

19713-625

12/13/2012

1/12

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Luz G. Chan  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-0327

DEC 13 2012

**Subject:** Drexel Chemical Company; Drexel Phiticide  
EPA Registration No. 19713-625  
Amendment to Update Label Language  
D# 469174, Application Dated 8/29/12

Dear Ms. Chan:


The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit two (2) copies of your final printed labeling before you release the product for shipment. Final printed labeling means the label or labeling of the product when distributed or sold. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass or metal containers or large bags or drum labels.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(b). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions contact Chris Pfeifer at 703-308-0031 or by email at: [pfeifer.chris@epa.gov](mailto:pfeifer.chris@epa.gov).

Sincerely,

  
Linda A. Hollis, Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)

Enclosure

CONCURRENCES								
MBOL	>	7511P						
IRNAME	>	Pfeifer						
ITE	>	12/12/12						



ACCEPTED

DEC 13 2012

2/12

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 19713-625



# Phiticide

Agricultural Fungicide

**ACTIVE INGREDIENT:**

Mono- and dibasic sodium, potassium, and ammonium phosphites\* ..... 56.2%

**OTHER INGREDIENTS:** ..... 43.8%

**TOTAL:** ..... 100.0%

\*Contains 6.69 pounds per gallon of the active ingredients, mono- and dibasic sodium, potassium, and ammonium salts of phosphorous acid, equivalent to 4.32 pounds phosphorous acid per gallon (36.3 weight %).

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See **FIRST AID** Below

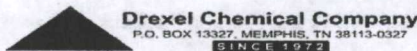
EPA Reg. No. 19713-625

EPA Est. No. 19713-XX-XXX

Net Content: Less than 5 gals.; 5 gals. and more

FIRST AID
<p><b>IF IN EYES:</b></p> <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>IF SWALLOWED:</b></p> <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious or convulsing person.</li> </ul>
<p><b>IF INHALED:</b></p> <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice</li> </ul>
<p><b>IF ON SKIN OR CLOTHING:</b></p> <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p><b>Hotline Number:</b> For emergency information on (product, use, etc.), call the National Pesticide Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center at 1-800-222-1222.</p>

Manufactured By:



The Drexel logo is a registered trademark of Drexel Chemical Company.

625SP-1212\*P



**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**CAUTION:** Causes moderate eye irritation. Harmful if inhaled. Avoid breathing vapor or spray mist. Harmful if swallowed or absorbed through the skin. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are available, use detergent and hot water. Keep and wash PPE separate from other laundry.

**ENGINEERING CONTROLS**

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) (4-5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

**Users should:** 1) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) 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**

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 wash water or rinsate. This pesticide is toxic to fish and aquatic organisms.

**(For packaging in 5 gallons or more):** Do not discharge effluent containing this product into lakes, streams, ponds, estuarines, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination Systems (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**USE INFORMATION**

PHITICIDE is a systemic product containing mono and dibasic phosphites. The phosphonic ion is effective in controlling downy mildew, brown rot, foot rot and other diseases caused by *Phytophthora*, *Pythium* and other related fungi by activating the plant's natural resistance mechanisms. When used in a complete Integrated Pest Management (IPM) disease control program with good cultural practices, this product will provide control of the listed diseases. To achieve the best results in disease control spraying, initiate before signs or symptoms of the disease are present or when the disease first appears or environmental conditions are conducive to disease development.

**DIRECTIONS FOR USE**

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

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protections Standard (WPS), 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 4 hours.

For early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water, wear: Coveralls, waterproof gloves and shoes and socks and protective eyewear.



**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are not within the scope of the WPS 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 area until spray has dried.

**MIXING AND APPLICATIONS INSTRUCTIONS**

Apply this product with properly calibrated ground sprayer, aerial equipment or sprinkler system. Always apply this product in sufficient water for thorough coverage. Fill the mix tank to one-half capacity before adding the required amount of this product. Add the remaining amount of water while continuously agitating the mixture. Do not apply when conditions favor drift from target area or wind speed is greater than 10 mph.

Mixture is to be applied to plant foliage, unless directed otherwise in the application rate table. Good agitation must be provided during the entire application period. Spray equipment must be cleaned thoroughly before and after applications.

**Ground Application**

Apply the specified rate of this product in sufficient water for thorough coverage of foliage or as stated for optimum disease control.

**Aerial Application**

Apply the specified rate of this product in minimum 3 gallons of water per acre unless otherwise stated.

**PRECAUTIONS FOR CHEMIGATION APPLICATIONS**

Apply this product only through center pivot, lateral move, end tow, side (wheel) roll, hand move, drip, microjet and solid set irrigation systems. Do not apply this product 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 a chemigation 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.

Public 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 regular 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, back flow 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 flow 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.

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.



**Sprinkler Chemigation 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 back flow.

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 when 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.

The pesticide supply tank should be equipped with a means for continuous agitation either by recirculation or a mechanical agitator. Charge the supply tank with the appropriate amount of water and add the pesticide slowly followed by any sticker-spreaders, insecticides, nutrients, etc. Observe all cautions and limitations on the labels of all products used in the mixtures. For fixed position irrigation systems such as center pivot, big gun, etc, apply the pesticide towards the end of the irrigation period. Exact timing will depend on the desired pesticide application rate and calibration of the system. For moving systems, apply the pesticide continuously. In all cases, provide thorough coverage of the crop.

**CROP USE PRECAUTIONS**

Mixing this product with certain surfactants, foliar fertilizers, or other pesticides can cause crop injury. If you do not have prior experience using this product as a solo treatment or in a tank mixture, you must determine crop sensitivity to a particular combination by spraying a small area of foliage and fruit. Evaluate for 3 to 7 days for adverse effects.

To assure compatibility of this product with other products, pour the products into a small container of water in the correct proportions: After thorough mixing, let stand for 5 minutes. If the combination remains mixed, or can be re-mixed readily, the mixture is compatible.

Mixing of this product with other products has been known to increase the salt content and the potential for fruit burn. Environmental factors that enhance burn potential include applying product during the following conditions:

- 1) At temperatures above 90°F,
- 2) Shortly after a rain event,
- 3) During color break of the fruit.

Apply with extreme caution when these conditions exist. Determine crop sensitivity to these factors by spraying small areas of foliage and fruit. Evaluate for 3 to 7 days for adverse effects.

**CROP USE AND RATES**

**ASPARAGUS**

**Phytophthora spp. (Asparagus Spear Slime and Crown Rot):** Apply 2.5 to 5 pints per acre per application to fully expanded ferns. Do not apply to ferns that have begun to senesce. Thorough coverage is required.

**AVOCADO**

**Phytophthora citricola (Canker):** Mix 2.5 to 5.0 pints with 5 gallons of water and apply to trunk lesions using enough spray volume to thoroughly wet the lesions. In the absence of lesions, apply to the trunk from the soil line to about two feet up the trunk. Use the higher rate when lesions are present.

**Phytophthora cinnamoni (Root Rot):** Apply 4.5 to 5 pints per acre as dilute spray starting at transplant or at the start of growing season. Make up to four applications per year at 60 day intervals. Spray to the point of run-off.

**Downy Mildew:** Apply 0.12 fl. oz. per gallon of water (3.5 pints per 500 gallons water) to point of run-off as needed for disease control.



**BLUEBERRY**

**Phytophthora spp. (Phytophthora Root Rot):** Apply 2.5 to 5 pints per acre, depending on disease pressure, in sufficient water for coverage. Begin foliar spray in the Spring at approximately the pink bud stage and continue on a 14 to 21 day intervals.

**BRASSICA CROPS [All members of Crop Group 5 including: Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese broccoli (gai lan), Chinese cabbage (bok choy), Chinese cabbage (Napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens]**

**Peronospora parasitica (Downy Mildew):** Apply 2.5 to 5 pints per acre on 7 to 21 day intervals when conditions favor disease development. Use higher rates and shorter spray intervals when disease pressure is moderate to high.

**CANEBERRY [Blackberry, Loganberry, Red and Black raspberry, cultivars and/or hybrids]**

**Phytophthora spp. (Root Rot):** Apply at 4.5 pints per acre in a minimum of 20 gallons of water to assure thorough wetting of the foliage. In new plantings, begin application when the plants produce new growth of 1 to 3 inches. In established plantings, begin application when conditions favor disease development. **East of the Rocky Mountains:** Begin application in the Spring after bud break (1 to 3 inches of new growth) and repeat on 45 to 60 day intervals. Do not make more than 4 sprays during the growing season. **West of the Rocky Mountains:** Fall Application — Apply when conditions favor disease development and repeat if necessary in 3 to 4 weeks. Spring Application — Make first application after bud break and repeat 3 to 4 weeks later.

**CRANBERRY**

This product is effective when used in conjunction with good management practices. Apply 5 to 6 pints per acre as a foliar spray in sufficient volume of water to ensure good coverage. Begin in the spring when conditions become conducive to disease development continuing on a 14 to 30 day intervals. Do not make more than 4 applications per year. Do not apply within 3 days of harvest.

**CITRUS [All members of Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (includes Chironja, Tangelo, Tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sour, sweet), Pummelo, Satsuma mandarin]**

**Phytophthora Foot, Root and Brown Rot:** Apply 4.5 pints per acre as dilute spray when conditions favor disease development. Apply to run-off making sure the foliage is thoroughly wet.

**Phytophthora Foot Rot:** Apply 2.5 to 5 pints per acre in 5 gallons of water and apply to trunk lesions using enough spray volume to thoroughly wet the lesions. In the absence of lesions, apply to the trunk from the soil line to about two feet up the trunk. Use the higher rate when lesions are present.

**CUCURBIT CROPS [All members of Crop Group 9 including: Chinese waxgourd, Citron melon, Cucumber, Gherkins, Gourd (edible), Momordica spp. (Balsam apple, Balsam pear, Bitter melon, Chinese cucumber), Muskmelon, Pumpkin, Summer and Winter Squash, Watermelon]**

**Phytophthora spp. (Root and Fruit Rot) and Pseudoperonospora cubensis (Downy Mildew):** Apply 2.5 to 5.0 pints per acre beginning when conditions favor disease development. Repeat as needed on 7 to 14 day intervals. Apply in sufficient water to obtain thorough coverage. In times of moderate to high disease pressure, use the higher rate and the shorter spray interval.

**Note:** Do not exceed 7 applications per season.

**GINSENG**

**Phytophthora cactorum (Foliar and Root Rot):** Apply 4.5 pints per 100 gallons of spray starting when conditions first become conducive to disease development and continue on 7 day intervals as long as conditions remain favorable for disease development.

**Note:** Do not exceed 9 applications per season.

**GRAPES**

**Downy Mildew:** Apply 2.5 to 5 pints per acre in a minimum of 10 gallons of water. Begin application at bud break with additional applications made throughout the season. Use higher rates depending on disease severity and canopy density.

**Note:** Due to varietal sensitivity, test for sensitivity prior to use.



## HOPS

**Downy Mildew:** Apply 2.5 to 6.0 pints in a minimum of 10 gallons of water per acre as a directed foliar spray using ground equipment only. During favorable disease development conditions, make applications as follows: 1) when shoots are 6 to 12 inches high; 2) after training when vines are 5 to 6 feet tall; 3) about 3 weeks after the second application; and 4) during bloom. 5) When needed depending on disease severity and canopy density.

**LEAFY VEGETABLES\*** [All members of Crop Group 4 including: Amaranth, Arugula (Roquette), Cardoon, Celery, Celery (Chinese), Celtuce, Chervil, Chrysanthemum (Edible leaved, Garland), Corn salad, Cress (Garden, Upland), Dandelion, Dock (Sorrel), Endive (Escarole), Fennel (Florence), Lettuce (Head, Leaf), Orach, Parsley, Purslane (Garden, Winter), Radicchio (red Chicory), Rhubarb, Spinach, Spinach (New Zealand, Vine), Swiss Chard]

***Bremia lactucae*, *Peronospora* spp. (Downy Mildew):** Apply 2.5 to 5 pints per acre in minimum 10 gallons of water to obtain good coverage. Begin application when conditions favor disease development and continue on 7 to 21 day spray intervals. Use higher rate and shorter spray interval during times of moderate to high disease pressure.

**Note:** Do not exceed 7 applications per season.

\*Except Brassica Vegetables

## LEGUME VEGETABLES (BEANS AND PEAS)

[All members of Crop Group 6 including: Edible Podded, Succulent Shelled, Dried Shelled - Lupines types including grain, sweet, white, and white sweet lupin beans; Phaseolus types including field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans; Pisum types including dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas; Vigna types including adzuki, asparagus, moth, mung, rice, urd and yardlong beans; black-eye pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea; Broadbean; Chickpea; Guar; Jackbean; Lablab bean; Lentil; Pigeon pea; Soybean; Sword bean]

***Pythium aphanidermatum* (Pythium Leak):** Apply 4 to 5 pints by air or by ground in minimum of 10 gallons of water per acre. Make the first application at full bloom and another 10 to 14 days later. Use the high rate and subsequent application for heavy disease pressure and when conditions favor disease development. Use this product at a reduced rate in combination with another class of chemistry that is labeled for *Pythium* spp. control.

**Foot and Root Rots *Phytophthora*, *Pythium* spp., Downy Mildew *Peronospora viciae*:** Apply in sufficient water to completely wet foliage. Apply 2 to 4 pints per acre with normal irrigation on a 2 to 3 week schedule and repeat as needed. For downy mildew, apply diluted solution to thoroughly wet foliage. Apply every 2 to 3 weeks and repeat as needed.

***Phytophthora phaseoli* (Downy Mildew) (Dry, Edible podded, and Succulent Beans Only):** Apply 4 pints per acre at 7 day intervals. The number of applications depends on how long favorable conditions for infection persist and/or if downy mildew is present in the area. **Note:** This product must be applied before disease symptoms appear for control of downy mildew in beans.

***Phytophthora* spp., *Pythium* spp. (Downy Mildew) (Lentils and Peas Only):** Apply 2 to 4 pints as diluted solution to thoroughly wet foliage at 2 to 3 week intervals. Repeat as needed. Apply with normal irrigation schedule.

## ONIONS (DRY BULB) AND OTHER ALLIUM SPP.

***Peronospora destructor* (Downy Mildew), *Alternaria porri* (Purple Blotch):** Best results are obtained when this product is used in a preventative disease control program. Apply by air, ground and/or chemigation, at the rate of 2.5 to 3.75 pints per acre beginning when conditions first favor disease development. Continue application on 7 to 14 day intervals. If disease is already present, use the high rate and shortest spray interval.

**Note:** Do not exceed seven applications per crop season.

## PEANUTS

Apply this product for effective control of damping-off and root rot, caused by *Phytophthora* and *Pythium* spp. in peanuts. Use 3 pints in 25 gallons of water, to 4 pints in 250 gallons of water, per acre at 14 day intervals, as disease pressure dictates. Ensure thorough coverage.

## PEPPERS

***Phytophthora*, *Pythium* spp. (Foot and Root Rot), *Peronospora tabacini* (Downy mildew):** Apply in sufficient water to completely wet foliage. Apply 2 to 4 pints per acre with normal irrigation on a 2 to 3 week schedule and repeat as needed. For downy mildew, apply diluted solution to thoroughly wet foliage. Apply every 2 to 3 weeks and repeat as needed.



**PINEAPPLE**

**Phytophthora parasitica (Heart Rot):** Apply as a pre-plant dip immediately prior to planting using 2.5 pints per 100 gallons solution. One hundred gallons are to be used to treat the number of slips required to plant one acre. For established planting, apply 3 pints per 100 gallons of spray mixture beginning when conditions are favorable for disease development and when such conditions are anticipated. Continue application at 3 month intervals. Make sure sufficient coverage is obtained.

**POME FRUITS [All members of Crop Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince]**

**Phytophthora spp. (Collar and Root Rot):** Apply 2.5 to 5 pints per acre as dilute spray at 30 to 60 day intervals when conditions favor disease development. Under moderate to heavy disease pressure, make 3 to 4 applications at 4 pints per acre on a 60 day spray intervals or 6 to 8 applications at 2 pints per acre on a 30 day intervals. Thorough spray coverage is required.

**Pseudomonas syringae pv. papulans (Blister Spot - Suppression):** Apply 2.5 to 5 pints as a dilute spray at 7 to 10 day intervals when conditions favor disease development. Apply 4 to 5 times beginning at bloom continuing as long as conditions favor disease development. Thorough spray coverage is required.

**TREE NUTS AND PISTACHIO [All members of Crop Group 14 and Pistachio including: Almonds, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut, Pecan, Pistachio, and Walnut]**

**Phytophthora spp.:** Apply 2.5 to 5 pints per acre. Apply first application with the first irrigation in the Spring with subsequent applications at three to five month intervals or as needed.

**Phytophthora Raceme Blight (Macadamia Nuts Only):** When used with good cultural practices, this product is effective at controlling Phytophthora raceme blight as a foliar application when disease first appears. Apply 7.5 pints in sufficient water to thoroughly wet the foliage. Continue on 21 day intervals until conditions no longer favor disease development.

**Fusicladosporium effusum (Pecan Scab):** Apply as a preventive foliar spray beginning at budbreak. Make applications in combination with or in alternation with a fungicide also labeled for pecan scab. In combination, use only with a fungicide that is tank mix compatible and use the lower rate range of this product. In alternation, use the upper end rate range of this product. Apply on a 10 to 14 day schedule and adjust according to the disease pressure. Use this product in sufficient spray solution to obtain thorough coverage of the target.

**STONE FRUITS [All members of Crop Group 12 including: Apricot, Sweet & Tart Cherries, Nectarines, Peaches, Plums, Chikasaw Plums, Damson Plums, Japanese Plums, Plumcot, Prunes]**

**Foliar Application: Phytophthora spp. -** Apply 4.5 pints per acre as dilute spray when disease conditions are favorable and continue spray on a 60 day schedule. Confer with you local Cooperative Extension Service for confirmation of favorable disease conditions. Treat nursery tree resets and new plantings after leaf emergence.

**Almond pruning-wound canker caused by Phytophthora syringae:** Apply as dilute paint or spray 2.5 to 5 pints to the pruning wound in sufficient volume to thoroughly wet the entire surface. Under severe disease conditions, such as when active lesions are present, use the higher rate. For small volume applications, mix 0.5 to 0.8 fluid ounce of this product per gallon of water. This rate is equivalent to 3 to 5 pints per 100 gallons of water.

**STRAWBERRY**

**Phytophthora fragariae (Red Stele): Dip Application —** Apply at 2.5 pints in 100 gallons of water as a pre-plant dip to strawberry roots and crowns for 15 to 30 minutes. In California, apply 2.5 to 5 pints in 100 gallons of water as preplant dip to strawberry roots and crowns for 15 to 30 minutes.

Plant within 24 hours of dipping. Use this application for both annual and perennial varieties.

**Foliar Application: Annual planting —** Apply 2.5 to 5.0 pints per acre. Begin application 2 to 3 weeks after planting and repeat on 30 to 60 day intervals while conditions favor disease development. **Perennial planting —** Start Spring applications when the plants start active growth. Repeat application at 30 to 60 day intervals if disease conditions persist or reoccur.

If using Red Stele susceptible varieties or if disease pressure is severe, use higher rates (3.75 to 5 pints per acre) and shorter application time (30 days).

**Phytophthora cactorum (Leather Rot):** Apply 2.5 to 5.0 pints per acre starting at 10% bloom and early fruit set. Continue on 7 to 14 day intervals while conditions favor disease development. Under heavy disease pressure, use higher rate (3.75 to 5 pints per acre) and shorter application time (7 days).



## TOBACCO

***Phytophthora parasitica* var. *nicotiana* (Black Shank):** Apply 2.5 to 5 pints in minimum 10 gallons of water per acre beginning after transplants have been established in the field. Continue on a 7 to 14 day spray intervals when conditions favor disease development.

Under high disease pressure or when plants are more mature, use 3.75 to 5 pints in minimum 10 gallons of water per acre at 7 day intervals.

## TOMATO, TOMATILLO

***Phytophthora* spp. (Root Rot):** Apply 2.5 to 5.0 pints in a minimum of 10 gallons of water per acre beginning at the 2 to 4 leaf growth stage for direct seeded tomatoes or immediately after transplanting to the field. Continue on 7 to 14 day spray intervals when conditions are favorable for disease development. Use the higher rate (3.75 to 5 pints per acre) and shorter spray interval when disease pressure is moderate to high.

**TUBEROUS AND CORM VEGETABLES [All members of Crop Subgroup 1C and 1D including: Arracacha, Arrowroot; Bitter cassava, Chayote (root), Chinese artichoke, Chufa, Dasheen, Edible canna, Ginger, Jerusalem artichoke, Leren, Potato, Sweet cassava, Sweet potato, Tanier, Turmeric, Yam bean; True yam]**

**In-furrow Application:** For suppression of storage rot diseases such as pink rot, caused by *Phytophthora erythroseptica*, and Pythium leak caused by *Pythium* spp., apply 3.75 to 10 pints in combination with the labeled rate of a mefenoxam containing fungicide. Apply in a band at planting directly over the seed pieces prior to row closure in a minimum of 3 gallons of water per acre.

When disease conditions are severe, when the variety planted is susceptible or moderately susceptible to the disease or when the field is located in a long growing season area, additional in-season foliar applications of tank mixes containing this product and a mefenoxam containing fungicide will provide additional control. See the label of the mefenoxam containing fungicide for more specific information.

**Foliar Application:** *Phytophthora infestans* and storage rot diseases such as pink rot, cause by *Phytophthora erythroseptica* and Pythium leak caused by *Pythium* spp. - Apply 2 to 10 pints of this product per acre. Apply every 4 to 14 days depending on disease conditions. Tank mix with the lowest rate of an EBDC fungicide, or alternate with other fungicides labeled for late blight control, in an appropriate spray rotation program for the disease conditions present.

**Postharvest (Potatoes Only):** Late blight caused by *Phytophthora infestans* and pink rot caused by *Phytophthora erythroseptica* - Apply 6 to 13 fluid ounces in half a gallon of water per ton of tubers using a mist-type sprayer. Ensure complete, even coverage. If pulp temperature is above 65°F or harvest conditions were wet, liquid products applied to tubers may cause surface blemishes unacceptable to fresh markets.

## SEED TREATMENT

Use this product for control of seedling diseases caused by *Phytophthora*, *Pythium* and *Fusarium* spp. on agricultural crop seeds from crops listed elsewhere on this label. Apply this product at planting or in commercial seed treatment operations. Use 8 to 24 fluid ounces per 100 pounds of seed, or 8 to 20 pints per ton, depending on the size of the seed being treated.

## ORNAMENTALS AND BEDDING PLANTS

Use this product on ornamentals and bedding plants grown in field nursery, greenhouse, landscaping and conifer nursery plantations, for control of diseases caused by *Phytophthora* and *Pythium*. This product is also effective on ornamentals for the control of downy mildew and fire blight and for the suppression of bacterial blight caused by certain pathovars of *Xanthomonas campestris*. Begin applications prior to disease development and in conjunction with good cultural management practices. Use the highest rate when disease pressure is severe. Do not exceed specified rates or apply more frequently than at specified intervals or plant injury may occur.

## Plant Tolerance

The genera and species identified on this label have been found to have acceptable plant tolerances to this product. Not every species or variety of ornamental plant has been tested for its tolerance to this product. Prior to using this product on plant genera or species that is not identified on this label, test a sample area for phytotoxicity responses using the given rates.



**Tank Mixtures**

Determine the compatibility by mixing approximately 1 pint spray solution of this product with other products in the same proportion and order as the contemplated use. The mixture will typically show signs of incompatibility within 5 to 15 minutes. DO NOT use this mixture if any signs of incompatibility appear. Read and follow all directions and precautions on this product label and on the tank mix product. Follow the most restrictive label precautions and requirements.

Use Site	Type of Application	Disease(s) / Target	This Product (pts.)
<b>Ornamentals including:</b> Aglaonema, Aphelandra, Azalea, Bougainvillea, <i>Cattleya skinneri</i> , Cissus, Dieffenbachia, Hibiscus, Juniper, Leather-leaf Fern, Orchard sp., Philodendron, Pittosporum, Spathiphyllum and <i>Taxus media</i>	Foliar	See "Ornamentals and Bedding Plants" above.	2.5 to 5
USE INSTRUCTIONS: Mix in 100 gallons of water and spray to wet using no more than 400 gallons of spray per acre. Repeat as necessary but do not exceed one application every 30 days.			
<b>Ornamentals including:</b> Aglaonema, Aphelandra, Azalea, Bougainvillea, <i>Cattleya skinneri</i> , Cissus, Dieffenbachia, Hibiscus, Juniper, Leather-leaf Fern, Orchard sp., Philodendron, Pittosporum, Spathiphyllum and <i>Taxus media</i>	Drench	See "Ornamentals and Bedding Plants" above.	0.37 - 0.75
USE INSTRUCTIONS: Mix with 100 gallons of water and apply to 400 sq. ft. (equivalent to 2 pints of spray solution per square foot). Repeat as necessary. Do not make more than 1 application every 30 days.			
<b>Ornamentals:</b> Anthurium, Dieffenbachia, English ivy, Ficus, Schefflera, Spathiphyllum, Syngonium	Foliar	<i>Xanthomonas campestris</i> pathovars: <i>hederae</i> , <i>dieffenbachiae</i> , <i>syngonli</i> , and <i>fici</i>	1.9 to 4.1
USE INSTRUCTIONS: Mix with 100 gallons of water and spray to wet using no more than 400 gallons of water per acre. Repeat as necessary but not to exceed 1 application every 7 days. Apply in conjunction with a disease sanitation program to reduce the spread of the disease to uninfected plants.			
<b>Ornamentals:</b> Hawthorne, Ornamental pear, Pyracantha	Foliar	Fire blight (suppression only)	2.5
USE INSTRUCTIONS: Mix in 100 gallons of water and spray to wet using no more than 400 gallons of water per acre. Because this product functions as a preventative application, apply the first spray treatment before blooms appear. Repeat application once every 7 days until bloom period ends. Do not apply more than once every 7 days. Always use a thorough disease sanitation program to reduce the spread of diseases to uninfected plants.			
<b>Ornamentals:</b> Roses	Foliar	Downy mildew	2.5
USE INSTRUCTIONS: For field, container, landscape grown roses and mini varieties to control downy mildew, make applications in conjunction with a disease sanitation program to reduce the spread of the disease to uninfected plants. Mix in 100 gallons of water and spray to wet using no more than 400 gallons of water per acre. Repeat as necessary but do not exceed one application every 7 days.			
<b>Ornamentals:</b> Well-rooted plants (such as Azalea, Pieris, Rhododendron)	Soil Incorporation	<i>Phytophthora</i> spp.	0.5 to 0.75
USE INSTRUCTIONS: Mix the specified rate of this product per cubic yard of soil immediately before potting. If conditions are favorable for disease development, apply this product as a foliar spray or drench as needed following the directions above. Repeat as necessary but not to exceed 1 application every 30 days.			
<b>Bedding Plants including:</b> Begonia, Geranium, Impatiens, Marigold, Pansy, Petunia, Vinca, and Zinnia	Foliar	See "Ornamentals and Bedding Plants" above.	1.25 to 4
USE INSTRUCTIONS: Mix with 100 gallons of water and spray the solution until the foliage is wet. Do not spray more than 400 gallons of solution per acre. Reapply as necessary. Do not apply more than once every 14 days.			



**CONIFERS IN NURSERIES (such as, but not limited to Douglas fir, Pine, Spruce)**

Type of Application	Disease	This Product (pts.)	Use Instructions
Foliar	<i>Phytophthora</i> root rot (prevention)	2.5 to 5	Mix in 100 gallons of water and spray to wet using no more than 400 gallons of solution per acre. Do not apply more than once every 30 days.
Dip Treatment	<i>Phytophthora</i> root rot (prevention)	2.5	Mix with 100 gallons of water and dip transplants immediately to thoroughly wet plant and root mass prior to transplanting.

**TREES IN LANDSCAPES, FORESTRY, GOLF COURSES AND PARKS**

Use this product on trees such as, but not limited to, Beech, Cedar, Chestnut, Crabapple, Dogwood, Elm, Fir, Hawthorne, Juniper, Linden, Monterey Pine, Oaks (Coastal, Live, Shreve, Black, Tan, Canyon), Ornamental Pear, Pyracantha, Sweet Birch, Sweet Gum, White Pine, White cedar and Willow in landscapes, forestry, golf courses and parks.

**For control of *Phytophthora* and *Pythium* diseases such as stem and canker blight (Sudden Oak Death, *Phytophthora ramorum*), Beech decline and general tree decline syndrome:** Make applications before disease development and in conjunction with good cultural management practices. Use higher application rates when disease pressure is severe. Do not apply to trees that are in a state of dormancy or under heat or moisture stress. Do not exceed indicated application rates or apply more frequently than stated on the label or tree injury may occur.

**Injection Applications for *Phytophthora*, *Phytophthora ramorum* and *Pythium* spp.:** Inject 11 fluid ounces per 21 fluid ounces of water or 1/2 teaspoonful per teaspoonful of water, in the following manner. Drill holes 3/16 inch (5 mm) into live sapwood (depth dependent upon age of tree) with a downward angle into trunk uniformly around the tree circumference using a slow drill. Do not inject into areas of obvious canker, decay or mechanical injury that appear on the tree trunk. Calculate the amount of product required by measuring the trees using one of the following three methods, and use the highest calculated number of injections. 1) One injection per square yard of canopy; 2) One injection per yard of diameter of canopy measured at the drip-line; 3) One injection per 6 inches of trunk circumference measured 4 feet above soil level. Make injections with applicators that maintain positive pressure differential such as ChemJet®, Sidewinder®, Ag-murph Gun®, Marley® Injector, or hydraulic applicator type equipment that forces solution into the sapwood of the tree.

**Basal Bark Spray for *Phytophthora*, *Phytophthora ramorum* and *Pythium* spp.:** Apply 62.4 fluid ounces plus 62.4 fluid ounces of water with 3.2 fluid ounces of Pentra-Bark™ bark penetrating surfactant. Apply uniformly to 6 to 9 feet of trunk circumference. Spray from the top down to ground level from either the first branch or as high as possible without exposing applicator to drift. Use as a preventative or curative application. Apply solution with hydraulic sprayer, handheld pump sprayer, backpack sprayer, hose-end applicators with backflow preventers, and other similar applicators.

**For Suppression of Fire Blight:** Apply 2.5 pints per 100 gallons of water, as a foliar spray, to thoroughly wet the foliage. Begin applications at the prebloom stage and continue until the end of bloom period at 7 day intervals. For specific use instructions on Hawthorne, Ornamental pear and Pyracantha, see "Ornamentals and Bedding Plants" section of this label.

**TURF**

This product is a systemic fungicide for use on turfgrass such as those found on golf courses, sod farms and other turf areas to control *Pythium* diseases and yellow tuft. Begin preventative application with a properly calibrated sprayer when conditions first favor disease development. Repeat at the specified intervals. DO NOT mow or water treated areas until sprays have dried.

Disease	This Product per 1000 sq. ft.	Use Instructions
Pythium diseases including root rot and blight	5 fl. ozs.	Broadcast spray 1 to 5 gallons of the spray mix per 1000 sq. ft. at 14 day intervals.
Yellow tuft	8.2 to 10 fl. ozs.	Broadcast spray 1 to 5 gallons of the spray mix per 1000 sq. ft. at 21 day intervals.

**Turf Tank Mixtures**

Use this product in tank mixtures with other products in accordance with the most restrictive label limitations and precautions. Apply the tank mixtures on golf courses, sod farms, industrial or municipal turf areas and residential lawns. Do not exceed label dosage rates. Do not mix with any product containing a label prohibition against such mixing.



Disease	This Product per 1000 sq. ft.	Use Instructions
Summer Stress Complex (Summer Decline) caused by <i>Pythium</i> and <i>Rhizoctonia</i> spp.	5 to 10 fl. ozs.	Apply as foliar spray 1 to 5 gallons of the spray mix per 1000 sq. ft. using calibrated sprayer. Start applications when conditions favor disease development. Repeat at the directed spray intervals.

**GRASS GROWN FOR SEED OR SOD PRODUCTION**

Use this product for control of damping-off and root rot diseases caused by *Phytophthora* and *Pythium* spp. in turf grasses such as, but not limited to, Bermuda, Fescue, Bent, Blue, Rye, Zoysia, Buffalo, Augustine and *Poa annua*. Apply 3 pints in 25 gallons of water to 4 pints in 250 gallons of water per acre at 14 to 21 day intervals, as disease pressure dictates. Ensure thorough coverage.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in its original container in a cool, dry secure place out of direct sunlight.

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

**CONTAINER DISPOSAL:**

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container (≥ 250 gallons & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**WARRANTY—CONDITIONS OF SALE**

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically directed and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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