



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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

SEP 2 2 2010

Richard M. Gorrell Bayer Environmental Science 2 T. W. Alexander Drive Research Triangle Park, NC 27709

SUBJECT: Label Amendment

Reserve Fungicide

EPA Reg. No. 432-1486; Decision # 436532

Your Submission Dated June 23, 2010

Dear Mr. Gorrell:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended; to add plant health claims for turf is acceptable provided that you make the following labeling changes:

- 1. On page 7, the last paragraph, "RESERVE" is misspelled.
- 2. On page 7, the last paragraph, change "resulting in faster spring green up..." to "which can result in faster spring green up..."
- 3. On page 7, the last paragraph, second line; the second sentence; place a comma between fall and RESERVE.

Your application mentions a Plant Health Brochure. ny website, brochure or other related information must make identical changes in this new claim.

Submit one copy of your final printed labeling before you release your product for shipment. This label supersedes all previously accepted labels.

If you have any questions regarding this correspondence, contact Rose Kearns of my staff by phone at 703-305-56111 or via email at <a href="kearns.rosemary@epa.gov">kearns.rosemary@epa.gov</a> or myself at 703-308-9358 or via email at <a href="kish.tony@epa.gov">kish.tony@epa.gov</a>.

Sincerely,

Tony Kish

Product Manager 22

Fungicide Branch

Registration Division (7504P)

#### with COMMENTS REPA Letter Dated

SEP 22 2010

Under the Federal Insecticide Fundicide, and Rodenticide Act as amended, for the pecticide

# as amenuea, 1- m. Francisco No. 432-1486

# RESERVE™ FUNGICIDE

A Fungicide For The Enhancement Of Greener And More Dense Turfgrass And For The Protection Against Winter Stress and for the control of diseases of commercial and institutional turfgrasses on golf courses, sod farms. commercial lawns, cemeteries, and professional athletic fields including colleges and universities.

ACTIVE INGREDIENT:	
Triticonazole:	5%
Chlorothalonil:	40%
OTHER INGREDIENTS:	55%
	TOTAL 100%
Reserve™ Fungicide contains 0.54 lbs triticonazole and 4	.25 lbs chlorothalonil per US gallon.
EPA Reg. No. 432-1486	EPA Est. No.

## **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.)

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577 For PRODUCT USE Information Call 1-800-331-2867

#### **FIRST AID**

IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.			
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.			
	Call a poison control center or doctor for treatment advice.			
IF ON SKIN OR	Take off contaminated clothing.			
CLOTHING:	Rinse skin immediately with plenty of water for 15-20 minutes.			
	Call a poison control center or doctor for treatment advice.			
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice.			
	Do not induce vomiting unless told to do so by a poison control center or doctor.			
	Have person sip a glass of water if able to swallow.			
	Do not give anything by mouth to an unconscious person.			
Have the product contained	er or label with you when calling a poison control center or doctor or going for treatment.			
NOTE TO PHYSICIAN: Treat Symptomatically.				

#### PRECAUTIONARY STATEMENTS

## HAZARD TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. Do not get in eyes, on skin, or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if swallowed or absorbed through the skin. 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)

Applicators and all other handlers must wear protective eyewear, long-sleeved shirt, long pants, shoes plus socks, and chemical resistant gloves made of any waterproof material.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product concentrate. Do not reuse them.

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

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#### **USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users should remove clothing immediately if pesticide gets inside. Then wash body thoroughly and change into clean clothing. The contaminated clothing should be washed before reuse.

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

#### **Engineering Control Statements:**

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.

#### **ENVIRONMENTAL HAZARDS**

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

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

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

#### STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original container and keep tightly closed when not in use. Store in a cool dry place. Avoid cross contamination with other pesticides.

Pesticide Disposal: Pesticide wastes may be 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 instruction, 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 Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) 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. After triple rinsing procedure dispose of container.

#### **DIRECTIONS FOR USE**

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

Read entire label before using this product.

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.

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, socks plus shoes, and protective eyewear.

Special Eye Irritation Provisions: This product is a severe eye irritant. Although the restricted-entry interval expires after 12 hours, for the next 6 ½ days entry is permitted only when the following safety measures are provided:

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

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when the product is used to produce agricultural plants on farms, nurseries or greenhouses.

DO NOT enter or allow others to enter treated areas until sprays have dried.

#### **GENERAL INFORMATION**

RESERVE FUNGICIDE is a broad spectrum fungicide with preventative, contact, systemic, residual and curative properties recommended for the control or suppression of certain turf diseases. Disease control is optimal when RESERVE FUNGICIDE is applied in a preventative and scheduled spray program and used in rotation with other fungicides.

Failure to follow these label instructions may result in turfgrass injury and inferior turfgrass quality. This product may cause staining. Avoid off-target sites such as sidewalks, patios, driveways, pavers or similar materials.

RESERVE FUNGICIDE can be used on all commercial, institutional turfgrass, such as golf courses, sod farms, commercial lawns, cemeteries, and professional athletic fields including colleges and universities.

#### **GENERAL USE PRECAUTIONS**

#### **APPLICATION INFORMATION**

RESERVE FUNGICIDE may be used alone to control important diseases of turfgrass or alternatively used in tank mix or sequentially with other registered turfgrass fungicides.

Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective disease control. Do not make applications when conditions favor drift beyond the target application area. All applications of RESERVE FUNGICIDE must be made in accordance with the use directions of this label.

RESERVE FUNGICIDE, when combined with other products such as Chipco® Signature®, will relieve the symptoms of summer stress syndrome/decline.

#### **Turfgrass Species:**

Colonial and Creeping Bentgrass
Common and Hybrid Bermudagrass\*
Annual, Rough and Kentucky Bluegrass
Buffalograss
Dichondra
Tall Fescue
Seashore Paspalum
Annual and Perennial Ryegrass
Zoysiagrass
Kikuyugrass

<sup>\*</sup>Refer to section on GENERAL RESTRICTIONS AND LIMITATIONS.

Avoid the shorter application intervals if the turf is under excessive stress in the summer time or under an intensive growth control program.

#### **Ground Application**

For ground application equipment use the appropriate product quantities described in this label in 1 to 5 gallons of water per 1,000 sq ft for turf (44 to 220 gallons per acre).

#### SPRAY MIXING AND COMPATIBILITY

In general, begin with clean spray equipment, add one-half of the required quantity of water to the spray or mixing tank and start agitation and add the required quantity of fungicide and the tank-mix partner if applicable to the water and complete filling with water to the required total volume. Follow the recommendations of your State Cooperative Extension Service for tank-mixing with other products. In general, follow the order beginning first with water soluble packaging (wait for it to completely dissolve), wettable powders and water-dispersible granular products, liquid flowables and suspension concentrates and emulsifiable concentrates last. Maintain agitation throughout spraying. Do not allow spray mixture to remain in the tank overnight, or for long periods during the day without agitation.

The turf safety of all potential tank-mixes with RESERVE FUNGICIDE including additives and other pesticides has not been tested on all turf type variants. Before applying any tank-mixture not specifically recommended on this label, safety to the target turf should be confirmed. RESERVE FUNGICIDE is compatible with most commonly used fungicide, herbicide, insecticide, growth regulator and foliar nutrient products. However, the physical compatibility of RESERVE FUNGICIDE with all potential tank-mix partners has not been fully investigated. If tank mixing with other pesticides is desirable, conduct a jar test with the volumes and rates typically used in agricultural application. Using a small container of water, add the proportionate amounts of the products: wettable powders and water-dispersible granular products first, then liquid flowables and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 15 minutes. Look for signs of separation, globules, sludge, flakes, or other precipitates. Physical compatibility is indicated if the combination remains mixed or can be remixed readily.

- The use of a soil penetrating adjuvant may improve the movement into the soil when irrigation after treatment is required for disease control. For soil borne diseases Reserve can be watered in after application.
- Combinations of RESERVE FUNGICIDE at high labeled rates with PGRs may impact turf quality and reduce turf growth particularly during period of heat stress and high humidity.
- When preparing spray mixtures of RESERVE FUNGICIDE with Bayer Products add the products in the following order: 1) Water dispersible products, 2) RESERVE FUNGICIDE followed by other suspension concentrates such as 26 GT<sup>®</sup>, and lastly 3) Chipco® Signature®.

When tank-mixing with other products, it is the responsibility of the end-user/applicator to insure that the tank-mix partner is registered in the state where the application is being made.

#### RESISTANCE MANAGEMENT

The active ingredient, triticonazole, in RESERVE FUNGICIDE belongs to

- 1). Sterol Inhibitors or Demethylation Inhibitors classes of chemistry (Group 3).
- 2). To maintain long term effectiveness of this fungicide follow the specific resistance management guidance from a local extension specialist.

#### **GENERAL RESTRICTIONS AND LIMITATIONS**

DO NOT apply more than the maximum seasonal rate from any combination of products containing triticonazole.

DO NOT apply more than 18 fl oz of RESERVE FUNGICIDE per 1,000 sq ft (49.3 pts/A) per year.

DO NOT apply more than 5.4 fl oz of RESERVE FUNGICIDE per 1,000 sq ft (14.7 pts/A) as a single application.

DO NOT use for sodfarms at application rates greater than 13 lbs ai/A/yr.

Follow the TURF-SPECIFIC USE DIRECTIONS for repeat application intervals.

For golf courses only: DO NOT apply to turf cut higher than 1 inch on golf holes where water bodies are present.

Sod farm turf treated with RESERVE FUNGICIDE prior to harvest, must be mechanically cut, rolled and harvested.

This product cannot be used to formulate or reformulate any other pesticide product.

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

DO NOT apply this product to crops other than turfgrass.

DO NOT apply to areas likely to be grazed by livestock.

DO NOT feed clippings to livestock or poultry.

DO NOT apply through irrigation equipment of any type.

DO NOT use on ultradwarf bermudagrass varieties. Do not exceed 5.4 fl oz/1,000 sq ft every 30 days on any bermudagrass type. For golf courses in FL do not apply RESERVE FUNGICIDE to bermudagrass greens when temperatures exceed 90°F.

#### TURF-SPECIFIC USE DIRECTIONS<sup>1</sup>

Disease Control	Rate fl oz/1,000 sq ft	Use Information
Anthracnose (Colletotrichum cereale)	3.2-5.4	Begin fungicide applications preventatively when conditions are favorable for disease development. Continue as needed, on a 14-28 day interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
Brown Patch (Rhizoctonia solani)	3.2-5.4	Begin fungicide applications preventatively when conditions are favorable for disease development. Continue as needed, on a 14-28 day interval.
Brown Patch, Cool weather/Yellow patch (Rhizoctonia cerealis)	3.2 -5.4	Make 1 to 2 applications in the fall using a 21-28 day interval when conditions are favorable for disease development.
Brown Ring (Waitea) Patch (Rhizoctonia circinata var. circinata)	3.2 -5.4	Begin fungicide applications at the early stage of yellow ring development when conditions are favorable for disease development. Continue as needed, on a 14-28 day interval. Late curative applications will not be effective. Irrigate to move the fungicide beneath the thatch.
Dollar Spot (Sclerotinia homeocarpa)	3.2 -4.5	Begin fungicide applications preventatively. Continue as needed, on a 14-28 day interval. Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
Fusarium Patch ( <i>Microdochium nivale</i> )	3.2 -4.5	Begin fungicide applications preventively in the spring and early summer when the turf stays moist and temperatures are in the range 32-65° F. Repeat applications at 10-14 day intervals when heavy disease pressure is anticipated. <b>Under conditions for severe disease</b> use the higher rate and tank mix with 26 GT® fungicide.
Gray Snow Mold, Typhula Blight ( <i>Typhula</i> spp.)	3.2 -5.4	Begin fungicide applications preventatively in the late fall. Make 1-2 applications, repeating at 14-28 day intervals when heavy disease pressure is anticipated. <b>Under conditions for severe disease</b> use the higher rate and tank mix with Tartan or 26 GT <sup>®</sup> fungicide.
Leaf Spots, including Red Leaf Spot and Gray Leaf Spot ( <i>Dreschlera</i> spp., <i>Bipolaris</i> spp., <i>Helminthopsorium</i> spp., <i>Pyricularia</i> spp.)	3.2 -4.5	Begin fungicide applications preventatively in the late fall. Make 1-2 applications, repeating at 14-28 day intervals when conditions are favorable for development. Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
Necrotic Ring Spot (Ophiosphaerella korrae)	3.2-5.4	Begin fungicide applications preventatively when soil temperature reach 60° F in early spring or summer and continue at 28 day intervals when conditions are favorable for development. Irrigate or aerate to allow movement of fungicide into the root zone.

3.2 -4.5	Begin fungicide applications preventatively when night air temperatures reach 60° F to 70° F under periods of high rainfall when conditions are favorable for development.  Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.  Begin fungicide applications preventatively in the late fall just prior to snow cover. Make 2 applications, repeating at a 14-28 day interval when heavy disease pressure is anticipated. Under conditions or prior history for severe disease use the higher rate and tank mix with 26 GT®
	just prior to snow cover. Make 2 applications, repeating at a 14-28 day interval when heavy disease pressure is anticipated. Under conditions or prior history for severe
3.2 -4.5	fungicide.
	Begin fungicide applications preventatively when night air temperatures reach 60° F to 70° F under periods of high rainfall when conditions are favorable for development. Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
3.2 -4.5	Begin fungicide applications preventatively when conditions are favorable for disease development.  Continue as needed, on a 14-28 day interval. Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
3.2 -5.4	Begin fungicide applications preventatively when soil temperatures reach 60° F to 65° F at a 2-inch soil depth unless otherwise advised by local recommendations. Continue under active disease conditions as needed, on a 14-28 day interval. <b>Under conditions for severe disease or for an early curative application</b> , use the higher rate and shorter interval.
3.2 -5.4	Begin fungicide applications preventatively in the fall and repeat in the following spring. Make 1 to 2 applications depending on local disease conditions, repeat under active disease conditions as needed, on a 14-28 day interval. Under conditions for severe disease or for an early curative application, use the higher rate and shorter interval.
3.2 -5.4	Begin fungicide applications preventatively in the fall. Make 1-2 applications, repeating at 14-28 day intervals when conditions are favorable for development. Under preventative applications where light disease pressure is anticipated, use the lower rate and longer interval. Under conditions or prior history for severe disease or for an early curative application, use the higher rate and shorter interval.

Additional Turfgrass Uses	Rate oz/1,000 sq ft	Use Information
Algae	3.2-5.4	Use preventively the lower rate for the suppression of algae. Continue as needed, on a 14-28 day interval. Tank mix with chlorothalonil or mancozeb to improve the curative control of algae.
Summer stress syndrome / summer decline	3.2-5.4	Begin applications prior to the onset of conditions for abiotic stress to reduce symptoms of summer stress/decline. Continue as needed, on a 14-28 day interval. Tank mix Chipco® Signature® to improve the relief in symptoms on turf under moderate to severe stress.

<sup>&</sup>lt;sup>1</sup> DO NOT apply more than 18 fl oz of RESERVE FUNGICIDE per 1,000 sq ft (49.3 pts/A) per year.

RSERVE FUNGICIDE used at the prescribed labeled rates protects the turf against winter stress resulting in faster spring green up when compared to other similar combinations of fungicides. When applied during the summer or fall RESERVE FUNGICIDE results in healthier, denser and greener turf, which in effect prevents the incursion of algae.

#### IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer 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 Bayer CropScience LP. All such risks shall be assumed by the user or buyer.

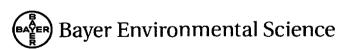
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Chipco is a registered trademark of Bayer. 26 GT® is a registered trademark of Bayer.

**NET CONTENTS:** 

Produced for



A Division of Bayer CropScience LP P.O. Box 12014, 2 T.W. Alexander Drive Research Triangle Park, North Carolina 27709

RESERVE FUNGICIDE (PENDING) 06/22/10