NUMITED STATED TO	U.S. ENVIRONMENTA PROTECTION AGENC Office of Pesticide Progra Registration Division (750 Ariel Rios Building 1200 Pennsylvania Ave., N Washington, D.C. 2046	Y ms 5P) WW	EPA Registration. Number: 86869-2	Date of Issuance: MAR 0 5 2010	
	NOTICE OF PESTICIDE: _x_ Registration		Term of Issuance Conditional	e:	
Registration (under FIFRA, as amended)			Name of Pesticide Product: Propiconazole Select		
Name and Addre	ess of Registrant (include ZIP Cod	e).	*		
Select Source,	-	-	Madhu Mandava	1	
301 N. Main St	-		a Associates, LI		
Suite 2436			Dallas Parkway		
Winston-Salem	NC 27101		•	, Suite 200	
w mston-saten	1, INC 2/101	1 Iano, 1	X 75024		
	ation furnished by the registrant, the above n				
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EPA Form 8570-6

## Page 1 – First Aid:

Revise the third bullet of the "If Swallowed" section by removing "Contains petroleum distillate – vomiting may cause aspiration pneumonia.

## Page 2 – Personal Protective Equipment:

Revise the existing text below the paragraph starting with "Some materials....." to read as follows:

"All handlers must wear:

- long-sleeved shirt and long pants,
- shoes and socks, and
- chemical-resistant gloves.

In addition, all handlers (mixers, loaders, and applicators, or individuals performing one or more of these tasks), who are applying this pesticide using hand-held equipment must wear:

- long-sleeved shirt and long pants,
- shoes and socks,
- chemical-resistant gloves and
- protective eyewear"

Additionally, in the following paragraph, revise the fourth paragraph to read, "If no such instructions for washables *exist*, use detergent and hot water.

## **Page 2 – Engineering Controls Statement:**

Delete the first sentence so that the statement complies with the Propiconazole RED.

## **Page 2 – User Safety Recommendations:**

Add an additional bullet: "User should remove PPE after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing."

## Page 2 – Environmental Hazards:

Revise the last sentence to read, "Do not contaminate water when disposing of equipment washwater, or rinsate.

## **Page 4 – Spray Drift Management:**

Revise the text following "Other state and local requirements," to read: Applicators must follow all state and local pesticide drift requirements regarding application of propiconazole. Where states have more stringent regulations, they must be observed."

Equipment - All application equipment must be properly maintained and calibrated using appropriate carriers or surrogates."

## Page 5- Turfgrass and Dichondra Disease Control:

Resize the font for item number 12.

## **Page 7 – Turfgrass Application Rate Table:**

Remove the header row for "Diseases" from below the "Take-all patch" and move above. Add the same header row below the "Dichondra – Specific Disease, Rates, and Application Timing."

## Page 9 – Table 1. Ornamentals – Plant Species:

Delete the spaces in the Herbaceous and Woody ornamental sections following Phlox and Juniper respectively.

## Page 14 – Warranty Statement:

Revise the sentence, "To the extent allowed by law" to read "To the extent consistent with applicable law." This statement should precede a number of sentences throughout the warranty statement. Please refer to the label review manual at http://www.epa.gov/oppfead1/labeling/lrm/chap-12.htm#IX.

4. Submit one (1) copy of the revised final printed label before the product is released for shipment.

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

A stamped copy of the label is enclosed for your records. If you have any questions, contact Lisa Jones of my team at (703) 308-9424 or jones.lisa@epa.gov.

Sincerely,

Shaja B. Joyner, Product Manager 20 Fungicide Branch Registration Division (7505P)

Enclosure: Stamped copy of label

# **PROPICONAZOLE SELECT**

## FUNGICIDE

# BROAD SPECTRUM AND SYSTEMIC DISEASE CONTROL FOR TURF AND ORNAMENTALS AND A FLARE ROOT-INJECTED SYSTEMIC FUNGICIDE FOR CONTROL OF SELECTED DISEASES IN

TREES

ACTIVE INGREDIENT:	% BY WT.
Propiconazole: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]Methyl]-1H-1,2,4-triazole	14.3%
INERT INGREDIENTS:	
TOTAL	
Contains petroleum distillate	

Propiconazole Select contains 1.3 lbs. of active ingredient per gallon.

# **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.)

	FIRST AID				
IF IN EYES:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> </ul>				
	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 ON SKIN OR					
CLOTHING:	Rinse skin immediately with plenty of water for 15 to 20 minutes.				
	Call a poison control center or doctor for treatment advice.				
IF SWALLOWED:	Immediately call a poison control center or doctor.				
	Do not give any liquid to the person.				
	Do not induce vomiting unless told to do so by a poison control center or doctor.				
	<ul> <li>Do not give anything by mouth to an unconscious person. Contains petroleum distillate - vomiting may cause aspiration pneumonia.</li> </ul>				
IF INHALED:	Move person to fresh air.				
	<ul> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> </ul>				
	<ul> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>				
Have the product container or label with you when calling a poison control center or doctor or going for					
treatment.					
	N: There is no specific antidote for this product. Induce emesis or lavage stomach, taking				
care to avoid aspiration of stomach contents into lungs. Contains petroleum distillate - vomiting may cause aspiration pneumonia.					

See Label Booklet for Additional Precautionary Statements and Directions For Use

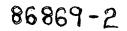
Manufactured For: Select Source, LLC. 4505 Booneville-New Harmony Road EVANSVILLE, IN 47725

EPA Reg. No. 86869-EPA Est. No.

NET WEIGHT: GALLON(S)

ACCEPTED with COMMENTS In EPA Letter Dated: MAR 0 5 2010

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as smended, for the pesticide registered under EPA Reg. No.



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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING-AVISO

Causes substantial, but temporary eye injury. Do not get in eyes or on clothing. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with skin or clothing. Avoid breathing vapor or spray mist.

## 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 C on an EPA chemical-resistance category selection chart.

All applicators and handlers (mixers, loaders, and applicators, or individuals performing one or more of these tasks), who are applying this pesticide using hand-held equipment must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), or Viton
- 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 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Enclosed Cockpits Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)].

## USER SAFETY RECOMMENDATIONS

#### User should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

• Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and shrimp. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water.

## PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

## 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.

## AGRICULTURAL USE REQUIREMENTS

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

# Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area 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

• Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), or Viton

- Shoes plus socks
- 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 Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Professional applications to golf courses, industrial (office park), and municipal lawns and ornamentals are not within the scope of the Worker Protection Standards. **Do not enter treated areas without protective clothing until sprays have dried.** 

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

### **GENERAL INFORMATION**

Propiconazole Select is a systemic fungicide for use on turfgrasses for the control of dollar spot (Sclerotinia homoeocarpa), brown patch (Rhizoctonia solani), anthracnose (Colletotrichum graminicola), red thread (Laetisaria fuciformis), pink patch (Limonomyces roseipellis), rust (Puccinia graminis), powdery mildew (Erysiphe graminis), stripe smut (Ustilago striiformis and Urocystis agropyri), summer patch (Magnaporthe poae), necrotic ring spot (Leptosphaeria korrae), spring dead spot (Leptosphaeria korrae, Leptosphaeria narmari, Ophiosphaerella herpotricha, Gaeumannomyces graminis), take-all patch (Gaeumannomyces graminis), leafspot (Bipolaris spp., Drechslera spp.), gray leafspot (Pyricularia grisea), pink snowmold (Microdochium nivale), Fusarium patch (Fusarium nivale), gray snowmold (Typhula spp.), yellow patch (Rhizoctonia cerealis), and zoysia patch (Rhizoctonia solani).

Propiconazole Select also controls numerous diseases on ornamentals and other landscape and nursery plantings. It controls powdery mildews, rusts, leafspots, scabs, and blights. Refer to the appropriate section for specified diseases and plants.

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

## MIXING INSTRUCTIONS

Fill the spray tank ½ to ¾ full with water. Add the proper amount of Propiconazole Select and then add the rest of the water. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

If Propiconazole Select is tank mixed with other products, use the following sequence:

- 1. Always check the compatibility of the tank mix using a jar test with proportionate amounts of Propiconazole Select, other chemicals to be used, and the water, before mixing in the spray tank.
- Provide sufficient jet or mechanical agitation during filling and application to keep the tank mix uniformly suspended.
- 3. Fill tank at least 1/2 full of clean water.
- 4. Add wettable powders to the tank first, allowing them to completely suspend in the tank before proceeding. This process can be hastened by premixing the product in water before adding to the tank.
- 5. Add flowables or suspensions next.
- 6. Add Propiconazole Select next.
- 7. Add emulsifiable concentrates last.
- 8. Do not leave tank mix combinations in the spray tank for prolonged periods without agitation. Mix and apply them the same day.

#### TANK MIXES

For broader spectrum control, Propiconazole Select can be tank mixed with other fungicides. For example, Subdue may be tank mixed with Propiconazole Select or used alone when conditions are favorable for Pythium blight. Propiconazole Select is also compatible with numerous herbicides and insecticides. Check compatibility before tank mixing. Add Unite (3 pts. per 100 gals.) to tank mixes which are incompatible. Follow the directions under **MIXING INSTRUCTIONS** for tank mixes. Observe all directions, precautions, and limitations on labeling of all products used in tank mixes. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

#### SPRAY DRIFT MANAGEMENT

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

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

Droplet size- Apply as a medium or coarser spray (ASAE Standard 572).

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

#### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of propiconazole. Where states have more stringent regulations, they must be appropriate carriers or surrogates.

#### Additional requirements for aerial applications:

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

## TURFGRASS AND DICHONDRA DISEASE CONTROL

- 1. USE PROPICONAZOLE SELECT IN A PREVENTIVE DISEASE CONTROL PROGRAM.
- 2. Apply in sufficient water to ensure thorough coverage.
- 3. Apply after mowing OR allow sprayed area to completely dry before mowing.
- 4. For control of foliar diseases, allow sprayed area to completely dry before irrigation.
- 5. For control of soil-borne diseases, Propiconazole Select can be watered in after application.
- 6. Under conditions optimum for high disease pressure, use the higher rate and the shorter interval.
- 7. For optimum turf quality and disease control, use Propiconazole Select in conjunction with turf management practices that promote good plant health and optimum disease control.
- 8. Evaluate spray additives prior to use. Label directions are based on data obtained with no additives.
- 9. Before use of any fungicide, proper diagnosis of the organism causing the disease is important. Use of diagnostic kits or other means of identification of the disease organism is essential to determine the best control measures.
- 10. Do not apply more than 16 fl. oz. per 1,000 ft.<sup>2</sup>/calendar year nor apply more than 5.4 gals. of product per acre per calendar year.
- 11. Do not graze animals on treated areas. Do not feed clippings from treated areas to livestock or poultry.
- Bermudagrass can be sensitive to Propiconazole Select. Do not exceed 4 fl. oz. per 1,000 sq. ft. every 30 days on any variety of bermudagrass. In Florida, do not apply Propiconazole Select to bermudagrass golf course greens when temperatures exceed 90°F.

Disease	Fl. Oz. Per 1,000 Sq. Ft.	Fl. Oz. Per Acre	Application Interval/ Timing	Instructions
Dollar Spot (Sclerotinia	0.5	22	7 days	Apply when conditions are favorable for disease development.
homoeocarpa)	0.5	22	14 days	Tank mix with low label rate of one of the following fungicides: Daconil 2787 F Daconil Ultrex
_	1	44	21-28 days	Tank mix with low label rate of one of the following fungicides: Daconil 2787 F Daconil Ultrex Chipco 26019
		44-88	14-28 days	If using the 1-2 fl. oz. per 1,000 sq. ft. rate without tank mixing, make no more than 3 consecutive applications for dollar spot control before rotating to an alternate EPA- registered fungicide having a different mode of action.
Anthracnose (Colletotrichum graminicola)	1-2	44-88	14-28 days	Apply when conditions are favorable for disease development. When disease pressure is high, use higher rates of Propiconazole Select and shorter intervals. For broad spectrum control, tank mix with a registered contact fungicide at the label rate. If disease is present, mix 2 fl. oz. of Propiconazole Select per 1,000 sq. ft. with the label rate of the above mentioned contact fungicides.

Turfgrass—Specific Diseases, Rates, and Application Timing

Disease	FI. Oz. Per 1,000 Sq. Ft.	FI. Oz. Per Acre	Application Interval/ Timing	Instructions
<b>Brown Patch</b> (Rhizoctonia solani)	1-2	44-88	14-21 days	Begin applications in May or June before disease is present. Tank mix with a registered contact fungicide labeled for brown patch control at the label rate. Under conditions of high temperatures and high humidity, use the higher rates of Propiconazole Select and shorter intervals.
Powdery Mildew (Erysiphe graminis), Rust (Puccinia graminis	1-2	44-88	14-28 days	Apply when conditions are favorable for disease development. If disease is presen use 2 fl. oz. of Propiconazole Select pe 1,000 sq. ft.
Red Thread (Laetisaria fuciformis), Pink Patch (Limonomyces roseipellis)	1.7	74	14-21 days	Apply when conditions are favorable for disease development.
Stripe Smut (Ustilago striiformis) (Urocystis agropyri)	1-2	44-88	Fall or Spring	Apply once in the fall after grass become dormant or in the early spring before gras starts to grow.
Gray Leafspot (Pyricylaria grisea)	1-2	44-88	14 days	Apply when conditions are favorable for disease development. If using the 1 fl. or per 1,000 sq. ft. rate, tank mix with registered contact fungicide at the label rate
Melting out, Leaf Spot ( <i>Bipolaris</i> spp.) ( <i>Drechslera</i> spp.)	1-2	44-176	14 days	Under light to moderate pressure, app Propiconazole Select to reduce the severi of leaf spot and melting out caused to Helminthosporium-type pathogens. For broad spectrum disease control, tank mix th 1 fl. oz. Propiconazole Select rate with registered contact fungicide at the label rate Tank mix the 1-2 fl. oz. per 1,000 sq. f Propiconazole Select rate with a registered contact fungicide at the label rate.
Summer Patch, Poa Patch (Magnaporthe poae)	2. 4	88 176	14 days 28 days	Apply Propiconazole Select beginning April. Use the 4 fl. oz. per 1,000 sq. ft. ra on a 28-day schedule and the 2 fl. oz. p 1,000 sq. ft. rate on a 14-day schedule.

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Turfgrass—Specific Diseases, Rates, and Application Timing				
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<b>Take-All Patch</b> (Gaeumannomyces graminis)	2-4	88-176	Spring and Fall	Apply Propiconazole Select to reduce the severity of take-all patch. Make 1 to 2 fall applications in September and October or when night temperatures drop to 55°F, and 1 to 2 spring applications in April and May, depending on local recommendations.
Disease	FI. Oz. Per 1,000 Sq. Ft.	Fl. Oz. Per Acre	Application Interval/ Timing	Instructions
Spring Dead Spot (Leptosphaeria korrae, Leptosphaeria narmari, Ophiosphaerella herpotricha, Gaeumannomyces graminis)	4	176	30 days	Make 1 to 3 applications. For one application, apply in September or October. For multiple applications, begin sprays in August.
Necrotic Ring Spot (Leptosphaeria korrae)	4	176	Fall or Spring	Apply in the fall and/or the early spring depending on local recommendations.
Snowmold Gray (Typhula spp.) Pink (Microdochium nivale)	2-4	88-176	Late Fall	Apply one application in the late fall before snow cover. Do not apply on top of snow. For optimum disease control, the 2 and 3 fl. oz. Propiconazole Select rates should be tank mixed with either PCNB or chlorothalonil at label rates.
Fusarium Patch (Fuasrium nivale)	2-4	88-176	Fall-Early Spring	Apply when conditions are favorable for disease development.
Yellow Patch (Rhizoctonia cerealis)	3-4	130-176	Late Fall	Apply one application in the late fall before snow cover. Do not apply on top of snow. If using a 3 fl. oz. per 1,000 sq. ft. rate, tank mix with a registered contact fungicide at the label rate.
Zoysia Patch, large patch of zoysia ( <i>Rhizoctonia</i> <i>solani</i> )	3-4	130-176	Early Fall	Make one application in the early fall (mid- September to mid-October) prior to development of disease symptoms. Consult local turfgrass extension experts to determine the optimum application timing for your area.

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Dichondra—Specific Disease, Rates, and Application Timing						
Dichondra Rust (Puccinia dichondrae)	2	88	14-21 days	Apply when conditions disease development.	are favorab	le for

## Establishment of Cool Season Turfgrass

Propiconazole Select provides control of many diseases of turf, and its primary use is as a fungicide for use against the diseases listed on this label. As an additional benefit, Propiconazole Select will improve the rate of establishment when it is applied to cool season grass seedlings or sod.

**New Seedlings:** Apply 1 fl. oz. per 1,000 sq. ft. at the 2- to 3-leaf stage of growth for faster root development and top growth.

**Sod:** Apply 1 fl. oz. per 1,000 sq. ft. 2-6 weeks before cutting for increased sod knitting and faster establishment after laying.

#### DISEASE CONTROL IN NURSERIES (FIELD) AND LANDSCAPE PLANTINGS

- 1. USE PROPICONAZOLE SELECT IN A PREVENTIVE DISEASE CONTROL PROGRAM. To determine the use directions for controlling a disease on an ornamental plant species, select the plant species in Table 1. The number in parentheses following the plant species refers you to the disease(s) controlled in Table 2. Find the disease in Table 2. The letter in brackets following the disease refers you to the application regime in Table 3.
- 2. Allow spray to dry before overhead irrigation is applied.
- 3. Optimum benefit of Propiconazole Select is obtained when used in conjunction with sound disease management practices.

### General Recommendations

Propiconazole Select may be used at rates of 2-24 fl. oz. per 100 gals. of water for control of diseases of ornamental plant species (see Tables 1, 2, and 3.)

**Note:** You can apply up to 5.4 gals. of Propiconazole Select per acre per crop per calendar year. For general disease control in landscapes, apply 6-8 fl. oz. per 100 gals. of water every 21 days. For best control, begin Propiconazole Select applications before disease development.

**Note:** Plant tolerances to Propiconazole Select have been found acceptable for the specific genera and species of plants listed under the DIRECTIONS FOR USE. In addition, crop tolerance to Propiconazole Select has been demonstrated (at a rate of 6-8 fl. oz. per 100 gals.) on the following ornamental plants: ajuga, Bartlett pear, bayberry, camelia, candy tuft, cotoneaster, elm, English ivy, euonymus, German statice, holly, hollyhock, impatiens, linden, liriope, magnolia, maples, peony, privet, raphiolepis, redbud, sweetgum, sycamore, tulip tree, vinca, and wax myrtle. Other plant species may be sensitive to Propiconazole Select and diseases other than those listed may not be controlled. Before using Propiconazole Select on ornamental plants or for diseases that are not listed in the DIRECTIONS FOR USE, test Propiconazole Select on a small-scale basis first. Do not apply Propiconazole Select to African violets, begonias, Boston fern, or geraniums. Apply the recommended rates for a particular type of disease, i.e., rust, powdery mildew, etc., and evaluate for phytotoxicity and disease control prior to widespread use.

## Table 1. Ornamentals—Plant Species

Numbers in parentheses refer to diseases controlled. See Table 2.

#### Herbaceous Ornamentals

Calendula (4a) Carnation (5f) Chrysanthemum (2a) Delphinium (4a) Gomphrena (3a) Iris (5d) Marigold (3a) Monarda (4c) Phlox (4c)

Snapdragon (5d) Sweet William (3k) (Dianthus barbatus) Zinnia (4c) Amelanchier (4d) Ash (4c) Azalea (2c, 4b) Crabapple (3c, 3q, 4c, 5a) Crape Myrtle (4a) Dogwood (3h, 4c) Douglas Fir (5b) Hawthorn (5a) Juniper (1a)

Woody Ornamentals

Lilac (4c) Oaks (3p) Pines (1b, 1c) Poplars (5b) Pyracantha (3o) Red Tip Photinia (3i) Rhododendron (2c, 3n) Roses (3g, 4e, 5c) (Outdoor Use Only) Shasta Fir (5e) Nonbearing Fruits and Nuts (Nurseries and Landscape Plantings) Apple (3q, 4d, 5a) Cherry (2b, 3d) Citrus (3m) Nectarine (2b) Peach (2b) Pecan (3b, 3c, 3f, 3l, 3n, 4e) Plum (2b) Walnut (3j)

#### Table 2. Diseases

Letters in brackets refer to application regimes. See Table 3.

- 1. Conifer Blights
  - a. Phomopsis juniperovora (Phomopsis Blight) [B]
  - b. Sirrococcus strobolinus (Tip Blight) [D]
  - c. Sphaeropsis sapinea (Diplodia Tip Blight) [B]
- 2. Flower Blight
  - a. Ascochyta chrysanthemi (Ray Blight) [C]
  - b. Monilinia spp. [A]
  - c. Ovulinia spp. [B]
- 3. Leaf Blights/Spots
  - a. Alternaria spp. [B]
  - b. Cercospora spp. (Brown Leaf Spot) [C]
  - c. Cladosporium spp.(Scab) [C]
  - d. Coccomyces hiemalis [A]
  - e. Colletotrichum spp. [B]
  - f. Cristulariella spp. (Zonate leafspot) [C]
  - g. Diplocarpon rosae (Blackspot) [B]
  - h. Discula spp. (Anthracnose) [A]
  - i. Fabraea maculata (syn. Entomosporium maculata) [B]
  - j. Gnomonia leptostyla (Anthracnose) [C]
  - k. Heterosporium echinulatum [B]
  - I. Mycosphaerella caryigena (Downy Spot) [C]
  - m. Mycosphaerella fructicola (Greasy Spot) [E]
  - n. Septoria spp. (Leaf Scorch) [C]
  - o. Spilocaea pyracanthae [B]
  - p. Tubakia dryina [D]
  - q. Venturia inaequalis (Scab) [A]

#### Table 2. Diseases

Letters in brackets refer to application regimes. See Table 3.

- 4. Powdery Mildew
  - a. Erysiphe spp. [B]
  - b. Microsphaera spp. [C]
  - c. Oidium spp. [B]
  - d. Podosphaera spp. [B]
  - e. Sphaerotheca pannosa [B]
- 5. Rust
  - a. Gymnosporangium juniperi-virginianae [A]
  - b. Melampsora occidentalis [D]
  - c. Phragmidium spp. [B]
  - d. Puccinia spp. [B]
  - e. Pucciniastrum goeppertianum [D]
  - f. Uromyces dianthi {B]

#### **Table 3. Application Regimes**

- [A] Mix 2-4 fl. oz. of Propiconazole Select in 100 gals. of water and apply as a full coverage spray to the point of drip. Apply every 14-21 days during the period of primary infection. If disease is present, tank mix with an EPA-registered contact fungicide. For flower blight, apply Propiconazole Select when there is 5-10% bloom and again at 70-100% bloom. For dogwoods, apply the 2-4 fl. oz. rate every 14 days, or apply 8 fl. oz. of Propiconazole Select every 28 days.
- [B] Mix 5-8 fl. oz. of Propiconazole Select in 100 gals. of water and apply as a full coverage spray to the point of drip. Apply as needed, beginning when conditions are favorable for disease development. For blackspot, apply with a registered contact fungicide labeled for black spot. For Calendula, apply every 30 days. For diplodia tip blight, make 3 applications every 14 days prior to major period of infection. For juniper phomopsis blight, make first application as soon as junipers start to grow, and repeat the applications every 14-21 days during periods of active growth.
- [C] Mix 8-12 fl. oz. of Propiconazole Select in 100 gals. of water and apply as a full coverage spray to the point of drip. Apply every 30 days beginning when conditions are favorable for disease development. For pecans, apply the 12 fl. oz. rate beginning at bud break. Apply 3 times on 14-day intervals. For walnut, apply 8.5 fl. oz. at 14- to 21-day intervals. For ray blight, apply 12 fl. oz. at 7-day intervals or 20 fl. oz. at 14-day intervals.
- [D] Mix 16 fl. oz. of Propiconazole Select in 100 gals. of water and apply as a full coverage spray to the point of drip. Apply every 14-28 days, beginning when conditions are favorable for disease development. For Douglas fir needle rust, apply once in May. For tip blight, initiate applications in mid-late winter, and apply 3 times at 2-month intervals.
- [E] Mix 20-24 fl. oz. of Propiconazole Select in 100 gals. of water and apply as a full coverage spray to the point of drip. Apply during June to August time period.

Do not apply to apple, cherry, citrus, nectarine, peach, pecan, plum, or walnut trees that will bear harvestable fruit within 12 months.

### A FLARE ROOT-INJECTED SYSTEMIC FUNGICIDE FOR CONTROL OF SELECTED DISEASES IN TREES

## **General Information**

Propiconazole Select is a systemic fungicide for use as a flare root injection for prevention and treatment of (1) oak wilt (*Ceratocystis fagacearum*) of oaks (*Quercus spp.*), (2) Dutch elm disease (*Ophiostroma ulmi*) of elms (*Ulmus spp.*), (3) sycamore anthracnose (*Apiognomonia veneta*), and (4) leaf diseases (i.e., *Venturia inaequalis, Gymnosporangium juniperi-virginianae, Pucciniastrum goeppertianum*, etc.) of crabapple (*Malus spp.*). It is recommended that Propiconazole Select be administered by trained arborists or others trained in injection techniques and in the identification of tree diseases.

**Notes:** The active ingredient in Propiconazole Select has been shown to be safe on a wide range of plant species. Before using Propiconazole Select on ornamental plants or for diseases that are not listed in the DIRECTIONS FOR USE, test Propiconazole Select on a small-scale basis and evaluate for phytotoxicity and disease control prior to widespread use.

## Correct Location for Injector Placement

The flare root area is the transitional zone between the trunk and the root system. Uptake and distribution of Propiconazole Select is more effective when injections are made into the flare roots. In addition, wounds created in the flare root area close more rapidly in comparison to wounds above the flare root area.

## **Tree Preparation**

- 1. Heavy, thick, or loose outer bark may be carefully shaved to form a smoother injection point and to ensure the operator that the drill hole penetrates through the bark to the xylem.
- 2. If the flare roots are not clearly exposed, carefully remove 2 to 4 inches of soil from the base of the tree to uncover the top of the flare roots. Brush away loose soil.
- 3. Drill holes through the bark, into sapwood, using a clean sharp drill bit. Drill hole diameter should be adequate to allow insertion of injection tees and formation of air tight contact between active xylem and the delivery point of the injection tees. Generally, a drill hole diameter of 7/32–5/16 inch for elms, sycamores, and crabapples, and 5/16 inch for oaks is appropriate. Follow manufacturer's instructions for the particular injection device used in the treatment.

Drill hole depth should be adequate to deliver the product into active xylem tissue. Generally, <sup>3</sup>/<sub>4</sub> inch depth is appropriate, but trees with thick bark may require increased drill hole depth to reach the active xylem layer. Space injectors 3 to 6 inches apart around the base of the tree. Do not drill in the valleys between the flare roots or into cankered areas. Drill above these areas into the trunk, then continue again into sound sapwood on the flares.

- 4. Disinfect the drill bit between trees with household bleach (20% solution), ethanol, or other disinfectant. Rinse bit with clean water after disinfecting.
- 5. Insert into the drilled holes the injection ports ("tees") which are connected to plastic tubing. The tubing should have inlet and outlet valves.
- 6. Mix the specified amount of Propiconazole Select and water thoroughly in the tank before beginning the injection treatment.

#### Tree measurement

Measure the diameter of the tree using a tree diameter-tape (D-tape) at  $4\frac{1}{2}$  feet above the ground. This is the diameter at breast height (DBH). If only a regular tape is available, measure the tree circumference and divide that number by 3.14. For crabapples, measure the diameter at the point where the tree begins to branch.

### Preparation of Injection Solution

Dilute 10 ml of Propiconazole Select in up to 1 liter of water per inch DBH. Refer to the following table as an example of the amounts of Propiconazole Select and water to use:

DBH inches	Treatment Level (ml)	Water Volume* (liters)
5	50	5
10	100	10
15	150	15
20	200	20
25	250	25
30	300	30
35	350	35
40	400	40

\*Use up to amount indicated.

#### Injection

For pressurized injections, with the outlet valve open, connect the tank to the inlet valve and begin pumping solution until all air bubbles come out of the outlet valve. Direct the solution into a container and return the solution to the tank. Shut off the outlet valve. Pressurize tank to 20 to 30 psi. Check for leaks and gently tap in tees if necessary. Maintain continuous pressure on the injection system until the full amount of solution is in the tree.

After injection is complete, remove injection tees and leave drill holes unplugged. A water flush to cleanse the hole will assist with wound closure. Soil should be replaced around the tree. It is not necessary to treat the drill holes with wound paint or other sealing compounds.

Contact your local extension agent for more details on tree injection. The injection system described is meant as an example; please refer to manufacturer's instructions when using other types of tree injection systems.

#### Retreatment

At the initial injection of Propiconazole Select, take notes on the level of disease in each tree. Reevaluate disease level in trees at 12-month intervals after treatment for the potential need for retreatment with Propiconazole Select. Preventive applications should be considered 12 to 36 months after the initial injection. Trees in high disease risk areas or high value trees should be evaluated for possible retreatment 12 months after each treatment. Follow application procedures described above for repeat injections; new drill holes will be needed for subsequent treatments.

## OAK WILT: OAKS

#### Preventive and Therapeutic Treatment

Use 10 ml of Propiconazole Select in up to 1 liter of water per inch DBH. For very high disease pressure, 20 ml of Propiconazole Select per inch DBH may be used.

In the upper Midwest, treat oaks after June 15. Wounds in oaks in the upper Midwest between May 15 and June 15 attract insects that transmit the oak wilt pathogen.

Oak trees exhibiting less than 20% crown loss from oak wilt have the best chance of responding to treatment by Propiconazole Select. Preventive application is more effective than therapeutic treatment. Trees in advanced stages of disease development may not respond to treatment.

Uninfected trees will generally absorb the full amount of Propiconazole Select/water solution within 2 hours when injected under pressure. Trees exhibiting specific symptoms or those symptomless trees immediately adjacent to a diseased tree should be considered infected. Symptomless trees separated by a primary plow line from diseased trees may be at less risk of infection. Infected trees will absorb the material more slowly due to the vascular plugging caused by the disease. If the Propiconazole Select water solution is not absorbed within 24 hours, the tree is considered high risk and has a poor chance of survival.

See the GENERAL INFORMATION section for details on retreatment.

## LEAF DISEASES: CRABAPPLES

#### Preventive Treatment

Use 10 ml of Propiconazole Select in up to 1 liter of water per inch trunk diameter. For trees less than 10 inches trunk diameter, use 6 ml of Propiconazole Select per inch trunk diameter. Make applications when the trees are in full leaf and actively growing for control of the next season's leaf disease development. Disease symptoms may not be reduced the year of application. Do not use fruit from treated trees for food or feed purposes.

See the **GENERAL INFORMATION** section for details on retreatment.

#### ANTHRACNOSE: SYCAMORE

#### **Preventive Treatment**

Use 10 ml of Propiconazole Select in up to 1 liter of water per inch DBH. For trees less than 10 inches DBH, use 6 ml of Propiconazole Select per inch DBH. Make applications when the trees are in full leaf and actively growing for control of the next season's anthracnose development.

See the GENERAL INFORMATION section for details on retreatment.

### DUTCH ELM DISEASE IN ELMS

## **Preventive and Therapeutic Treatment**

Use 6-10 ml of Propiconazole Select in up to 1 liter of water per inch DBH. For very high disease pressure, 20 ml of Propiconazole Select per inch DBH may be used.

**Notes:** (1) Accurate diagnosis of Dutch elm disease is important since Propiconazole Select only provides control of Dutch elm disease in elms. (2) Propiconazole Select will be most effective when used in conjunction with other cultural practices recommended for management of Dutch elm disease (removal of dead elm trees, pruning of diseased tree limbs and branches, control of bark beetles, etc.) (3) Preventive applications can be made at 6 to 10 ml/inch DBH. The 6 ml rate should provide 24 months control and the 10 ml rate should provide 36 months control. (4) Therapeutic treatment in trees showing disease symptoms should be made at 10-20 ml/inch DBH. Retreatment may be needed every 12 to 36 months. Trees in advanced stages of disease development may not respond to treatment. For further information on the proper diagnosis and control of Dutch elm disease, consult your local extension agent.

See the **GENERAL INFORMATION** section for details on retreatment.

## STORAGE AND DISPOSAL

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

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water 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 in proper disposal methods.

**CONTAINER STORAGE:** Non-refillable container. Do not reuse empty container. Triple rinse container (or equivalent), 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. Stay out of smoke from burning containers. 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 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.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call CHEMTREC at 1-800-424-9300 day or night.

## WARRANTY STATEMENT

Select Source, LLC, warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with 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 Select Source, LLC. To the extent allowed by law, Select Source, LLC, shall in no event be liable for consequential, special, or indirect damages resulting from the use or handling of this product. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer. In addition to the foregoing, no purchaser of this product (other than an end user) shall be entitled to any reimbursement for any loss suffered as a result of any suspension or cancellation of the registration for this product by the U.S. Environmental Protection Agency. Except, as expressly provided herein, Select Source, LLC. makes no warranties, guarantees, or representations of any kind, either expressed or implied, or by usage of trade, statutory or otherwise, with regard to the product sold, including, but not limited to merchantability, fitness for a particular purpose, use or eligibility of the product for any particular trade usage. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damage resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall be damages not exceeding the purchase price paid for this product or, at Select Source, LLC. election, the replacement of this product.