

100-863

10/24/2003

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ruhi Rezaaiyan
Regulatory Product Manager
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Subject: Sentinel® 40WG
EPA Reg. No. 100-863
Amendment dated September 22, 2003

Dear Dr. Rezaaiyan:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

1. **Personal Protective Equipment (PPE) - WPS USES:** (page 3): In the first line, delete "(other than mixers and loaders)". Delete the entire subsection "Mixers and loaders must wear: ... shoes plus socks."
2. **Engineering Controls Statements:** (page 4): Add the following to the end of the paragraph: "PPE must be readily available in case of emergency."
3. Page 8 - next to last line: change "Sandoz" to "Syngenta"
4. **APPLICATION COMMENTS:** (Page 13): following the product "Eagle" change the company name from "Rohm and Haas Company" to "Dow Agrosiences LLC".

One copy of the label stamped "Accepted with comments" is enclosed for your records. This label supercedes all labels previously accepted for this product. Please submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

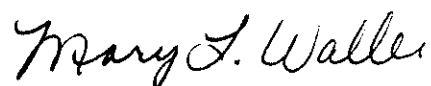
Please note that acceptance of this label does not constitute permission to sell this product in the United States or to import the product into the United States (refer to Agency letter dated September 24, 1998.)

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Sentinel® 40WG
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If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,



Mary Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

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**Sentinel® 40WG
Turf Fungicide**

A broad spectrum systemic turf fungicide for prevention
and control of certain diseases on golf courses and sod farms

Active Ingredient:	
Cyproconazole: (CAS No. 94361-06-5).....	40.0%
Other Ingredients:	60.0%
Total:	100.0%

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-863

EPA Est. _____

SCP

6 X 3.6 ounces
Water-Soluble Packets

21.6 ounces
Total Net Contents per Container

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

OCT 21 2003

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

100-863

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FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazard to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing dust or spray mist. Wear rubber gloves and a long-sleeved shirt when mixing, handling, and spraying the product. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before use.

Personal Protective Equipment (PPE)

WPS USES

Applicators and other handlers (other than mixers and loaders) who handle this pesticide for any use covered by Worker Protection Standard (40 CFR Part 170) -- in general, agricultural-plant uses (sod farms) are covered -- must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks

Mixers and loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

NON-WPS USES

Mixers and loaders who handle this pesticide for any use NOT covered by Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural-plant uses are covered by the WPS -- must wear:

- Chemical-resistant gloves made of any waterproof material

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.

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.

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Engineering Controls 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

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 wash water.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Physical And Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitations of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

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DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at the time of pesticide application.

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 made of any waterproof material
- Shoes plus socks

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in a cool dry place in original container in a well-ventilated area away from fertilizer, feed, or foodstuffs.

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

Completely empty contents of external container into application equipment. Then dispose of empty external container in sanitary landfill or by alternative methods allowed by state and local authorities.

GENERAL INFORMATION

When used as directed, Sentinel 40WG is effective against:

Brown Patch (*Rhizoctonia solani*)

Summer Patch (*Magnaporthe poae*)

Dollar Spot
(*Lanzia* or *Moellerodiscus*, historically known as *Sclerotinia homeocarpa*)

Rust (*Puccinia graminis*)
Red Thread (*Laetisaria fuciformis*)
Southern Blight (*Sclerotium rolfsii*)
Stripe Smut (*Ustilago striiformis*)

Copper Spot (*Gloeocercospora sorghi*)

Gray Snow Mold (*Typhula incarnata*, *T. ishikariensis*)

Gray Leaf Spot (*Pyricularia grisea*, suppression)

Pink Snow Mold (*Microdochium nivalis*)
Necrotic Ring Spot
(*Leptosphaeria korrae*)

Anthracnose
(*Colletotrichum graminicola*, *Microdochium bolleyi*)

Powdery Mildew (*Erysiphe graminis*)

- Sentinel 40WG is a systemic fungicide MOST EFFECTIVE WHEN APPLIED PREVENTIVELY.
- Best results are achieved by using Sentinel 40WG as the foundation fungicide in an overall turf management program utilizing sound cultural and pest control practices.
- Disease organism identification is important to determine the best control measures and should be done prior to application.
- If disease is already active, Sentinel 40WG may be tank mixed with appropriate contact fungicides (see **Tank Mixes** and **Compatibility Test** below).
- Calibrate sprayer for accuracy prior to use.

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- Apply Sentinel 40WG with sufficient water to ensure thorough coverage. Application in concentrations from 2 to 5 gallons of water per 1000 sq. ft. will provide the best performance of Sentinel 40WG.
- After application, allow area to dry before mowing.
- For foliar disease control, allow sprayed areas to dry completely prior to irrigation.
- Do not apply this product through any type of irrigation system.
- Do not graze animals on treated turf areas or use grass clippings for food or feed.
- Do not exceed 1.33 oz./1000 sq. ft. (16 water soluble packets/acre) per growing season.
- Tank mixtures with nitrogen fertilizer sources are not recommended.
- Sentinel 40WG is not harmful to turf if used as directed. Under certain environmental conditions, Sentinel 40WG may cause thickening or color shifts of some turf species, or growth reduction of *Poa annua*. If plant growth regulator (PGR) effects from Sentinel 40WG use are observed, do not reapply Sentinel 40WG until turf has outgrown PGR effects.
- Use of turf growth regulators **on greens** may result in turf injury in management programs containing Sentinel 40WG.
- Failure of performance and/or turf injury may occur if directions for use are not followed as indicated on this label.
- The following information is recommended by The North American Fungicide Resistance Action Committee for inclusion on all demethylation inhibitor (DMI)/sterol inhibitor (SI) fungicide labels including Sentinel 40WG, Bayleton®, Banner®, Eagle®, Rubigan™, and others that are in development:

In rare cases, the repeated and exclusive use of certain classes of fungicides in solo applications may select fungal strains with reduced sensitivity. The North American Fungicide Resistance Action Committee advises that a spray program which alternates and/or tank mixes DMI/SI fungicides with fungicides having a different mode of action may prevent or delay this process. Consult your local Sandoz representative if you are unsure of the appropriate alternation or mixing partners.

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MIXING INSTRUCTIONS

Fill the tank $\frac{1}{3}$ to $\frac{1}{4}$ with water, add the desired number of water soluble packets of Sentinel 40WG into the tank (do **not** remove the Sentinel 40WG from the water soluble packets since the packets will dissolve in the tank), maintain sufficient agitation to completely dissolve the packets and suspend the contents, then complete filling the tank. Maintain agitation until the content of the tank has been completely sprayed. Do not prepare more solution than needed.

If Sentinel 40WG is tank-mixed with other products, use the following recommendations:

1. Check the compatibility of the tank-mix using a small container with the proper proportions of Sentinel 40WG with the other chemical, water, or fertilizers as described in **COMPATIBILITY TEST** below.
2. The desired number of water soluble packets of Sentinel 40WG should be added to a partially filled tank **first** and mixed until packets are dissolved and the Sentinel 40WG is suspended completely.
3. Wettable powders and other water dispersible granules should be added next, mixing until suspended completely.
4. Flowables and suspensions next.
5. Emulsifiable concentrates last.

Do not leave in spray tank for prolonged period without agitation. Prepared solution should be used the same day.

Immediately after use, clean by flushing water containing a detergent through the system and rinse with clean water.

TANK MIXES

- For control of additional diseases and/or if disease is already present, Sentinel 40WG may be tank-mixed with appropriately labeled fungicides.
- Tank mixes with other pesticides and fertilizers may be made after a compatibility test has shown that no problem exists (see **COMPATIBILITY TEST**).
- Observe all directions, precautions, and limitations on the label of the tank-mix partner. Follow the directions under **MIXING INSTRUCTIONS**.

COMPATIBILITY TEST

Before mixing in the spray tank, it is advisable to test compatibility by mixing all components in a small container in proportionate quantities.

If pesticides do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested spray mix is compatible. Usually incompatibility in any of the above described forms will occur within 5 minutes after mixing.

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Sentinel 40WG Application Rates: For Disease Control on Fairways, Roughs, Tees (cut higher than 1/4"), and Sod Farms

Disease	Sentinel 40WG in Water Soluble Bags		Anticipated Length of Control in Days*	Application Directions
	Ounces/1000 sq. ft.	Bags/Acre		
Anthracnose Brown Patch Copper Spot Dollar Spot Powdery Mildew Red Thread Rust Southern Blight	0.25 - 0.33	3.0 - 4.0	21.0 - 28.0	For best results, apply PREVENTIVELY. Tank mixing with a contact fungicide is recommended when applying curatively. Repeat treatment when environmental conditions favor disease development. Do not apply more than 1.33 oz./1000 sq. ft./year.
Gray Leaf Spot (Suppression)	0.33	4.0	21.0 - 28.0	For best results, apply PREVENTIVELY when conditions are favorable for disease development. Do not apply more than 1.33 oz./1000 sq. ft./year.
Summer Patch	0.25 - 0.33	3.0 - 4.0	28.0	Begin applications in early spring when soil temperatures reach 60 - 65° F at a 2" soil depth, apply 2 or 3 times on a 28-day interval.
Necrotic Ring Spot	0.33	4.0	28.0	Begin applications in early spring, apply 2 or 3 times on a 28-day interval.
Stripe Smut	0.33	4.0	--	Apply a single application in late fall or early spring.
Gray Snow Mold Pink Snow Mold	0.33	4.0	--	Apply in late fall before snow cover. Repeat application in early spring. May be tank mixed with fungicides having a different mode of action (non SI) that are labeled for Snow Mold control.

* Expected length of control when used in a preventive disease control program. Actual length of disease control will vary depending on weather conditions, disease pressure, and turf management practices.

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Sentinel 40WG Application Rates: For Disease Control on Greens Height Turf and Closely Maintained Tees (less than or equal to 1/4")

Disease	Sentinel 40WG in Water Soluble Bags		Anticipated Length of Control in Days*	Minimum Application Interval**	Application Directions
	Ounces/1000 sq ft.	Bags/Acre			
Anthracnose Brown Patch Copper Spot Dollar Spot Powdery Mildew Red Thread Rust Southern Blight	0.16 or 0.25	2.0 3.0	14.0 - 21.0 21.0 - 28.0	21.0 28.0	For best results, apply PREVENTIVELY. When daytime highs exceeds 85° F use the 0.16 oz. rate in alternation with an appropriate contact fungicide. Tank mixing with a contact fungicide is recommended when applying curatively. Repeat treatment when environmental conditions favor disease development. Do not apply more than 1.33 oz./1000 sq. ft./year.
Summer Patch	0.25	3.0	21.0 - 28.0	28.0	Begin applications in early spring when soil temperatures reach 60 - 65°F at a 2" soil depth, apply 2 times on a 28-day interval. Do not apply 0.25 oz. rate when greens are stressed due to temperature or PGR effects or after June 1, whichever comes first.
Necrotic Ring Spot	0.25	3.0	28.0	28.0	Begin applications in early spring, apply 2 or 3 times on a 28-day interval. Do not apply 0.25 oz. rate when greens are stressed due to temperature or PGR effects or after June 1, whichever comes first.
Stripe Smut	0.33	4.0	--		Apply a single application in late fall or early spring.
Gray Snow Mold Pink Snow Mold	0.33	4.0	--		Apply in late fall before snow cover. Repeat application in early spring. May be tank mixed with fungicides having a different mode of action (non SI) that are labeled for Snow Mold control.

* Expected length of control when used in a preventive disease control program. Actual length of disease control will vary depending on weather conditions, disease pressure, and turf management practices.

** Alternation with a fungicide having a different mode of action (non SI) is recommended if fungicide application is necessary to accommodate the minimum spray interval.

APPLICATION COMMENTS

- Sentinel 40WG is a systemic fungicide MOST EFFECTIVE WHEN APPLIED PREVENTIVELY.
- Actual length of disease control will vary depending on weather conditions, disease pressure, and turf management practices. Under conditions with high disease pressure use higher recommended application rate and/or anticipate a shorter period of control.
- Apply Sentinel 40WG with sufficient water to ensure thorough coverage. Application in concentrations from 2 to 5 gallons of water per 1000 sq. ft. with properly calibrated equipment will provide the best performance of Sentinel 40WG.
- Use of spreader stickers, extenders, or wetting agents is not needed with Sentinel 40WG.

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Bayleton® is a trademark of Bayer CropScience

Eagle® is a trademark of Rohm and Haas Company

Rubigan™ is a trademark of Dow AgroSciences

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For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481

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SCP

[GANNONC.SNDZ/SENTINEL] - ccg - 9/3/97
SEN 40WG DRAFT aa-7-22-03
SEN 40WG DRAFT highlight copy aa-7-22-03 – bb – 7-22-03
SEN 40WG DRAFT aa-8-15-03 clean – bb – 8-20-03-rr-25-03 clean

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