, Septoria
Cordyline	Cercospora
Cotoneaster	Cercospora, Phyllosticta, Venturia
Crabapple, ornamental	Gymnosporangium, Marssonina, Phyllosticta, Septoria, Venturia
Croton	Gloeosporium
Cuphea (Mexican heather)	Gloeosporium, Rhizoctonia
Cyclamen	Botrytis, Cladosporium†††, Fusarium, Glomerella, Phyllosticta, Ramularia
Cypress	Coryneum, Fusarium, Gymnosporangium, Lophodermium, Monchaetia, Pestalotia, Phomopsis

(continued)

TABLE 1 *(continued)*	
PLANT	**PATHOGEN CONTROLLED**
Dahlia	Alternaria, Botrytis, Fusarium, Rhizoctonia
Daisy†††	Botrytis, Cercospora, Whetzelia
Daisy, Shasta	Cylindrosporium, Fusarium, Septoria
Daisy, Transvaal	Alternaria, Botrytis, Gloeosporium
Daylily†††	Alternaria, Botrytis, Cercospora, Colletotrichum, Phomopsis, Phyllosticta, Puccinia
Delphinium	Ascochyta, Botrytis, Cercospora, Diaporthe, Fusarium, Phyllosticta, Puccinia, Ramularia, Septoria, Volutella
Dieffenbachia	Cephalosporium, Colletotrichum, Gloeosporium, Glomerella, Leptosphaeria
Dogwood	Ascochyta, Botrytis, Cercospora, Colletotrichum, Elsinoe, Phyllosticta, Septoria
Dracaena	Alternaria, Cercospora, Colletotrichum, Fusarium, Phyllosticta
Dusty Miller	Fusarium, Puccinia
Elm	Botryosphaeria, Cephalosporium, Cercospora, Coryneum, Cylindrosporium, Fusarium, Gloeosporium, Monochaetia, Mycosphaerella, Phomopsis, Phyllosticta, Rhizoctonia, Sphaeropsis, Taphrina
Euonymus	Cercospora, Colletotrichum, Gloeosporium, Marssonina, Ramularia, Septoria, Whetzelinia
Fatsia	Alternaria, Cercospora, Colletotrichum, Phyllosticta
Fern	Botrytis, Cercospora, Curvularia, Cylindrosporium, Glomerella, Phyllosticta, Taphrina
Ficus	Alternaria, Ascochyta, Cephalosporium, Cercospora, Cladosporium†††, Colletotrichum, Fusarium, Gloeosporium, Glomerella, Mycosphaerella, Phomopsis, Stemphylium
Fir (*Abies*)	Cephalosporium, Lophodermium, Melampsora, Phomopsis, Sphaeropsis
Fir, Douglas†††	Phaeocryptopus
Fir, Frasier	Phaeocryptopus
Firethorn	Fusarium, Fusicladium, Rhizoctonia
Fittonia	Rhizoctonia
Four-o'clock†††	Cercospora, Rhizoctonia
Fuchsia	Botrytis, Phomopsis, Septoria
Garden balsam (Lady's slipper)	Alternaria, Botrytis, Cercospora
Gardenia†††	Alternaria, Botrytis, Diaporthe, Mycosphaerella, Pestalotia, Phomopsis, Phyllosticta, Rhizoctonia
Geranium	Alternaria, Ascochyta, Bipolaris, Botrytis, Cercospora, Cylindrosporium, Helminthosporium, Puccinia, Ramularia, Rhizoctonia, Septoria, Uromyces, Venturia
Gladiolus†	Alternaria, Botrytis, Cladosporium†††, Curvularia, Rhizoctonia, Septoria, Stemphylium
Gloxinia	Botrytis, Colletotrichum
Gold dust tree	Gloeosporium, Glomerella, Pestalotia, Phyllosticta
Gomphrena	Cercospora
Gypsophila	Botrytis, Rhizoctonia
Hawthorn	Cercospora, Cylindrosporium, Gloeosporium, Gymnosporangium, Monilinia, Mycosphaerella, Phyllosticta, Septoria, Venturia
Hemlock, Eastern ††† (*Tsuga*)	Botrytis, Cylindrosporium, Melampsora, Rhizoctonia
Hibiscus	Alternaria, Cercospora, Colletotrichum, Fusarium, Phyllosticta
Hickory	Cercospora, Cladosporium†††, Elsinoe, Fusarium, Gnomonia, Mycosphaerella, Pestalotia, Phyllosticta, Septoria
Holly	Phyllosticta
Hollyhock	Alternaria, Ascochyta, Cercospora, Colletotrichum, Puccinia, Septoria
Honeysuckle	Alternaria†††, Cercospora†††, Gloeosporium†††, Herpobasidium, Phyllosticta†††
Horse Chestnut	See Buckeye
Hydrangea	Ascochyta, Botrytis, Cercospora, Colletotrichum, Phyllosticta, Rhizoctonia, Septoria

(continued)

TABLE 1 *(continued)*	
PLANT	**PATHOGEN CONTROLLED**
Impatiens	Cercospora, Phyllosticta, Rhizoctonia, Septoria
Indian Hawthorn	Entomosporium
Iris	Ascochyta, Botrytis, Cladosporium†††, Fusarium, Kabatiella, Phyllosticta, Puccinia, Rhizoctonia
Ivy	Cladosporium†††, Colletotrichum, Glomerella, Phyllosticta, Ramularia, Sphaeropsis, Rhizoctonia
Jade plant	Gloeosporium, Phomopsis
Juniper	Cercospora, Coryneum, Gymnosporangium, Lophodermium, Pestalotia, Phomopsis, Stigmina
Kalanchoe	Cercospora, Stemphylium
Larkspur	See Delphinium
Laurel, Cherry	Alternaria, Cercospora, Coccomyces, Monilinia, Phyllosticta, Septoria
Laurel, Mountain	Cercospora, Mycosphaerella, Pestalotia, Phomopsis, Rhytisma, Septoria
Lavender, cotton	Septoria
Lilac†††	Botrytis, Cercospora, Cladosporium†††, Cylindrocladium, Gloeosporium
Lily	Botrytis, Cercospora, Cladosporium†††, Colletotrichum, Fusarium, Puccinia, Ramularia, Rhizoctonia
Liriope	Alternaria, Cercospora, Colletotrichum, Leptothyrium†††
Lobelia	Botrytis, Cercospora, Puccinia, Rhizoctonia, Septoria
Loquat	Colletotrichum, Fusicladium, Pestalotia, Phyllosticta, Septoria
Magnolia	Alternaria, Cercospora, Cladosporium†††, Colletotrichum, Glomerella, Rhizoctonia
Mahonia	Cercospora, Cylindrocladium, Gloeosporium, Leptosphaeria, Phomopsis, Phyllosticta, Puccinia
Maple	Alternaria, Cercospora, Ciborinia, Fusarium, Marssonina, Monochaetia, Phomopsis, Phyllosticta, Rhizoctonia, Rhytisma, Septoria, Sphaeropsis, Taphrina, Venturia
Mountain ash	Gymnosporangium
Myrtle	Cercospora, Glomerella, Pestalotia
Narcissus	Botrytis, Sclerotinia†††
Nasturtium	Botrytis, Cercospora, Puccinia
Nannyberry	Botrytis, Cercospora, Cladosporium†††, Helminthosporium, Monochaetia, Phomopsis, Phyllosticta, Ramularia
Nephthytis	Cephalosporium
Nicotiana	Alternaria
Nierembergia	Botrytis
Oak	Cephalosporium, Cercospora, Cladosporium†††, Cronartium, Elsinoe, Fusarium, Gloeosporium, Gnomonia, Marssonina, Phyllosticta, Septoria, Taphrina, Venturia
Orchid	Cercospora, Fusicladium, Mycosphaerella, Phyllosticta, Puccinia, Septoria
Osmanthus	Alternaria, Cercospora, Colletotrichum, Phyllosticta
Palm, Areca	Alternaria, Cercospora, Colletotrichum, Phomopsis, Phyllosticta, Septoria
Palms, Arenga†††	Cercospora, Colletotrichum, Cylindrocladium, Pestalotia, Phoma, Stigmina
Palm, Cabbage†††	Fusarium, Gloeosporium, Pestalotia, Stigmina
Palm, Coconut†††	Pestalotia
Palm, Date†††	Alternaria, Fusarium, Helminthosporium, Pestalotia
Palm, King	Alternaria, Fusarium, Helminthosporium, Pestalotia, Phomopsis
Palm, Phoenix†††	Alternaria, Cercospora, Fusarium, Gloeosporium, Pestalotia, Phomopsis, Stigmina
Palm, Queen†††	Glomerella, Septoria
Palm, Royal†††	Alternaria, Cercospora, Colletotrichum, Helminthosporium
Palm, Washington	Cercospora, Colletotrichum, Cylindrocladium, Pestalotia, Phoma†††, Stigmina
Pansy	Alternaria, Botrytis, Cercospora, Colletotrichum, Peronospora, Phyllosticta, Ramularia, Rhizoctonia

(continued)

TABLE 1 *(continued)*	
PLANT	**PATHOGEN CONTROLLED**
Peach, ornamental	Cercospora, Cladosporium†††, Coryneum, Fusarium, Glomerella, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Taphrina
Pear, ornamental	Alternaria, Botrytis, Cercospora, Cladosporium†††, Coryneum, Elsinoe, Fusarium, Glomerella, Gymnosporangium, Helminthosporium, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Venturia
Peony	Alternaria, Botrytis, Cercospora, Cladosporium†††, Gloeosporium, Phyllosticta, Septoria
Peperomia	Colletotrichum, Gloeosporium, Rhizoctonia
Periwinkle	Alternaria, Botrytis, Cladosporium†††, Colletotrichum, Phomopsis, Phyllosticta, Puccinia, Rhizoctonia, Septoria
Petunia	Cercospora, Puccinia, Rhizoctonia, Stemphylium
Philodendron	Colletotrichum, Gloeosporium
Phlox	Ascochyta, Botrytis, Cercospora, Colletotrichum, Phyllosticta, Puccinia, Septoria, Ramularia, Stemphylium, Volutella
Photinia	Cercospora, Gloeosporium, Gymnosporangium, Lophodermium, Pestalotia, Phyllosticta, Septoria
Pieris	Alternaria, Pestalotia, Phyllosticta, Rhytisma
Pilea	Alternaria, Botrytis, Ercospora, Colletotrichum, Helminthosporium, Phyllosticta
Pine, Norfolk Island	Botrytis, Colletotrichum, Cronartium, Cylindrocladium, Fusarium, Lophodermium, Pestalotia, Rhizoctonia, Septoria, Sirococcus†††
Pine	Alternaria, Botrytis, Cronartium, Fusarium, Lophodermium, Monochaetia, Rhizoctonia, Septoria, Sirococcus†††
Pittosporum	Alternaria, Cercospora, Gnomonia, Mycosphaerella, Phyllosticta, Rhizoctonia, Septoria
Plane tree	Cercospora, Gnomonia, Phyllosticta, Septoria
Plum, ornamental	Botrytis, Cercospora, Cladosporium†††, Coccomyces, Coryneum, Monilinia, Phyllosticta, Taphrina
Poinsettia††	Botrytis, Cercospora, Fusarium, Uromyces
Poplar	Cercospora, Ciborinia, Colletotrichum, Cylindrocladium, Fusarium, Marssonina, Melampsora, Mycosphaerella, Phyllosticta, Septoria, Stigmina, Taphrina, Venturia
Portulaca	Rhizoctonia
Pothos	Rhizoctonia
Prayer plant	Alternaria, Drechslera, Glomerella, Puccinia
Primrose	Alternaria, Botrytis, Colletotrichum, Mycosphaerella, Puccinia, Ramularia, Uromyces
Privet	Cercospora, Glomerella, Phomopsis, Phyllosticta, Ramularia
Protea	Botrytis
Pyracantha	Botrytis, Cercospora, Diplodia, Phomopsis, Phyllosticta, Sphaeropsis
Quince, flowering	Cercospora†††, Fabraea, Gymnosporangium†††, Septobasidium†††
Red cedar, western††† (*Thuja*)	Keithia or Didymascella
Red tip	See Photinia
Redwood, Sequoia	Botrytis, Cercospora, Mycosphaerella, Pestalotia, Phomopsis
Rhododendron	Alternaria, Cercospora, Coryneum, Gloeosporium, Glomerella, Guignardia, Lophodermium, Mycosphaerella, Pestalotia, Phomopsis, Rhizoctonia, Septoria, Venturia
Rose	Alternaria, Bipolaris, Botryosphaeria, Botrytis, Cercospora, Cladosporium†††, Cylindrocladium, Diplocarpon, Elsinoe, Gloeosporium, Helminthosporium, Leptosphaeria, Monochaetia, Mycosphaerella, Peronospora, Phyllosticta, Septoria
Rosemary	Rhizoctonia
Russian olive†††	Cercospora, Colletotrichum
Sage	Cercospora, Peronospora, Puccinia, Ramularia, Rhizoctonia
Salvia†††	Cercospora, Puccinia

(continued)

TABLE 1 *(continued)*	
PLANT	**PATHOGEN CONTROLLED**
Santolina	Botrytis
Senecio	Cercospora, Gloeosporium, Phyllosticta, Puccinia, Ramularia, Septoria
Schefflera	Alternaria
Snake Plant	Fusarium, Gloeosporium
Snapdragon	Alternaria, Bipolaris, Botrytis, Cercospora, Colletotrichum, Drechslera, Fusarium, Helminthosporium, Peronospora, Phyllosticta, Puccinia, Rhizoctonia
Spathiphyllum	Alternaria
Spindle Tree	See Euonymus
Spirea†††	Cylindrosporium
Spruce	Ascochyta, Botrytis, Cladosporium†††, Lophodermium, Rhizoctonia
Spurge	Cercospora, Melampsora, Puccinia
Statice	Alternaria, Ascochyta, Botrytis, Cercospora, Colletotrichum, Rhizoctonia, Uromyces
Strawflower	Fusarium
Sumac†††	Cercospora, Cladosporium†††, Fusarium, Phyllosticta, Septoria, Taphrina
Sunflower, ornamental†††	Alternaria, Puccinia
Syngonium	Cephalosporium, Erwinia†††, Fusarium
Tulip	Botrytis
Venus flytrap	Colletotrichum
Verbena	Alternaria, Ascochyta, Botrytis, Cercospora, Phyllosticta, Puccinia, Rhizoctonia, Septoria, Stemphylium
Viburnum	Botrytis, Cercospora, Cladosporium†††, Helminthosporium, Monochaetia, Phomopsis, Ramularia
Walnut	Cercospora, Cladosporium†††, Cylindrocladium, Cylindrosporium, Gnomonia
Willow	Ascochyta, Cercospora, Ciborinia, Cylindrosporium, Fusicladium, Gloeosporium, Marssonina, Melampsora, Phomopsis, Phyllosticta, Ramularia, Rhytisma, Septoria, Taphrina, Venturia
Wisteria†††	Alternaria, Cercospora, Colletotrichum, Gloeosporium, Pestalotia
Yucca	Cercospora, Cylindrosporium, Gloeosporium, Puccinia
Zebra plant	Alternaria, Cercospora, Colletotrichum
Zinnia	Alternaria, Botrytis, Cercospora, Rhizoctonia

† Do not exceed 0.75 lb per 100 gallons on flower spikes.
†† Do not exceed 1.5 lbs per 100 gallons.
††† Except in California.
Note: Do not treat marigolds.

CHRISTMAS TREES: PLANTATIONS AND NURSERIES ***(Not permitted in California)***

Aerial application: Apply 1 to 2 lb per acre using a minimum rate of 10 gallons of spray per acre during aerial application.

Application of dilute sprays: Apply as thorough coverage spray using 1 to 2 lb per acre or 1 to 2 lbs per 100 gallons of water. Begin application at first sign of disease and repeat every 7 to 10 days. Use the shortest spray interval during periods of frequent rain, when severe disease conditions persist or during periods of rapid plant growth. This product may be used alone or in combination with other fungicides.

TABLE 2		
USE SITE	**PATHOGEN CONTROLLED**	**APPLICATION RATE (lb/A or lb/100 gal)**
Christmas trees, including fir, spruce, pine	Ascochyta, Alternaria, Botrytis, Cephalosporium, Cladosporium†††, Cronartium, Fusarium, Lophodermium, Melampsora, Monchaetia, Phomopsis, Rhizoctonia, Septoria, Sirococcus, Sphaeropsis	1 to 2 lbs per acre or 1 to 2 lbs per 100 gallons, make applications at 7 to 10 day intervals

††† Except in California.

TURFGRASSES: Sodfarms, Turf Uses

For applications to turfgrasses on sod farms, golf courses, industrial and commercial lawns. Applications must be done by a professional applicator.

Application Restrictions

For ALL turfgrass uses:

- Do not apply more than 8 oz. per 1,000 ft^2 or 21.8 lbs of product per acre (17.4 lbs a.i./acre) per application.
- Apply on a minimum 10 day schedule.

Sod farms:

- Harvesting of treated turf is prohibited until 5 days following application.
- Do not make more than 4 applications/year.
- Aerial application is prohibited on all sod farm turfgrasses.

Golf Courses:

- For cool season turfgrasses:
  - o Greens, tees, and aprons ➔ Do not make more than 5 applications/year.
  - o Fairways ➔ Do not make more than 4 applications/year.
- For warm season turfgrasses:
  - o Greens, tees, and aprons ➔ Do not make more than 4 applications/year.
  - o Fairways ➔ Do not make more than 3 applications/year.
- Aerial application is prohibited on all golf course turfgrasses

All other turfgrasses (including industrial and commercial lawns and other similar non-residential areas):

- Do not make more than 4 applications per year.

TABLE 3

CROP	DISEASE/PEST	APPLICATION		
		RATE	TIMING INTERVAL	COMMENTS
Sod farms (WPS use): see *Agricultural Use Requirements Box* **Turfgrasses** (Non-WPS uses): see *Non-Agricultural Use Requirements Box* Examples include: golf courses and professional applications to industrial (office park) and municipal lawns.	Algae	6 oz. in 3-5 gals/1,000 ft^2; 16 lbs in 130-220 gals/acre	Start treatment when algae begins to appear. Repeat at 10-day intervals as long as condition persists.	Do not use on grasses grown for seed. Do not use on grasses intended for grazing, such as range or pasture grasses. Do not graze treated areas or feed clippings to livestock. When conditions are unusually favorable for disease, use 6 to 8 oz./1000 ft^2 (16 to 22 lbs/acre) and reduce intervals to 3 to 5 days. Applications prohibited on all types of residential lawns and athletic fields.
	Copper Spot (*Gloeocercospora sorghi*)	4-8 oz. in 3-5 gals/1,000 ft^2; 11-21.8 lbs in 130-220 gals/acre	Begin application when disease appears. Repeat at 10-day intervals as long as condition persists.	
	Fusarium Blight (*Fusarium* spp.)	4-8 oz. in 3-5 gals/1,000 ft^2; 11-21.8 lbs in 130 to 220 gals/acre		
	Gray Leaf Spot††† (*Pyricularia grisea*)	8 oz. in 3-5 gals/1,000 ft^2; 21.8 lbs in 130-220 gals/acre		
	Red Thread (Laetisaria fuciformis)	4-8 oz. in 3-5 gal/1,000 ft^2; 11- 21.8 lbs in 130-220 gals/acre		
	Slime Mold (Mucilago, Physarum, Fuligo)	4-8 oz. in 3-5 gals/1,000 ft^2; 11- 21.8 lbs in 130-220 gals/acre		
	Dollar Spot (*Sclerotinia homiocarpa*)	6-8 oz. in 3-5 gals/1,000 ft^2; 11-21.8 lbs in 130-220 gals/acre		
	Pythium Blight (*Pythium* spp.)	8 oz. in 3-5 gals/1,000 ft^2; 11- 21.8 in 130-220 gals/acre	Repeat at 10-day intervals if conditions are favorable for disease development	
	Fusarium Snow Mold	6-8 oz. in 3-5 gals/1,000 ft^2; 11- 21.8 lbs in 130-220 gals/acre	Apply at 2 to 6 week intervals during winter	
	Leaf Spot (*Helminthosporium* spp.) *Rhizoctonia solani* Brown Patch	4-8 oz. in 3-5 gals/1,000 ft^2; 11 lbs in 130-220 gals/acre	Begin when disease appears. Repeat at 10-day intervals as long as condition persists.	
	Leaf Rust Stem Rust Stripe Rust	4 oz. in 3-5 gals/1,000 ft^2; 11 lbs in 130-220 gals/acre	Begin when disease threatens. Repeat at 10-day intervals as long as disease persists.	

†††Except in California.

ATTENTION:

This product contains mancozeb and ETU, chemicals known to the State of California to cause cancer in laboratory animals. ETU is also known to the State of California to cause birth defects or other reproductive harm in laboratory animals.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Important. Never allow Pentathlon DF to become wet during storage. This may lead to certain chemical changes which will reduce the effectiveness of Pentathlon DF as a fungicide and create vapors which may be flammable. Keep container closed when not in use. Store product in original container only, away from other pesticides, fertilizer, food or feed.
Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Nonrefillable Container Disposal (non-rigid, any size): Do not reuse or refill this container. Offer for recycling if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TERMS AND CONDITIONS OF USE

If terms of the following *Warranty Disclaimer, Inherent Risks of Use* and *Limitation of Remedies* are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under *Warranty Disclaimer, Inherent Risks of Use*, and *Limitation of Remedies*.

WARRANTY DISCLAIMER

SePRO Corporation warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SEPRO CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

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It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO Corporation or the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

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(1) Refund of purchase price paid by buyer or user for product bought, or
(2) Replacement of amount of product used.

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