

10163-290

04-19-2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Julie Butcher
Senior Registration Specialist
Gowan Company
P.O. Box 5569
Yuma, AZ 85366

APR 19 2010

SUBJECT: Riverdale Patchwork
EPA Reg. No. 10163-290
Your amendment dated March 25, 2010
Decision Number 408433

Dear Ms. Butcher:

The label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. One copy of the label stamped "Accepted" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment. If you have any questions regarding this correspondence, please contact Tracy Keigwin of my staff by phone at 703-305-6605 or via email at keigwin.tracy@epa.gov.

Sincerely,

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

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

Enclosure: "Accepted" label

Riverdale Patchwork®

For use only on golf course tees, greens, and fairways, and turf in professional athletic stadia.

Active Ingredient:	% By Wt.
Fenarimol: a-(2-chlorophenyl)-a-(4-chlorophenyl)-5-pyrimidinemethanol.....	0.78%
Other Ingredients.....	99.22%
	TOTAL 100.00%

Contains 0.0078 pounds active per pound.

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
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.
If swallowed	<ul style="list-style-type: none"> • Call 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 or convulsing person.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
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.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-888-478-0798 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling.

NET CONTENTS _____ POUNDS

ACCEPTED
APR 19 2010
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registration...

Produced For: 10163-290

EPA Reg. No. 10163-290
EPA Est. No.



Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569

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 selections chart.

Applicators and Other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton
- Shoes plus socks
- Goggles or face shield

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. 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.

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 pesticide 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 wash waters. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

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

This product may contaminate surface water due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water.

The product is classified as having high potential for runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff of rain water. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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 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 such as barrier laminate or butyl rubber
- Shoes plus socks
- Goggles or face shield

NON AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of the 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. Do not allow children or pets into the treated area until sprays have dried.

GENERAL INFORMATION

READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

Riverdale Patchwork is a locally systemic fungicide that provides preventative control of the Patch Diseases of Turf listed on the label; **Turf uses are limited to golf course tees, greens, fairways, and turf in professional athletic stadia.** This product is a soil active fungicide that must be applied prior to the onset of disease activity in accordance with label specified timing. Since Patch Diseases in Turf are generally active in the same area they occurred previously, preventative applications of Riverdale Patchwork to the previously affected area are necessary for control. When applying Riverdale Patchwork to control two or more diseases, the rate, timing and interval must comply with the most restrictive of any of the diseases.

Aerial Applications: Do not apply Riverdale Patchwork by aerial application.

Maximum Application and Use Rate: No single application to exceed 8 lbs per 1000 sq ft. (2.7 lbs a.i. per acre). For tees, greens and professional athletic stadia, do not make more than 12 applications per year or exceed the cumulative rate of 32 lbs per 1000 sq ft per year (10.8 lb a.i. per acre per year). For golf course fairways, do not exceed the cumulative rate of 24 lbs per 1000 sq ft. per year (8.1 lb a.i. per acre per year).

**APPLICATION DIRECTIONS:
RIVERDALE PATCHWORK RATES
GOLF COURSE FAIRWAYS AND PROFESSIONAL STADIA**

Disease Organism	Lb/Acre	Lb/1,000 Square Feet	Application Interval	Comments
Necrotic Ring Spot (<i>Leptosphaeria korrae</i>)	175 to 350	4 to 8	Single application (per season)	Apply Riverdale Patchwork preventatively in a single 175 to 350 lb/acre (4 to 8 lb/1,000 square feet) application in April or as a split application with 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in April and 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in May. Use the higher rate listed when area to be treated has a previous history of disease infestation. Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.
	87.5 to 175	2 to 4	2 applications (Split applications applied in April and May.)	
Summer Patch (<i>Magnaporthe poae</i>)	175 to 350	4 to 8	Single application (per season)	Apply Riverdale Patchwork preventatively in a single 175 to 350 lb/acre (4 to 8 lb/1,000 square feet) application in April or as a split application with 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in April and 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in May. Use the higher rate listed when area to be treated has a previous history of disease infestation. Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.
	87.5 to 175	2 to 4	2 applications (Split applications applied in April and May.)	

APPLICATION DIRECTIONS *Continued*:
RIVERDALE PATCHWORK RATES
GOLF COURSE FAIRWAYS AND PROFESSIONAL STADIA

Fusarium Blight (<i>Fusarium roseum</i> , <i>F. triticum</i>)	175 to 350	4 to 8	Single application (per season)	Apply Riverdale Patchwork preventatively in a single 175 to 350 lb/acre (4 to 8 lb/1,000 square feet) application in April or as a split application with 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in April and 87.5 to 175 lb/acre (2 to 4 lb/1,000 square feet) applied in May. Use the higher rate listed when area to be treated has a previous history of disease infestation. Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.
	87.5 to 175	2 to 4	2 applications (Split applications applied in April and May.)	
Take-All-Patch (<i>Gaeumannomyces graminis</i>)	350	8	Single application (per season)	Apply Riverdale Patchwork preventatively in a single 350 lb/acre (8 lb/1,000 square feet) application or as a split application with each application at 175 lb/acre (4 lb/1,000 square feet) applied at 14-30 day intervals. Applications must be made prior to permanent snow cover or frozen soil. For optimum control utilize the 30-day interval between applications. Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.
	175	4	2 applications 14-30 day intervals	
Spring Dead Spot (<i>Ophiosphaerella spp.</i>)	262.5	6	Single application (per season)	Apply Riverdale Patchwork preventatively in a single application of 262.5 lb/acre (6 lb/1000 square feet) in September, or as a split application each at 175 lb/acre (4 lb/1000 square feet) in early September and early October applied at 14-30 day intervals. Apply when soil temperatures are between 80° and 60° F at a depth of 2 inches. Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.
	175	4	2 applications 14-30 day intervals	

RIVERDALE PATCHWORK RATES *Continued:*
GREENS & TEES

Disease Organism	Lb/Acre	Lb/1,000 Square Feet	Application Interval	Comments
Necrotic Ring Spot (<i>Leptosphaeria korrae</i>)	175	4	Split application 30 day intervals	<p>For greens and tees, apply Riverdale Patchwork preventatively with split applications with the first application of 87.5 lb/acre (2 lb/1,000 square feet) beginning in April followed by a second application of 87.5 lb/acre (2 lb/1,000 square feet) in May.</p> <p>If conditions are favorable in the Fall for disease occurrence, applications 14 days prior to the anticipated appearance of disease symptoms may be necessary.</p> <p>Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.</p>
Summer Patch (<i>Magnaporthe poae</i>)	175	4	Split application 30 day intervals	<p>For greens and tees, apply Riverdale Patchwork preventatively with split applications with the first application of 87.5 lb/acre (2 lb/1,000 square feet) beginning in April followed by a second application of 87.5 lb/acre (2 lb/1,000 square feet) in May.</p> <p>If conditions are favorable in the Fall for disease occurrence, applications 14 days prior to the anticipated appearance of disease symptoms may be necessary.</p> <p>Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.</p>

**RIVERDALE PATCHWORK RATES
GREENS & TEES**

Disease Organism	Lb/Acre	Lb/1,000 Square Feet	Application Interval	Comments
Fusarium Blight (<i>Fusarium roseum</i> <i>F. triticum</i>)	175	4	Split application 30 day intervals	<p>For greens and tees, apply Riverdale Patchwork preventatively with split applications with the first application of 87.5 lb/acre (2 lb/1,000 square feet) beginning in April followed by a second application of 87.5 lb/acre (2 lb/1,000 square feet) in May.</p> <p>If conditions are favorable in the Fall for disease occurrence, applications 14 days prior to the anticipated appearance of disease symptoms may be necessary.</p> <p>Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.</p>
Take-All-Patch (<i>Gaeumannomyces graminis</i>)	350	8	Split application 30 day intervals	<p>For greens and tees, apply Riverdale Patchwork preventatively in split applications of 175 lb/acre (4 lb/1,000 square feet) at 30 day intervals. Applications must be made prior to permanent snow cover or frozen soil.</p> <p>If conditions are favorable in the Fall for disease occurrence, applications 14 days prior to the anticipated appearance of disease symptoms may be necessary.</p> <p>Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.</p>
Spring Dead Spot (<i>Ophiosphaerella spp.</i>)	262.5	6	Single application (per season)	<p>Apply Riverdale Patchwork preventatively in a single application of 262.5 lb/acre (6 lb/1000 square feet) in September, or as a split application each at 175 lb/acre (4 lb/1000 square feet) in early September and early October applied at 14-30 day intervals.</p> <p>Apply when soil temperatures are between 80° and 60° F at a depth of 2 inches.</p> <p>Apply product to the turfgrass and thoroughly irrigate with 0.25 to 0.5 inch of water.</p>
	175	4	Split application 14-30 day intervals	

PRECAUTIONS

Applications to turfgrass areas containing *Poa annua* (annual bluegrass) may result in the gradual reduction of this species from the turfgrass area. Cumulative dosages of 350 lb/acre (8 lb/1,000 square feet) are usually necessary for this response to occur.

POA ANNUA MANAGEMENT PROGRAM FOR OVERSEED BERMUDAGRASS GREENS AND TEES

Poa annua behaves as a true winter annual weed in southern warm season turf grass areas. As such, it reduces turf quality in overseeded Bermudagrass and is a significant management problem for golf course superintendents. Riverdale Patchwork can be used as a tool for reducing *Poa annua* populations in overseeded Bermudagrass greens and tees. Methods of reducing *Poa annua* populations can be varied to fit easily into a golf course turf management program. This labeling describes various options for managing *Poa annua* populations using Riverdale Patchwork. The program must not be undertaken unless these instructions are fully understood by the user. In addition, the user must read and follow all use directions, precautions and limitations on the Riverdale Patchwork label.

RIVERDALE PATCHWORK GROWTH REGULATING EFFECT

Riverdale Patchwork may exert a growth regulating effect in certain plants by reducing the biosynthesis of gibberellic acid. This effect is expressed as a reduction in internode elongation and suppression of overall plant growth. In the presence of sufficiently high rates of Riverdale Patchwork or prolonged exposure, a species sensitive to this effect may be selectively suppressed. In turf, this effect allows the competitive balance to shift in favor of less sensitive cultivars. *Poa annua* has demonstrated a significantly greater sensitivity to Riverdale Patchwork than perennial turf grass species and most of their cultivars. The selective growth regulation of *Poa annua* can be most readily observed in Riverdale Patchwork treated greens and tees. Proper use of this selectivity can assist the golf course superintendent in managing the *Poa annua* composition of greens and tees.

MANAGEMENT OF POA ANNUA USING RIVERDALE PATCHWORK

Riverdale Patchwork, a highly effective, locally systemic fungicide, is labeled for control of a number of economically important turf grass diseases. The Riverdale Patchwork *Poa annua* management program can be timed to coincide with Fall fungicide applications for control of late season diseases in Bermudagrass, including spring dead spot.

For optimum control, apply Riverdale Patchwork prior to germination of *Poa annua*. Treatment alternatives include a program of either 2 or 3 applications to reach the 12 lb/1000 square feet rate of Riverdale Patchwork.

Timing is the critical issue in achieving control of *Poa annua*. Apply Riverdale Patchwork prior to germination of *Poa annua*. If a later overseeding date is scheduled, the three-application strategy is most effective.

OVERSEEDING

Fine bladed perennial ryegrass or blends of ryegrass cultivars are recommended for overseeding. To avoid seedling stress, apply the last application of Riverdale Patchwork at least 2 weeks before overseeding perennial ryegrass and at the minimum seeding rate of 30 pounds per 1,000 square feet. If either *Poa trivialis* or bentgrass is used for overseeding, follow the 3-application program. To avoid seedling stress when overseeding *Poa trivialis* or bentgrass, apply the final application of Riverdale Patchwork at least 30 days before overseeding.

RIVERDALE PATCHWORK POA ANNUA CONTROL PROGRAMS

Program	Number of Applications	Rate Application	Application Interval	Application Timing	Expected Percent Control
A	2	Riverdale Patchwork 6.0 lb/1,000 square feet	14 days	First application prior to <i>Poa annua</i> germination	75 to 95+%
B	3	Riverdale Patchwork 4.0 lb/1,000 square feet	14 days	First application prior to <i>Poa annua</i> germination	75 to 95+%

Note: A single application of no more than 2.0 lb of Riverdale Patchwork per 1,000 square feet in late December or early January following the establishment of overseeding will help enhance the suppression of *Poa annua* and prolong this effect through the Spring season.

ANTICIPATED RESULTS

Application of Riverdale Patchwork for management of *Poa annua* will coincide with the onset of winter dormancy in Bermudagrass. Extended periods of low temperatures and heavy rainfall after an application of Riverdale Patchwork may result in yellowing of Bermuda grass. This effect is attributable to developing dormancy of Bermudagrass, not to Riverdale Patchwork application. Normal germination and growth of the overseeded grasses can be expected. Avoid the use of plant growth regulators (PGR's) within two weeks of the first application of Riverdale Patchwork and withheld until 2 weeks after the last application of Riverdale Patchwork.

Applications of Riverdale Patchwork in the programs listed in this label are expected to result in *Poa annua* control in the range of 75 to 95 percent. Results are most apparent during the following spring season when *Poa annua* seed heads are visible and plant populations can be measured. Concurrent control of turf diseases susceptible to Riverdale Patchwork at the rates applied can be expected as a part of the *Poa annua* control program.

PRECAUTION

- A single application of Riverdale Patchwork in excess of 8.0 lb/1,000 square feet may inhibit the germination of creeping bentgrass for up to 30 days after application. Do not apply this treatment where creeping bentgrass is to be seeded within 30 days after application.
- Make each subsequent application at an angle to the previous application of Riverdale Patchwork. Avoid overlap.
- During periods of environmental stress, a single high rate application of Riverdale Patchwork may rapidly eliminate *Poa annua* from greens, tees or other close cut turf areas. Do not apply this treatment if rapid elimination of *Poa annua* is a potential problem.
- Do not apply a single application of Riverdale Patchwork in excess of 262.5 lb/acre (6 lb/1,000 square feet) to greens and tees.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Always store pesticide product in original container and in locked storage area.

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: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed in accordance with local, state and federal regulations. When completely empty, offer for recycling if available, or dispose of bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK OR FIRE), CALL CHEMTREC® (800) 424-9300.

For other product information, contact GOWAN COMPANY, LLC or see Material Safety Data Sheet.

NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS

Important: Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our directions for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer and User.

Gowan Company warrants that this product conforms to the specifications on the label and is reasonably fit for the intended purpose referred to on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE FULLEST EXTENT PERMITTED BY LAW, GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY'S SOLE DISCRETION.

Chemtrec® is a registered trademark of American Chemistry Council, Inc.
Riverdale Patchwork® is a registered trademark of Gowan Company L.L.C.

EPA Text Pending: Riverdale Patchwork (to EPA 3-25-10)