

400-433

08/07/2000

STREET 1/5



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 7 2000

Judith O Ball  
Uniroyal Chemical Company, Inc  
74 Amity Road  
Bethany, CT 06524-3402

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Review of Labeling Amendment  
Terraguard 50W  
EPA Reg. No. 400-433  
Your Submission Dated November 9, 1999

Dear Ms Ball

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments below.

There has been a recent change in the Worker Protection Standard (WPS) labeling regarding the use of the term "waterproof gloves". Under Personal Protective Equipment, add "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." Change "waterproof gloves" to "chemical-resistant gloves made of any waterproof material" in the PPE statement and in the Agricultural Use Requirements box.

A stamped copy of the labeling is enclosed for your records. Please submit one (1) copy of your final printed labeling before you release the product for shipment.

If you have any questions, then please contact Summer Gardner-Jenkins of my staff at (703) 308-9353.

Sincerely,

A handwritten signature in cursive script that reads "Mary L. Waller".

Mary L. Waller  
Product Manager, Team 21  
Fungicide Branch  
Registration Division (7505C)

Enclosure

# Terraguard® 50W <sup>2/5</sup>

ORNAMENTAL FUNGICIDE

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

AUG 7 2000

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

400-433

## COMPOSITION

Active Ingredients: (% by weight)

triflumizole

1-[1-[[4-chloro-2-(trifluoromethyl) phenyl] imino]-2-

propoxyethyl]-1H-imidazole ..... 50%

Inert Ingredients: ..... 50%

Total: ..... 100%

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

### STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of Ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed, or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Do not get in eyes, on skin or on clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact with this product may cause allergic skin reactions in some individuals.

#### PERSONAL PROTECTIVE EQUIPMENT

**Applicators and Other Handlers Must Wear:** A long-sleeved shirt & long pants; waterproof gloves; shoes plus socks.

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

When handlers use closed systems or 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.

#### USER SAFETY RECOMMENDATIONS

Users 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

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

#### PHYSICAL or CHEMICAL HAZARDS

Do not use or store near heat or open flame.

Net contents:

**UNIROYAL  
CHEMICAL**

Uniroyal Chemical  
Company, Inc.  
Middlebury, CT 06749

EPA REG. NO. 400-433

EPA EST. NO.

011

### DIRECTIONS FOR USE

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

Read entire label directions before using.

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 12 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; waterproof gloves; and shoes plus socks

#### 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. Keep unprotected persons out of treated areas until sprays have dried.

#### GENERAL INFORMATION

TERRAGUARD 50W ornamental fungicide is effective in controlling a variety of diseases on all ornamental plants grown in the following areas:

- Greenhouses and shadehouses
- Nurseries, including Christmas tree / conifer plantations.
- Interiorscapes

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#### APPLICATION NOTES

TERRAGUARD 50W provides excellent protectant activity and is most effective when applied prior to the onset of disease following recommended rates. When not used in preventative programs, TERRAGUARD can also be applied after disease symptoms appear and provide good eradicator activity.

Applications can be made as a foliar spray, soil drench, cutting soak and through chemigation equipment.

**FOLIAR SPRAYS:** The recommended rate of application is 1 to 2 gallons of spray mixture to cover 200 sq. ft. of area or 200 to 400 gallons per acre. Required spray volumes will vary greatly depending on both the size and spacing of the plant, and should only be enough to ensure thorough coverage of the foliage just prior to the point of drip.

**SOIL DRENCHES:** Apply the recommended rate of TERRAGUARD 50W according to the guidelines below. The application should be made to plants which have been well watered one day prior to application. For best results, irrigation with additional water should not be made until 24 hours after application.

#### FOR CONTAINER GROWN PLANTS

Pot Diameter (inches)	Minimum Drench Volume (fl. oz./pot)
4	1.5
5	3
6	4
8	7
10	13
12	18

#### FOR BED AND BENCH GROWN PLANTS

Soil Depth (inches) to be Drenched	Coverage for TERRAGUARD 50W Drench Mix	
	Fl. oz./Sq. ft.	Sq. ft./100 gals.
2 or less	16	800
3	24	530
4 or more	32	400

#### USE AND RATE RECOMMENDATIONS - ORNAMENTALS

FOLIAR DISEASES	DUNCES TERRAGUARD 50W PER 100 GALS. (TSP./GAL.)	APPLICATION NOTES
Aerial Blight (Rhizoctonia solani)	4 - 8 ( $\frac{2}{3}$ - $1\frac{1}{3}$ )	<p>For optimum disease control, initial applications should be made prior to, or at very first sign of disease.</p> <p>Repeat applications at 7 to 14 day intervals as needed.</p> <p>Use high rates for initial applications under disease pressure. Low rates can be used for subsequent applications and preventative sprays.</p>
Botrytis Blight (Botrytis cinerea)		
Leaf Spot (Alternaria spp.) (Exserohilum rostratum) (Helminthosporium rostratum)		
Petiole Rot (Myrothecium roridum)		
Powdery Mildew (Erysiphe cichoracearum) (Erysiphe lagerstromiae) (Oidium spp.) (Podosphaera spp.) (Sphaerotheca pannosa)	4 - 16 ( $\frac{2}{3}$ - $2\frac{2}{3}$ )	<p>For powdery mildew control:</p> <ul style="list-style-type: none"> <li>• Use the 16 oz/100 gal. rate only for initial applications to existing infections</li> <li>• Use 4 to 8 oz./100 gals. for subsequent applications and preventative sprays.</li> </ul>
Rust (Puccinia spp.) (Gymnosporangium spp.)	2 - 8 ( $\frac{1}{3}$ - $1\frac{1}{3}$ )	
Scab (Venturia spp.)	4 - 8 ( $\frac{2}{3}$ - $1\frac{1}{3}$ )	

USE AND RATE RECOMMENDATIONS - ORNAMENTALS

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SOIL BORNE DISEASES	OUNCES TERRAGUARD 50W PER 100 GALS. (TSP./GAL.)	APPLICATION NOTES
Black Root Rot (Thielaviopsis spp.)	1 - 4 ( $\frac{1}{8}$ - $\frac{3}{8}$ )	Apply soil drenches at 2 to 4 week intervals as needed. Use higher rate under heavy disease pressure.
Cylindrocladium Root Rot and Petiole Rot (Cylindrocladium spathiphylli)	4 - 8 ( $\frac{3}{8}$ - $1\frac{1}{8}$ )	Apply soil drenches at 2 to 4 week intervals as needed. Use higher rate under disease pressure which can occur under warmer conditions. <b>NOTE:</b> Applications may be made as a heavy spray over the foliage however, the volume applied should be the same as that required for the soil drench to insure adequate soil penetration.
Cylindrocladium Root Rot, Wilt and Crown Canker (Cylindrocladium scoparium) (Cylindrocladium thraae)	12 - 16 (2 - $2\frac{3}{8}$ )	<b>FOR PLANTS BEING PROPAGATED:</b> The cutting soak plus soil drench application may be necessary to provide control, therefore treatment should consist of both methods of application. <b>Pre-stick cutting soak:</b> Soak cuttings for 10 minutes. Slight agitation of the mixture is required to maintain proper suspension.
	6 - 8 (2 - $1\frac{1}{8}$ )	<b>Soil Drench:</b> The higher rate should be used under heavier disease pressure. Apply additional drenches at 2 to 4 week intervals as needed. Normally 2 to 4 applications are sufficient. <b>NOTE:</b> Do not exceed 8 ozs./600 sq. ft. of bed or bench area as injury and/or inhibition of rooting may occur.
	6 - 12 (1 - 2)	<b>FOR PLANTS WITH ESTABLISHED ROOT SYSTEMS:</b> <b>Soil Drench:</b> Use higher rate under heavier disease pressure. Lower rates may be used in subsequent application. Apply additional drenches at 2 to 4 week intervals as needed. Normally 2 to 4 applications are sufficient. If reinfection occurs at a later date, retreatment may be necessary.
Fusarium wilt (Fusarium spp.)	4 - 8 $\frac{3}{8}$ - $1\frac{1}{8}$	Apply soil drenches at weekly intervals as needed. Use higher rate under heavy disease pressure.
Root Rot (Rhizoctonia solani)	4 - 8 ( $\frac{3}{8}$ - $1\frac{1}{8}$ )	Apply soil drenches at 2 to 4 week intervals as needed. Use higher rate under heavy disease pressure.

**PLANT TOLERANCE:**

When used on bedding plant plugs, do not exceed 2 ozs./100 gals. water. Some cultivars of impatiens have shown a sensitivity to applications of TERRAGUARD 50W.

DO NOT USE ON IMPATIENS PLUGS.

ON IMPATIENS TRANSPLANTS, DO NOT EXCEED 2 OZS./100 GALS.

Neither the manufacturer nor the seller has determined whether or not TERRAGUARD 50W can be used safely on all ornamental plants. Prior to any large scale application, the user should determine the safety of TERRAGUARD 50W by testing a small number of the type of plants to be treated at the recommended rates. Observe the treated plants for symptoms of phytotoxicity which may occur as stunting, foliage burn or, for plants being propagated, as an inhibition of rooting. This may take up to two months for species that do not root readily.

**USE DIRECTIONS FOR CHEMIGATION:**

In addition to the above use rates and recommendations, the following precautions must be observed when using this product in any type of irrigation system:

Apply this product only through the following systems:

- 1) Overhead sprinklers such as impact or micro-sprinklers,
- 2) Micro-irrigation such as spaghetti-tube or individual tube irrigation,
- 3) Mist-type irrigation such as fog systems,
- 4) Hand-held calibrated irrigation equipment such as the hand-held wand with injector.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system, (including greenhouse systems), used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

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

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

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

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS**

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.

Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the

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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 systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**IMPORTANT NOTICE**

The directions and recommendations on this label are derived from research to ensure correct product usage. Insufficient control may result from extremes in weather conditions, or lack of following label instruction. The use of this product is beyond the control of Uniroyal and seller. Buyer is responsible for proper use as per directions and acceptance of product performance under extraordinary or unusual weather conditions.

Uniroyal is not responsible for losses or damage resulting from using TERRAGUARD in any manner not specifically recommended.

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty of merchantability nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in a cool, dry location.

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

**CONTAINER DISPOSAL:**

**Plastic:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**EMERGENCY ASSISTANCE:**

**UNIROYAL CHEMICAL EMERGENCY PHONE 203-723-3670**  
**SAFETY DATA AND INFORMATION 203-573-3303**  
**TRANSPORTATION EMERGENCY (CHEMTREC) 800-424-9300**

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