

QUALI-PRO

Chlorothalonil DF

Fungicide

PULL HERE TO OPEN ▲

ACTIVE INGREDIENT:	% BY WT.
Chlorothalonil (tetrachloroisophthalonitrile)	82.5%
INERT INGREDIENTS:	17.5%
TOTAL:	100.0%

Contains 0.825 Lb active ingredient per 1.0 Lb of product.

EPA Reg. No. 66222-149

KEEP OUT OF REACH OF CHILDREN

WARNING – AVISO

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

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. May be fatal if inhaled. Do not breathe dust or spray mist. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid prolonged contact with skin. Do not take internally.

For additional precautionary, handling, and use statements, see inside of this booklet.

Manufactured for: Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Road, Suite 300 • Raleigh, NC 27609

EPA 080111/Rev A

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FIRST AID

IF IN EYES:	<ul style="list-style-type: none">• Hold eye 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 INHALED:	<ul style="list-style-type: none">• 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 treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious or convulsing person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call Prosar at 1-877-250-9291.	
NOTE TO PHYSICIAN: Persons having temporary irritation may respond to treatment with antihistamines or steroid creams and/or systemic steroids.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

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Note to user: This product may produce mild bronchial irritation, and temporary irritation of the skin characterized by redness or rash on exposed skin areas. Persons having allergic reactions must contact a physician.

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.

For WPS or non-WPS applications made in enclosed areas, such as greenhouses, applicators and other handlers must wear a NIOSH-approved respirator with any N, P, R, or HE filter.

WPS Uses (commercial production on farms, forests, nurseries, sodfarms, and in greenhouses):

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as nitrile rubber, natural rubber, or butyl rubber
- Shoes plus socks
- A NIOSH-approved respirator with any N, P, R, or HE filter
- Protective eyewear

Non-WPS Uses (such as applications to non-residential turf, golf courses, etc.):

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as nitrile rubber, natural rubber, or butyl rubber
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

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 part 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical is known to leach through soil into groundwater under certain conditions as a result of labeled use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface waters for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

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 can be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection 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 Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, such as nitrile rubber, natural rubber, or butyl rubber
- Shoes plus socks
- Protective eyewear

Special Eye Irritation Provisions: This product is a severe eye irritant. Although the restricted-entry interval expires after 12 hours, for the next 6.5 days, entry is permitted only when the following safety measures are provided:

- (1) At least one container designed specifically for flushing eyes must be available in operating condition at the WPS-required decontamination site intended for workers entering the treated area.
- (2) Workers must be informed, in a manner they can understand:
 - that residues in the treated area may be highly irritating to their eyes,
 - that they should take precautions, such as refraining from rubbing their eyes, to keep residues out of their eyes,
 - that if they do get residues in their eyes, they should immediately flush their eyes using the eyeflush container that is located at the decontamination site or using other readily available clean water, and
 - how to operate the eyeflush container.

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 the product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

APPLICATION INSTRUCTIONS

Quali-Pro Chlorothalonil DF, a dry flowable product containing chlorothalonil, is used as a spray for the control of many important plant diseases.

RESISTANCE MANAGEMENT

To avoid the development of tolerant or resistant strains of fungi, always tank mix Quali-Pro Chlorothalonil DF with a fungicide of different chemistry, and/or alternate a fungicide of different chemistry with Quali-Pro Chlorothalonil DF at each application. If after using Quali-Pro Chlorothalonil DF as directed and the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of Quali-Pro Chlorothalonil DF for at least one season.

Quali-Pro Chlorothalonil DF is effective for use in programs that attempt to minimize disease resistance to fungicides. Quali-Pro Chlorothalonil DF has a multi-site mode of action and can be used to delay or prevent the development of resistance to single-site fungicides. Consult with your Federal or State Cooperative Extension Service representatives for guidance on the proper use of Quali-Pro Chlorothalonil DF in programs that seek to minimize the occurrence of disease resistance to other fungicides.

PRODUCT PRECAUTIONS

Quali-Pro Chlorothalonil DF can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control.

Do not combine Quali-Pro Chlorothalonil DF in a spray tank with pesticides, surfactants, or fertilizers, unless prior use has shown the combination to be physically compatible, effective, and noninjurious under conditions of use. Do not combine Quali-Pro Chlorothalonil DF with DiPel 4L, Foil®, Triton AG-98, Triton B-1956 and Latron® B-1956 as phytotoxicity can result from the combination when applied to crops listed on this label.

Add the required amount of Quali-Pro Chlorothalonil DF slowly into the spray tank during filling. With concentrate sprays, premix the required amount of Quali-Pro Chlorothalonil DF in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations.

Dosage rates on this label indicate lbs of Quali-Pro Chlorothalonil DF per acre, unless specified otherwise. Under conditions favoring disease development, use the high rate specified and shortest application interval.

APPLICATION PRECAUTIONS AND REQUIREMENTS

This product must not be applied within 150 feet for aerial and air-blast applications, or 25 feet for ground applications of marine/estuarine water bodies unless there is an untreated buffer area of that width between the area to be treated and the water body.

SPRAY DRIFT MANAGEMENT

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Excluding helicopters, nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed. The applicator must be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory Information](#).

Aerial Drift Reduction Advisory Information:

INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. 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 prevent drift if applications are made improperly or under unfavorable conditions (see **Wind, Temperature**).

CONTROLLING DROPLET SIZE

- **Volume**-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure**-Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles**-Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation**-Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift potential.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length can further reduce drift without reducing swath width.

APPLICATION HEIGHT

Application should not be made at a height greater than 10 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the application must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

WIND

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

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

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

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

SHIELDED SPRAYERS

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

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some can reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. **NOTE:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration.

AIR ASSISTED (AIR BLAST) TREE AND VINE SPRAYERS

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

CHEMIGATION

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set, and portable (wheel move, side roll, end tow, or hand move) irrigations system(s). Do not apply this product through any other type of irrigation system. Use only on crops specifically designated in the **DIRECTIONS FOR USE**.

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, contact State Extension Service Specialists, equipment manufacturers, or other experts.

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

Specific Instructions for Public Water Systems:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Always inject Quali-Pro Chlorothalonil DF into irrigation water after it discharges from the irrigation pump and after it passes through the check valve. Never inject pesticides on the intake line on the suction side of the pump.
8. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application can occur.
9. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Instructions for Sprinkler Irrigation Systems:

Quali-Pro Chlorothalonil DF can be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

A. Center Pivot, Motorized Lateral Move, and Traveling Gun Irrigation Equipment

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump, of either diaphragm or piston type, constructed of materials that are compatible with pesticides, capable of being fitted with a system interlock, and capable of injection at pressures approximately two to three times those encountered within the irrigation water line. Venturi application units cannot be used on these systems.

Fill chemical supply tank of injection equipment with water. Operate system for one complete revolution or run across the field, measuring time required, amount of water injected, and acreage covered. Thoroughly mix specified amount of Quali-Pro Chlorothalonil DF for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until Quali-Pro Chlorothalonil DF has been cleared from last sprinkler head.

B. Solid Set and Portable (Wheel Move, Side Roll, End Tow, or Hand Move) Irrigation Equipment

With stationary systems, an effectively designed in-line venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides, however, a positive-displacement pump can also be used.

Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a 30 to 45 minute period. Mix desired amount of Quali-Pro Chlorothalonil DF for acreage to be covered with water so that the total mixture of Quali-Pro Chlorothalonil DF plus water in the injection tank is equal to the quantity of water used during calibration, and operate entire system at normal pressures specified by the manufacturer of injection equipment used for amount of time established during calibration. No agitation should be required. Quali-Pro Chlorothalonil DF can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until Quali-Pro Chlorothalonil DF has been cleared from last sprinkler head.

Do not use on greenhouse grown crops.

TREE CROPS—APPLICATION INSTRUCTIONS

Apply Quali-Pro Chlorothalonil DF in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application because ground applications usually give better coverage of the tree canopy. If application with ground equipment is not feasible, Quali-Pro Chlorothalonil DF can be applied with aircraft. When concentrate sprays are used or when treating immature trees, the lower rate of Quali-Pro Chlorothalonil DF listed can be used. Both ground and aircraft methods of application are suggested unless specific directions are given for a crop. Do not apply through sprinkler irrigation systems unless specific directions are given for a crop. See the following instructions for application and calibration.

Do not allow livestock to graze treated areas. The following spray volumes are specified as gallons of spray per acre:

CROP	SPRAY VOLUME (Gallons per Acre)	
Conifers:	Dilute	Concentrate
Forest Stands	Not used	10 to 20 (aircraft)
Christmas Trees	100	10 to 50 (aircraft or ground equipment)
Nursery Beds	100	5 to 10 (ground equipment only)

CROP	DISEASES CONTROLLED	QUALI-PRO CHLOROTHALONIL DF RATE LBS./ACRE	SEASONAL LIMIT LBS./ACRE	APPLICATION DIRECTIONS
CONIFERS Pines, Spruces	See Below	See Below	20.0	The minimum retreatment interval for established trees is 21 days. The minimum retreatment in nursery beds is 7 days.
	Swiss Needlecast	2.5 – 5		Single-application technique: In Christmas tree plantations or forest stands, make one application in the spring when new shoot growth is 1/2 to 2 inches in length.

CROP	DISEASES CONTROLLED	QUALI-PRO CHLOROTHALONIL DF RATE LBS./ACRE	SEASONAL LIMIT LBS./ACRE	APPLICATION DIRECTIONS
CONIFERS Pines, Spruces (cont.)	Scleroderris Canker (Pines), Swiss Needlecast	1.2 – 2.5	20.0	Make the first application in spring when new shoot growth is 1/2 to 2 inches in length. Make additional applications at 4 week intervals until conditions no longer favor disease development. For use in nursery beds, apply the highest rate specified on a 4-week schedule.
	Sirococcus Tip Blight	1.8 – 3.2		
	Rhizosphaera Needlecast (Spruces), Scirrhia Brown Spot (Pines)	5.0		
	Cyclaneusma and Lophodermium Needlecasts (Pines)	2.5 – 5.0		
	Rhabdocline Needlecast (Douglas fir)	1.4 – 2.5		
	Botrytis Seedling Blight Phoma Twig Blight	1.4 – 2.5		
	Autoecious Needle Rust (Weir's Cushion) (Spruces)	5.0		
		Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully elongated and conditions no longer favor disease development. In plantations of mixed provenance, or when irregular budbreak occurs, apply weekly until all trees have broken bud, then every 3 to 4 weeks as specified above. In nursery beds, use the high rate on a 3-week schedule.		
		Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 day intervals as long as disease favorable conditions persist.		
		Begin applications when 10% of buds have broken and twice thereafter at 7 to 10 day intervals.		

GRASS: SODFARMS

Do not use on home lawns and turf sites associated with apartment buildings, daycare centers, playgrounds, playfields, recreational park athletic fields located on or next to schools (i.e., elementary, middle, and high schools), campgrounds, churches, and theme parks.

Apply Quali-Pro Chlorothalonil DF in 30 to 40 gallons of water per acre. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist using the rates specified in the following table.

Under severe disease conditions, a single application of 8.8 lbs. per acre can be made with a 7 day retreatment interval. Subsequent applications must follow the rates and retreatment intervals outlined in the following table for the remainder of the year.

Do not mow or water after treatment until spray deposited on grass is thoroughly dry. Always use Quali-Pro Chlorothalonil DF in conjunction with good turf management practices.

Sodfarm turf treated with chlorothalonil prior to harvest must be mechanically cut, rolled, and harvested. Follow all provisions outlined in the **Agricultural Use Requirements** box.

DISEASES CONTROLLED	LOW DISEASE PRESSURE TREATMENT REGIME		EXTREME DISEASE CONDITION	
	Retreatment Interval (Days)	Application Rate (Lbs./Acre) ¹	Minimum Retreatment Interval for the Maximum Single Application (Days)	Application Limit Per Year for Sodfarms (Lbs./Acre)*
Dollar Spot	7 – 10	2.5* – 5.0	7	15.75
	14 – 21	5.0 – 8.8		
Leaf Spot, Melting Out, Brown Blight	7 – 10	5.0		
	14 – 21	5.0 – 8.8		
Brown Patch	7 – 14	5.0 – 8.8		
Gray Leaf Spot	7 – 10	5.0 – 8.8		
Red Thread	7 – 10	5.0 – 8.8		
Anthracnose	7 – 14	5.0 – 8.8		

¹One single application of 13.6 lbs. per acre using a minimum retreatment interval of 14 days can be made per year for control of severe disease conditions. After using this high rate the lower rates and retreatment intervals in this table must be followed.

*Low rate is not effective on intensively mowed grasses.

Diseases are caused by some of the following fungi:

Dollar Spot: *Sclerotinia homeocarpa*, *Lanzia* or *Moellerodiscus* spp.

Leaf Spot, Melting Out and Brown Blight: *Drechslera* spp., *Bipolaris* spp., *Curvularia* spp.

Brown Patch: *Rhizoctonia* spp.

Anthracnose: *Collectotrichum*

*Do not use for sodfarms at application rates greater than 13 lbs. a.i. (15.75 lbs. of Quali-Pro Chlorothalonil DF) per acre per year.

GOLF COURSE FAIRWAYS

Apply Quali-Pro Chlorothalonil DF in 30 to 40 gallons of water per acre. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist. Under severe disease conditions, use the highest rate and shortest interval corresponding with the application schedule selected from the table below.

Do not mow or water after treatment until spray deposited on grass is thoroughly dry. Always use Quali-Pro Chlorothalonil DF in conjunction with good turf management practices. For reentry into treated areas, refer to the **NON-AGRICULTURAL USE REQUIREMENTS** box.

FAIRWAYS:

DISEASES CONTROLLED	Application Interval (Days)	Application Rate (Lbs./Acre) ¹	Seasonal Limit (Lbs./Acre/Year)
Dollar Spot	7 – 10	2.5 ² – 5.0	31.5
	14 – 21	5.0 – 8.8	
Leaf Spot, Melting Out, Brown Blight	7 – 10	5.0	
	14 – 21	5.0 – 8.8	
Brown Patch	7 – 14	5.0 – 8.8	
Gray Leaf Spot	7 – 10	5.0 – 8.8	
Red Thread	7 – 10	5.0 – 8.8	
Anthracnose	7 – 14	5.0 – 8.8	

¹One single application of 13.6 lbs per acre of Quali-Pro Chlorothalonil DF using a minimum retreatment interval of 14 days, can be made per year for control of severe disease conditions. After using this high rate, the lower rates and retreatment intervals in the above table must be followed.

²Low rate is not effective on intensively mowed grasses.

GOLF COURSE TEES AND GREENS

Apply Quali-Pro Chlorothalonil DF in an adequate amount of water to provide complete coverage. This amount may vary from 90 to 450 gallons to provide complete coverage. See below for suggested rates and timing. Under severe disease conditions, use the high rate. A maximum seasonal amount of 63 lbs per acre can be applied to tees; no more than 88.4 lbs per acre of Quali-Pro Chlorothalonil DF can be applied during a year to greens. For reentry into treated areas, refer to the **Non-Agricultural Use Requirements** box.

DISEASES CONTROLLED ¹	Application Interval (Days)	Application Rate (Lbs./Acre)		Seasonal Limit (Lbs./Acre/Year)
		Before disease occurs	After disease has occurred ²	
Dollar Spot	7 – 10	5.0 – 8.8	8.8	88.4 (greens) 63 (tees)
Brown Patch	7 – 14	5.0 – 8.8	8.8	
Leaf Spot, Melting Out	7 – 10	5.0 – 8.8	8.8	
Gray Leaf Spot	7 – 10	5.0 – 8.8	8.8	
Red Thread	7 – 10	5.0 – 8.8	8.8	
Anthracnose	7 – 14	7.5 – 8.8	-	
Copper Spot	7 – 10	8.8	8.8	
Stem Rust (Blue Grass)	7 – 14	8.8	8.8	
Dichondra: Leaf Spot (California Only)	7 – 14	8.8	8.8	

¹Diseases listed are caused by fungi, some of which are named as follows:

1. Dollar Spot: *Sclerotinia homeocarpa*; *Lanzia* or *Moellerodiscus* spp.
2. Brown Patch: *Rhizoctonia solani*, *R. zeae*, *R. cerealis*
3. Leaf Spots; Melting Out; Brown Blight: *Drechslera* spp. (including *D. poae*, *D. sicans*, *Bipolaris sorokiniana*, *Curvularia* spp.)
4. Gray Leaf Spot: *Pyricularia grisea*, *P. oryzae*
5. Red Thread: *Laetisaria fuciformis*
6. Anthracnose: *Colletotrichum graminicola*
7. Copper Spot: *Gloeocercospora sorghi*
8. Stem Rust: *Puccinia graminis*

9. Dichondra Leaf Spot: *Alternaria* spp.

²A single maximum application of 13.6 lbs per acre, with a 14 day retreatment interval, can be made for control of extreme disease conditions in a year.

Gray Snow Mold caused by *Typhula* spp.:

Apply in sufficient water to obtain adequate spray coverage (90 to 450 gallons per acre). Apply 8.8 lbs per acre of turf areas. Application must be made before snow cover in autumn. Use the high single maximum application rate of 13.6 lbs per acre if turf layer remains frozen prior to snow cover. If snow cover is intermittent or lacking during the winter, reapply Quali-Pro Chlorothalonil DF at 8.8 lbs per acre of turf at monthly intervals until gray snow mold conditions no longer prevail. In areas where pink snow mold (Gerlachia or Fusarium patch) is likely to occur, apply a single application of 8.8 lbs per acre of Quali-Pro Chlorothalonil DF in combination with products containing iprodione at 88.4 ounces active ingredient per acre of turf area. The maximum seasonal application limits are 88.4 lbs per acre for greens, 63 lbs per acre for tees, and 31.5 lbs per acre for turf and fairways. Read and observe all label directions for products containing these active ingredients.

Fusarium (Gerlachia) Patch:

For control of Fusarium patch only in areas where snow cover is intermittent or lacking during the winter, apply 8.8 lbs per acre of Quali-Pro Chlorothalonil DF. Make an initial application of 13.6 lbs per acre in late autumn; and reapply applications of 8.8 lbs per acre at 21 to 28 day intervals until conditions favoring Fusarium patch no longer exist. The maximum seasonal application limits are 88.4 lbs per acre for greens, 63 lbs per acre for tees, and 31.5 lbs per acre for turf and fairways.

Algal Scum:

For prevention of algal scum on turfgrasses caused by cyanobacteria of the genus Lyngbia, apply Quali-Pro Chlorothalonil DF at the rate of 5 to 8.8 lbs per acre of turf on a 7 to 14 day schedule. When algal scum is well established, make every attempt to dry out the afflicted area. Once dry, spiking or verticutting can be done to enhance turfgrass recovery in conjunction with a Quali-Pro Chlorothalonil DF application at the rate of 13.6 lbs per acre with a 7 day retreatment at the 5 to 8.8 lbs per acre rate. Several applications of Quali-Pro Chlorothalonil DF at the high 8.8 lbs per acre rate may be necessary for turfgrass recovery. Only a preventative spray program with Quali-Pro Chlorothalonil DF will prevent a recurrence of the algae when environmental conditions are favorable for algal growth. The maximum seasonal application limits are 88.4 lbs per acre for greens, 63 lbs per acre for tees, and 31.5 lbs per acre for turf and fairways.

ORNAMENTAL PLANTS

Do not use on home lawns and turf sites associated with apartment buildings, daycare centers, playgrounds, playfields, recreational park athletic fields located on or next to schools (i.e., elementary, middle, and high schools), campgrounds, churches, and theme parks. Quali-Pro Chlorothalonil DF may be used on ornamental plants grown in the field, nurseries, or greenhouses.

Ornamentals grown in nurseries, greenhouses:

Apply Quali-Pro Chlorothalonil DF at the rates given in the tables below. Apply in a spray to run-off, when conditions are favorable for disease development. Repeat applications at 7 to 14 day intervals until conditions are no longer favorable. During periods when conditions favor severe disease incidence, cloudy or wet weather, apply Quali-Pro Chlorothalonil DF at 7 day intervals. Apply Quali-Pro Chlorothalonil DF to plants when both foliage and flowers are dry or nearly dry.

Do not use mistblowers or high pressure spray equipment when making applications of Quali-Pro Chlorothalonil DF in greenhouses.

Ornamentals grown in the field:

For aerial application to field-planted ornamentals, use a minimum rate of 10 gallons of spray per acre during application. For field-grown ornamentals, excluding roses and pachysandra, apply 1.4 lbs per 100 gallons of water unless other directions are given in the tables below. No more than 44 lbs per acre of Quali-Pro Chlorothalonil DF can be applied to field-grown ornamentals per year. Apply Quali-Pro Chlorothalonil DF to plants when both foliage and flowers are dry or nearly dry.

For field-grown roses, apply 1 lb per 100 gallons of water of Quali-Pro Chlorothalonil DF.

For field-planted pachysandra, apply 2.5 lbs per 100 gallons of water of Quali-Pro Chlorothalonil DF.

Do not combine Quali-Pro Chlorothalonil DF in the spray tank with pesticides, surfactants, or fertilizers unless prior use has shown the combination to be physically compatible, effective, and noninjurious under your conditions of use.

Use Quali-Pro Chlorothalonil DF for control of fungal diseases referred to by numbers in parentheses following each ornamental. Ornamentals listed on this label have been tested and found to tolerate applications of Quali-Pro Chlorothalonil DF at the specified rates. Plant sensitivities have been found to be acceptable in specific genera and species listed on this label, however, phytotoxicity may occur. Due to the large number of species, widely varying growth conditions, and varieties of ornamentals and nursery plants, it is impossible to test every one for sensitivity. Neither the manufacturer nor seller has determined whether or not Quali-Pro Chlorothalonil DF can be used safely prior to commercial use. Test for possible phytotoxic responses, using specified rates on ornamental plants on a small area prior to commercial treatments and observe for 7 to 10 days for symptoms of phytotoxicity. Applications made during bloom can damage flowers and/or fruits.

NOTE: Fruits and other treated foliage must not be eaten or fed to livestock.

Diseases Controlled by Quali-Pro Chlorothalonil DF:

1. Leaf Spots/Foliar Blights:

- Actinopelte Leaf Spot
- Alternaria Leaf Spot/Leaf Blight
- Anthracoze Leaf Blotch, Spot
- Anthracoze (Discula) Blight
- Ascochyta Blight
- Bipolaris (Helminthosporium) Leaf Spot
- Black Spot on Roses
- Botrytis Leaf Spot, Leaf Blight
- Cephalosporium Leaf Spot
- Cercospora Leaf Spot
- Cercosporidium Leaf Spot
- Coryneum Blight (Shothole)
- Corynespora Leaf Spot
- Curvularia Leaf Spot
- Cylindrosporium Leaf Spot
- Dactylaria Leaf Spot
- Didymellina Leaf Spot
- Drechslera Leaf Spot
- Fabraea (Entomosporium) Leaf Spot
- Fusarium Leaf Spot
- Gloeosporium Black Leaf Spot
- Ink Spot (Drechslera)
- Marssonina Leaf Spot
- Monilinia Blossom Blight, Twig Blight
- Mycosphaerella Ray Blight
- Myrothecium Leaf Spot, Brown Rot
- Nematostoma Leaf Blight
- Phylosticta Leaf Spot
- Rhizoctonia Aerial or Web Blight
- Ramularia Leaf Spot
- Septoria Leaf Spot
- Sphaeropsis Leaf Spot
- Stagonospora Leaf Scorch
- Tan Leaf Spot (Curvularia)
- Volutella Leaf Blight

2. Flower Spots/Blights:

Botrytis Flower Spot, Flower Blight
Curvularia Flower Spot, Flower Blight
Monilinia Blossom Blight
Ovulinia Flower Blight
Rhizopus Blossom Blight
Sclerotinia Flower Blight

3. Cylindrocladium Stem Canker

4. Phytophthora Leaf Blight, Dieback

5. Powdery Mildews:

Erysiphe cichoracearum
Microsphaera spp.

6. Rusts:

Gymnosporangium spp.
Puccinia spp.
Pucciniastrum hydrangeae

7. Taphrina Blister

8. Scab (*Venturia inaequalis*)

Ornamentals specified for treatment with Quali-Pro Chlorothalonil DF:

Avoid applications during bloom periods for those plants where flower injury is unacceptable.

For poinsettia, discontinue applications prior to bract formation; phytotoxicity is possible on bracts.

Plant	Disease(s)	Application Rate (lb./100 gal.)	Comments
Aglaonema	1	2.5	
Andromeda (Pieris)	4	1.4	
Arabian Violet	2	1.0	
Areca Palm	1	2.5	
Artemesia	1	2.5	
Ash (Fraxinus)	1	1.4	
Aspen	1	1.4	
Azalea	1,2,4	1.4	
Begonia	1	1.0	
Boston Fern	1	2.5	
Buckeye, Horsechestnut	1	1.4	
Camellia	2	1.0	
Carnation	1,2	1.0	
Cherry-laurel	1	1.4	
Chrysanthemum	1,2	1.0	
Crabapple	1,6,8	1.4	
Crocus	1	1.0	
Daffodil	1	1.0	
Daisy	1	1.0	

Plant	Disease(s)	Application Rate (lb./100 gal.)	Comments
Dogwood	1	1.4	
Dumbcane, Dieffenbachia	1	2.5	
Dracaena	1	2.5	
Eucalyptus	3	1.4	
Euonymus	1	1.4	
Fatsia (Aralia)	1	2.5	
Ficus	1	2.5	
Firethorn, Pyracantha	1	1.4	
Florida Ruffle Fern	1	2.5	
Flowering Almond	1,2	1.4	
Flowering Cherry	1,2	1.4	
Flowering Peach	1,2	1.4	
Flowering Plum	1,2	1.4	
Flowering Quince	1,2	1.4	
Geranium	1,6	1.0	
Gladiolus	1,2	1.0	
Hawthorn	1,6	1.4	
Holly	1	1.4	
Hollyhock	6	1.0	
Hydrangea (Foliage Only)	1,6	1.0	
Iris	1,2	1.0	
Leatherleaf Fern	1	2.5	
Lilac	5	1.4	
Lily	1	1.0	
Lipstick Plant	1	2.5	
Magnolia	1	1.4	
Maple	1	1.4	
Marigold	1	1.0	
Ming Aralia	1	2.5	
Mountain Laurel	1	1.4	
Narcissus	1	1.0	
Oak (Red Group Only)	1,7	1.4	
Oregon Grape (Mahonia)	6	1.4	
Oyster Plant (Rhoeo)	1	2.5	
Pachysandra	1	2.5	
Pansy	1	1.0	
Parlor Palm (Chamaedorea)	1	2.5	
Peperomia	1	2.5	
Petunia	1,4	1.0	
Philodendron	1,4	2.5	
Phlox	1	1.0	
Photinia	1	1.4	
Poinsettia	1	1.0	Discontinue applications prior to bract formation; phytotoxicity is possible.
Poplar	1	1.4	
Prayer Plant (Maranta)	1	2.5	
Privet, Ligustrum	1	1.4	
Rhododendron	1,2,4	1.4	

Plant	Disease(s)	Application Rate (lb./100 gal.)	Comments
Rose	1	1.0	Avoid application during bloom period on plants where flower injury is unacceptable.
Sand Cherry	1,2	1.4	
Sequoia	1	1.4	
Spiraea	1	1.4	
Statice	1	1.0	
Sycamore, Planetree	1	1.4	
Syngonium	1	2.5	
Tulip	1	1.0	
Viburnum	5	1.4	
Walnut, Juglans	1	1.4	
Zebra Plant (Aphelandra)	1	2.5	
Zinnia	1,5	1.0	

The following ornamental plant species which have been tested with Quali-Pro Chlorothalonil DF at specified rates (1 to 2.5 lbs per 100 gallons) did not exhibit phytotoxicity (refer to the disease listing above):

Botanical name	Common name	Disease(s) Controlled	Application Rate (lb./100 gal.)
<i>Aechmea fasciata</i>	Aechmea	1	1-2.5
<i>Araucaria heterophylla</i>	Norfolk Island Pine	1	1-2.5
<i>Asplenium nidus</i>	Birdnest Fern	1	1-2.5
<i>Bougainvillea</i> spp.	Bougainvillea	1,4	1-2.5
<i>Caladium</i> spp.	Caladium	1	1-2.5
<i>Calathea makoyana</i>	Peacock Plant	1	1-2.5
<i>Calistephus chinensis</i>	Aster	1,2	1-2.5
<i>Carissa grandiflora</i>	Natal Plum	1	1-2.5
<i>Clerodendron thomsonae</i>	Bleeding Heart	1	1-2.5
<i>Codiaeum</i> spp.	Croton	1	1-2.5
<i>Cordylone terminalis</i>	Ti Plant	1	1-2.5
<i>Crassula argentea</i>	Jade Plant	1	1-2.5
<i>Cyrtanthium falcatum</i>	Holly Leaf Fern	1	1-2.5
<i>Dionaea muscipula</i>	Venus Fly Trap	1	1-2.5
<i>Dizygotheca elegantissima</i>	False Aralia	1	1-2.5
<i>Epipremnum aureum</i>	Golden Pothos, Scindapsus	1	1-2.5
<i>Episcia cupreata</i>	Flame Violet	1	1-2.5
<i>Fittonia</i> spp.	Silver-Nerve Plant	1	1-2.5
<i>Gerbera jamesonii</i>	Gerbera Daisy	1,2,4,5	1-2.5
<i>Gynura sarmantosa</i>	Purple Passion Vine	1,4	1-2.5
<i>Gypsophila paniculata</i>	Baby's Breath	1,2,4	1-2.5
<i>Hoya</i> spp.	Wax Plant	1	1-2.5
<i>Ilex cornuta</i>	Chinese Holly	1	1-2.5
<i>Ilex crenata</i>	Japanese Holly	1	1-2.5
<i>Impatiens</i> spp.	Impatiens	1,2,6	1-2.5
<i>Pilea cadierei</i>	Aluminum Plant	1,4	1-2.5
<i>Platyserium</i> spp.	Staghorn Fern	1	1-2.5

Botanical name	Common name	Disease(s) Controlled	Application Rate (lb./100 gal.)
Sansevieria trifasciata "Hahnii"	Birdsnest Sansevieria	1	1-2.5
Tolmeia menziesii	Piggy-Back Plant	1	1-2.5
Yucca elephantipes	Spineless Yucca	1	1-2.5
Zygocactus truncatus	Christmas Cactus	1	1-2.5

Note: Do not apply Quali-Pro Chlorothalonil DF to either green or variegated Pittosporum or to Schefflera as multiple applications have been demonstrated to cause phytotoxic responses.

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed, or seed by storage or disposal.

PESTICIDE STORAGE: Store in a cool place. Protect from excessive heat. Store product in original container only way from water, food, or feed. Keep container closed to prevent spills and contamination. Carefully open containers. After partial use, replace lid and close tightly. Do not put concentrate or diluted product into food or drink containers.

PESTICIDE DISPOSAL: Do not contaminate water, food, or feed by disposal. Improper disposal of excess pesticide, pesticide spray, or rinseate is a violation of Federal law. Wastes resulting from the use of this product that cannot be used according to the label instructions or chemically reprocessed must be disposed of on site or at a landfill or waste disposal facility approved for pesticide disposal, or in accordance with all applicable Federal, state, or local regulations. For further guidance, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Empty containers retain vapor and product residues.

Nonrefillable Container (flexible-bag-all weights): Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling or reconditioning, or puncture and dispose of 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-fifty lbs. or less): 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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