

# QUALI-PRO<sup>®</sup>

## TM 4.5

### *Turf & Ornamental Fungicide*

Contains thiophanate-methyl, the active ingredient used in Topsin 4.5FL

Quali-Pro TM 4.5 is not manufactured or distributed by Cerexagri.

ACTIVE INGREDIENT:	% BY WT.
Thiophanate-methyl: (dimethyl[(1,2-phenylene)-bis(iminocarbonothioyl)]bis[carbamate])	46.2%
<b>OTHER INGREDIENTS:</b>	<b>53.8%</b>
<b>TOTAL:</b>	<b>100.0%</b>

Contains 4.5 pounds of thiophanate-methyl per gallon.

EPA Reg. No. 66222-134

**KEEP OUT OF REACH OF  
CHILDREN  
CAUTION**

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

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

FIRST AID	
<b>IF SWALLOWED:</b>	<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 person.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF INHALED:</b>	<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 treatment advice.</li></ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 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>
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact PROSAR at 1-877-250-9291 for emergency medical treatment information.	

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical resistant to this product are barrier laminate, butyl rubber ( $\geq 14$  mils), neoprene rubber ( $\geq 14$  mils), and polyethylene. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

**Handlers mixing, loading, and applying the product as a dip (including application of product in kaolinite clay to conifer seedling roots) must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- A chemical-resistant apron

**All other mixers, loaders, and applicators must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Chemical-resistant apron for mixers, loaders, and other handlers exposed to the concentrate

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

**USER SAFETY RECOMMENDATIONS**

**Users should:**

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

**ENGINEERING CONTROLS**

When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff

from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater.

**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 agency responsible for pesticide regulation.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop. Exemption: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated areas if there will be no contact with anything that has been treated.

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 over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

**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 (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 or allow others to enter until sprays have dried.

**PRODUCT INFORMATION**

Shake well before using.

Apply Quali-Pro TM 4.5 with ground or aerial equipment using suffi-

cient volume of spray to provide thorough coverage. Add required amount of Quali-Pro TM 4.5 to partially filled tank agitated by mechanical or hydraulic means and then add remaining required amount of water. Continuous agitation is required to keep the material in suspension. Do not tank mix with highly alkaline pesticides such as Bordeaux mixture or lime sulfur. No claim of compatibility with other pesticides is implied. Use the higher rate under conditions of severe disease pressure. Also see local State Extension Service instructions for application schedules.

Use the fl oz/acre rate for concentrate sprayers. Use the fl oz/100 gal rate for dilute ground application.

For aerial applications, use a minimum of 5 gal/acre for row crops; use a minimum of 10 gal/acre for tree crops. For ground applications, use a minimum of 20 gal/acre for row crops and 30 gal/acre for tree crops. Higher spray volume will result in better coverage and better disease control.

When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and

Distributors Association certified adjuvant.

### RESISTANCE MANAGEMENT

To avoid the development of tolerant or resistant strains of fungi, tank mix Quali-Pro TM 4.5 with a fungicide of different chemistry, and/or alternate a fungicide of different chemistry with Quali-Pro TM 4.5 at each application. DO NOT USE PRODUCTS CONTAINING THIABENDAZOLE OR OTHER PRODUCTS CONTAINING THIOPHANATE METHYL IN COMBINATION OR IN ROTATION WITH QUALI-PRO TM 4.5. If after using Quali-Pro TM 4.5 as directed and the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of Quali-Pro TM 4.5 for at least one season. Do not use products containing thiabendazole as substitutes for Quali-Pro TM 4.5, as they are of similar chemistry and will contribute to the development of resistance. As long as these precautions are followed, Quali-Pro TM 4.5 can be useful for disease control even if resistant strains are present.

### CHEMIGATION

Do not apply this product through any type of irrigation system.

### APPLICATION RATES FOR USE ON CONIFERS (Not for use in California)

#### REI = Restricted-Entry Interval

CROP	DISEASES	MAXIMUM APPLICABLE RATE PER ACRE	RATE, MINIMUM GALLONAGE	REMARKS
<b>CONIFERS</b> Pine Austrian Red Scots Christmas Trees	Tip blight ( <i>Diplodia</i> )	60 fl oz	20 fl oz product per acre applied in spray solution at a rate of 100 gallons of spray per acre	Apply at bud break. Repeat 10 to 14 days later, just before needles emerge from sheath; repeat again 10 to 14 days after needle emergence.
<b>Fir</b> Douglas	Swiss needle cast ( <i>Phaeocryptopus</i> ) Rhabdocline needle cast	100 fl oz	20 fl oz product per acre applied in spray solution at a rate of 50 gallons of spray per acre	Apply initially in early May. Repeat at 4-week intervals.
<ul style="list-style-type: none"> <li>• Pine: Do not apply more than 60 fl oz/acre of Quali-Pro TM 4.5 per year.</li> <li>• Fir: Do not apply more than 100 fl oz/acre of Quali-Pro TM 4.5 per year.</li> <li>• Add a spreader/sticker to improve coverage.</li> <li>• Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers.</li> <li>• Do not graze livestock in treated areas.</li> <li>• The REI is 12 hours.</li> </ul>				
<b>CONIFERS</b> (Seeding treatment) Longleaf	Brown needle blight ( <i>Scirrhia</i> )	N/A	1.25 fl oz / 9.5 oz of dry kaolinite clay for seedling roots	Wet seedling roots in clean water; then apply Quali-Pro TM 4.5 / kaolinite mixture to wet roots.
<b>Loblolly Longleaf Slash</b>	Fusarium and Rhizoctonia root rot	N/A	2 fl oz / 50 oz kaolinite clay, plus enough water to make a slurry	Thoroughly cover seedling roots with Quali-Pro TM 4.5 / kaolinite slurry.
<ul style="list-style-type: none"> <li>• Do not apply mixture to seedling foliage.</li> <li>• During treatment, avoid excessive drying of roots or exposure to temperatures greater than 90° or less than 32° F.</li> <li>• Quali-Pro TM 4.5 does not control <i>Pythium</i> or <i>Phytophthora</i>.</li> <li>• The REI is 12 hours.</li> </ul>				

## HORTICULTURAL APPLICATIONS GREENHOUSE, NURSERY, AND LANDSCAPE

Quali-Pro TM 4.5 provides broad-spectrum control of many foliar, stem, and below-ground diseases on a wide range of horticultural plants grown or maintained under a variety of conditions. Apply Quali-Pro TM 4.5 14 to 21 days prior to when a particular disease usually appears and at the very latest upon first sign of disease. Use 7- to 14-day spray intervals with 14 days being for preventative treatments and the 7-day interval for times when conditions are conducive to disease development. Add an acceptable wetting agent to the spray tank to increase product efficacy for hard-to-wet foliage. Use a spreader/sticker when excessive and repeated foliar wetting occurs. Use Quali-Pro TM 4.5 to control listed diseases on non-commercial fruit and nut trees. Do not use fruit or nuts from trees treated with this product as food. Do not apply this product to home orchards or backyard fruit trees after fruit set. Not for homeowner use.

**Note:** Quali-Pro TM 4.5 has been determined to be safe for use on the plant types listed in these directions for use based on cumulative data derived from research trials and historical field use. As all species and cultivars have not been tested, perform trial applications if a user wishes to make an application to a plant type not listed on the label but found on a similar use site and for disease that is listed on the label. To conduct a trial application, apply at least two applications to at least 25 trial plants at the highest concentration, 7 days apart. Evaluate 7 days after the last application before initiating full-scale application. Do not use this product on the following plants: Swedish Ivy (*Neprolepsis exaltata*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

PLANT TYPE	SUCH AS BUT NOT LIMITED TO:
Herbaceous Bedding	Ageratum, Begonia, Canna, Coleus, Dahlia, Dusty Miller, Foxglove, Fuchsia, Geranium, Impatiens, Lavender, Marigold, Pansy, Petunia, Pinks, Primrose, Salvia, Statice, Strawflower, Tickseed, Verbena
Flowering	Chrysanthemum, Hydrangea, Hollyhock, Iris, Lily, Poinsettia
Tropical Foliage	Dieffenbachia, Dracaena, English Ivy, Philodendron, Pothos
Woody Ornamentals	Azalea, Hibiscus, Holly, Ligustrum, Rhododendron, Rose, Pyracantha
Evergreen Trees	Douglas Fir, Fir, Larch, Pine, Spruce
Deciduous Trees*	Ash, London Plane, Maple, Oak, Sycamore, Walnut
Flowering Trees*	Cherry, Crabapple, Hawthorn, Mountain Ash, Pear

\*Do not use fruit or nuts from treated trees as food or feed.

## FOLIAR SPRAY PLANT TYPES AND DISEASES CONTROLLED

DISEASE(S)	PLANT TYPES
Anthrachnose	Woody ornamentals, shade trees <sup>1</sup>
Ascochyta Blight	Herbaceous ornamentals
Black spot	Roses
Botrytis (Gray Mold)	Woody and herbaceous ornamentals
Brown Rot	Woody and herbaceous ornamentals
Colletotrichum	Woody and herbaceous ornamentals
Cercospora Leaf Spot	Woody and herbaceous ornamentals
Corynespora Leaf Spot	Ligustrum
Didymellina Leaf Spot	Iris
Diplodia Tip Blight (Diplodia pinea)	Shade and ornamental trees
Ovulinia	Azalea, rhododendron <sup>2</sup>
Entomosporium Leaf Spot	Woody and herbaceous ornamentals
Fusiculadium Leaf Scab	Woody and herbaceous ornamentals
Phomopsis Blight	Woody and herbaceous ornamentals
Pine Tip Blights	Woodys
Powdery Mildew	Woody and herbaceous ornamentals, ornamental nut and fruit trees
Rust Diseases	Ornamental nut and fruit trees
Ramularia Leaf Spot	Herbaceous ornamentals
Scab	Pyracantha, flowering crab, ornamental fruit and nut trees
Septoria Leaf Spot	Woody and herbaceous ornamentals
Venturia Leaf Scab	Woody and herbaceous ornamentals

<sup>1</sup> Begin at bud and make 2 or 3 additional applications at 10- to 14-day intervals.

<sup>2</sup> Begin treatment as flowers open. Addition of a spray surfactant to the spray mixture improves distribution of the spray on hard-to-wet plants such as roses.

## FOLIAR SPRAY APPLICATIONS

APPLICATION RESTRICTIONS
<b>Maximum Single Application Rates:</b>
<b>Ornamentals:</b> Do not exceed the maximum single application rate of 85.3 oz Quali-Pro TM 4.5 per acre (3.0 lbs thiophanate-methyl active ingredient per acre).
<b>Cut Flowers:</b> Do not exceed the maximum single application rate of 14.2 oz Quali-Pro TM 4.5 per acre (0.5 lb thiophanate-methyl active ingredient per acre).
<b>Seasonal Maximum Application:</b>
<b>All Ornamentals:</b> Do not apply more than 66.6 gallons Quali-Pro TM 4.5 (300 lbs thiophanate-methyl active ingredient per acre per season).

### Hydraulic Application Mixing Instructions

Add the required amount of Quali-Pro TM 4.5 to a partially filled spray

tank agitated by mechanical or hydraulic means and then add the remaining volume of water. Maintain continuous agitation to keep the material in suspension and apply with properly calibrated spray equipment.

**Application Concentrations (Mechanical or Hand-Held):**

Use the labeled amount of Quali-Pro TM 4.5 per 100 gallons of water for the prevention and control of the diseases shown below.

**FOLIAR DISEASES**

DISEASE(S) CONTROLLED	CONCENTRATION OF QUALI-PRO TM 4.5 FL OZ/100 GALS.	REMARKS
Anthraxnose ( <i>Colletotrichum</i> )	10.75-20	Apply as buds break or at first sign of disease. Repeat application at 7- to 14-day intervals as needed during disease period.
Black Spot of Rose ( <i>Diplocarpon rosae</i> )	10.75-20	Apply early summer or at first sign of disease. Repeat application every 7 to 14 days as needed during disease period.
Brown Rot and Blight ( <i>Monlinia, Sclerotinia, Whetzellinia</i> )	10.75-20	Apply late spring or at first sign of disease. Repeat application every 7 to 14 days as needed during the disease period.
Fusicladium and Venturia Leaf Scabs on: Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	10.75-20	Apply as buds break. Repeat application every 7 to 14 days during disease period. Effective control requires coverage during expansion. Rotations with chlorothalonil or propiconazole can be utilized.
Leaf Spots and Blights caused by: <i>Ascochyta, Blumeriella, Botrytis, Cercospora, Coccomyces, Corynespora, Curvularia, Didymellina, Entomosporium, Fabraea, Fusarium, Ramularia, Rhizoctonia, Marssoninia, Mycosphaerella, Myrothecium, Phoma, Physalospora, Schizothyrium, Septoria, Sphaeloma</i>	10.75-20 (10-14.5; California only)	Make applications when disease symptoms first appear. Repeat every 7 to 14 days during disease period. Rotations with chlorothalonil can be used.
Ovulinia Blight	7.25-20	Apply as flowers open. Repeat every 7 to 14 days during disease period.
Powdery Mildews <i>Erysiphe, Microsphaera, Phylactinia, Podosphaera, Oidium, Sphaerotheca</i>	10-20	Apply when disease first appears and repeat application every 7 to 14 days. Rotations with other effective products can be used.
Rust Diseases caused by: <i>Puccinia, Gymnosporangium, Uromyces</i>	10.75-20	Apply late spring or when symptoms first appear. Repeat applications every 7 to 14 days during disease period. Rotations with other effective products can be used.
Tip Blight of Pine <i>Sphaeropsis sapinea, Diplodia pinea</i>	14.5-20	Begin applications in the spring when new growth starts. Make a second application just prior to needle emergence from the sheath and a third application 7 days later. Ensure thorough coverage.
Twig Blights, Cankers, and Diebacks <i>Diaporthe, Kabatina, Phoma, Phomopsis</i>	14.5-20	Apply when symptoms first appear. Repeat applications every 7 to 14 days during disease period.

**Adjuvants:** Where rainfall and/or overhead irrigation is the norm, use of a compatible spreader/sticker is suggested. Where wetting of foliage is difficult, use a compatible wetting agent. Follow the phytotoxicity precautions described in the **HORTICULTURAL APPLICATIONS** section of this label.

**SOIL DRENCH APPLICATIONS**

**Mixing Instructions:** Add required amount of Quali-Pro TM 4.5 to a partially filled tank agitated by mechanical or hydraulic means. Add the remaining required amount of water. Maintain continuous agita-

tion throughout application to keep the material in suspension.

**Application Concentrations/Rates and Timing for Disease**

**Control:** Create a drench solution by mixing 7.5-20 fl oz of Quali-Pro TM 4.5 per 100 gallons of water. Apply as a drench or heavy spray at the rate of 0.5 to 2 pints per square foot (100 gallons per 400 to 1600 square feet). For small pots and shallow flats up to 4 inches in size, apply at 1 pint per square foot. For containers and pots 4 inches or larger, refer to the following table for the volume to apply. Make repeat applications at 4- to 8-week intervals depending on disease presence and conditions for disease development.

Container Type	Drench Solution Volume to Apply/Container	
	1 pt/sq ft Rate	2 pt/sq ft Rate
4 inch	2 fl oz	-
5 inch	2.5 fl oz	-
6 inch	-	6.5 fl oz
7 inch	-	8.5 fl oz
8 inch	-	11 fl oz
9 inch	-	14 fl oz
10 inch	-	17.5 fl oz

For containers larger than 10 inches, a drench volume of 2 ½ to 3 pints per square foot of surface area is required.

**Plant Types:** Containerized woody shrubs, trees, herbaceous/bedding, flowering, and tropical foliage plants and flowers and bedding plants in the landscape.

**Note:** Do not apply this product to plug trays or seedling flats at time of seeding.

**Soil Diseases Controlled:** Botrytis, Cyndrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, and Thielaviopsis.

**Note:** Pythium, Phytophthora, and Cyndrocladium spathiphylli are not controlled by Quali-Pro TM 4.5.

#### PLANT DIP TREATMENT

**Mixing Instructions:** Mix as described in the **FOLIAR DISEASES** and **SOIL DRENCH APPLICATIONS** sections of this label. Maintain continuous agitation during application.

#### Application Concentration and Dipping Time

**Plants or Cuttings:** Use 14.5 to 20 fl oz of Quali-Pro TM 4.5 per 100 gallons of water. Immerse plants or cuttings for 10 to 15 minutes, remove, and allow to drain and dry. Note that the **PERSONAL PROTECTIVE EQUIPMENT** section of this label included protective cloth-

ing for dip treatment.

**Bulbs, Corms, Tubers, and Rhizomes:** Use 14.5 to 20 fl oz of Quali-Pro TM 4.5 per 100 gallons of water or two teaspoons of Quali-Pro TM 4.5 per gallon of water. Soak cleaned bulbs for 15 to 30 minutes in warm dip (80-85° F) within 48 hours of digging. Dry bulbs after treatment. If bulbs are for forcing, treat bulbs that have been heat cured.

**Plant Types:** Plants, cuttings, cane sections of woody herbaceous, flowering, and tropical foliage plants. Bulbs, corms, tubers, and rhizomes of plants such as but not limited to Caladium, Easter Lily, Tulip, Gladiolus, Daffodil, Iris.

**Diseases Controlled:** Botrytis, Cyndrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis.

#### TURF APPLICATIONS

Use Quali-Pro TM 4.5 against certain foliar and soil diseases for use on all turf types such as golf course greens, tees and fairways, athletic fields, cemeteries, parks, and commercial and home lawns. Use Quali-Pro TM 4.5 both preventatively and curatively; it is not phytotoxic. Do not use Quali-Pro TM 4.5 on turf being grown for sale or other commercial uses such as sod.

For use only by certified applicators and those under their direct supervision. Not for homeowner use. Do not apply with fixed wing or rotary aircraft.

**Mixing Instructions:** Add the required amount of Quali-Pro TM 4.5 to a partially filled tank agitated by mechanical or hydraulic means. Add the remaining required amount of water. Maintain continuous agitation to keep the material in suspension. For best results, use spray mixture the same day it is prepared.

**Turf Types:** All cool-season and warm-season grasses (such as but not limited to Bentgrasses, Bermudagrasses, Bluegrasses, Fescues, Ryegrasses, St. Augustinegrasses, and Zoysiagrasses) or their mixtures.

DISEASE(S) CONTROLLED	RATE OF QUALI-PRO TM 4.5 FL OZ/1000 SQ FT*	REMARKS
Anthraxnose ( <i>Colletotrichum graminicola</i> )	2-3.5  (3.5-5.3)**	Apply when disease first appears. Make additional applications at 14-day intervals as needed. Allow spray to dry on leaves with no watering in.
Dollar Spot ( <i>Sclerotinia homoeocarpa</i> ) Copper Spot ( <i>Gloeocercospora sorghi</i> ) Brown Patch and Zoysia Patch ( <i>Rhizoctonia solani</i> ) Red Thread ( <i>Laetisaria fuciformis</i> )	2-3.5	Apply when disease first appears. Make additional applications at 14-day intervals as needed. Allow spray to dry on leaves with no watering in.
Pink Snow Mold ( <i>Microdochium nivale</i> ) (Only for those areas where snow cover is not present the entire winter)	2-3.5	Apply Quali-Pro TM 4.5 in middle to late November before turf has stopped all growth activity. Lightly water application into the root zone for best results. For best results, use a spreader/sticker. Let second spray dry on leaf surfaces with no watering in. Minimum spray interval is 14 days.

DISEASE(S) CONTROLLED	RATE OF QUALI-PRO TM 4.5 FL OZ/1000 SQ FT*	REMARKS
Gray Leaf Spot ( <i>Pyricularia grisea</i> )	3.5-5.3	Apply when conditions are favorable for disease development. Continue at 14-day intervals. Let spray dry on leaves with no watering in.
Summer Patch ( <i>Magnaporthe poae</i> )	3.5-5.3	For preventative treatment, make 3 applications at 21-day intervals beginning in early May. Water product into the root zone thoroughly after application. For suppression, apply two applications at 14-day intervals beginning applications when the disease first appears.
Fusarium Blight ( <i>Fusarium roseum</i> ) Necrotic Ring Spot and Spring Dead Spot ( <i>Leptosphaeria korrae</i> )	3.5-5.3	Make two applications at 14-day intervals beginning applications when the disease first appears.
Stripe Smut ( <i>Ustilago striiformis</i> )	3.5-5.3	Make two applications at 14-day intervals when disease first appears. Water into root zone after application. For prevention, apply in the spring (just before grass begins growth) and in the fall.

\*Refer to the use sites and maximum application rates table to determine allowable rates for each application.

\*\*Use the 3.5-5.3 fl oz rate for curative response to Basal Stem Anthracnose.

#### Turf Application Directions

Apply Quali-Pro TM 4.5 uniformly over the area to be treated with a properly calibrated power sprayer. Apply after mowing or avoid mowing for 12 hours after application. Apply sufficient water to obtain thorough coverage, usually 1 ½ to 2 ½ gallons per 1000 sq ft of turf area. When treating golf course greens, always treat aprons and approaches to golf greens.

SITE	MAXIMUM SINGLE APPLICATION RATE PER FL OZ/1000 SQ FT	MAXIMUM SEASONAL APPLICATION RATE FL OZ/1000 SQ FT
Golf Course greens/tees/aprons	5.3	14.25
Golf Course Fairways (except Florida)	3.5	3.5
Golf Course Fairways (Florida only)	1.75	1.75
Residential and Public Areas (home lawns, parks, athletic fields, schools, day care centers)	1.75	7

**Note to User:** Do not graze animals on treated turf. Do not feed clip-pings to livestock or poultry.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in dry area.

Do not store in a manner where cross-contamination with other pesticides, fertilizers, food, or feed could occur. If spilled during storage or handling, absorb with sand or other inert material and dispose of absorbent in accordance with the **PESTICIDE DISPOSAL** instructions listed below.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

**Nonrefillable Container (five gallons 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 and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### **LIMITATION OF WARRANTY AND LIABILITY**

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

Quali-Pro® is a registered trademark of Makhteshim Agan of North America, Inc.



# QUALI-PRO<sup>®</sup>

## TM 4.5

### *Turf & Ornamental Fungicide*

Contains thiophanate-methyl, the active ingredient used in Topsin 4.5FL

Quali-Pro TM 4.5 is not manufactured or distributed by Cerexagri

<b>ACTIVE INGREDIENT:</b>	<b>% BY WT.</b>
Thiophanate-methyl: (dimethyl[(1,2-phenylene)-bis(iminocarbonothioyl)]bis[carbamate]) . . . . .	46.2%
<b>OTHER INGREDIENTS:</b> . . . . .	<b>53.8%</b>
<b>TOTAL:</b> . . . . .	<b>100.0%</b>

Contains 4.5 pounds of thiophanate-methyl per gallon.

EPA Reg. No. 66222-134

**KEEP OUT OF REACH OF  
CHILDREN  
CAUTION**

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

Manufactured for:  
**Makteshim Agan of North America, Inc.**  
4515 Falls of Neuse Rd., Suite 300  
Raleigh, NC 27609

EPA 012011/Notif 070711/Rev D

<b>FIRST AID</b>	
<b>IF SWALLOWED:</b>	<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 person.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF INHALED:</b>	<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 treatment advice.</li></ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 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>
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact PROSAR at 1-877-250-9291 for emergency medical treatment information.	