



EPA Reg.

Number:

432-1412 MAR 28 2005

Date of Issuance:

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs

Registration Division (7505C)

401 "M" St., S.W.

Washington, D.C. 20460

## NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Term of Issuance:

conditional

Name of Pesticide Product:

Armada 50 WP Fungicide

Name and Address of Registrant (include ZIP Code):

Bayer Environmental Science

95 Chestnut Ridge Road

Montvale, NJ 07645

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) and sec. 4 when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes and submit the data listed below before you release the product for shipment:

- a. Add the phrase, "EPA Registration No. 432-1412"  
(continued)

Signature of Approving Official:

Olga Odiott, Acting Product Manager 21

Date:

MAR 28 2005

- b. Under the "User Safety Recommendations" section replace the second bullet with the following bullet: "Remove and wash contaminated clothing before reuse."
- c. Under the "If Swallowed" section insert the following bullet at the end "Do not give anything by mouth to an unconscious person."

3. You will submit production information (pounds or gallons produced) for this product for the fiscal year in which the product is conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1 and ends September 30. This information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year. The production information should be submitted to:

U.S. Environmental Protection Agency  
Office of Pesticide Programs (7504C)  
Document Processing Desk (RSB)  
1200 Pennsylvania Ave. N.W.  
Washington, DC 20460

4. You will submit the Storage Stability (830.6317) and Corrosion Characteristics (830.6320) studies. It is recommended that observations be made at 0, 3, 6, 9, and 12 months intervals. The corrosion characteristics study may be carried out concurrently.

5. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Enclosure

Aug 19, 2004  
387



# ARMADA™ 50 WP

\* For control of certain collar, stem, and root diseases of turfgrass including golf courses, institutional, commercial and residential lawns, sod farms, sports fields, parks, municipal grounds and cemeteries.

**For Professional Use Only.**

**ACTIVE INGREDIENT:**

Trifloxystrobin (CAS No. 141517-21-7) .....	8.33%
Triadimefon (CAS No. 43121-43-3) .....	41.67%

<b>OTHER INGREDIENTS:</b> .....	50.00%
Total	100.00%

EPA Reg. No. 432-xxxx

EPA Est. No. \_\_\_\_\_

**Keep out of reach of children.**

## CAUTION

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing dust or spray mist. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**Personal Protective Equipment:**

**Applicators and other handlers must wear:**

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

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.

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

MAR 28 2005

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

432-1412

**BACKED  
by BAYER.**

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or a doctor.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<p>In case of emergency call toll free the Bayer Kansas City Emergency Response Telephone No. 1-800-414-0244. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p><b>Note To Physician:</b> If ingested, induce emesis or lavage stomach. Treat symptomatically.</p>	

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish and aquatic invertebrates. 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 wash water or rinsate.

**Ground Water Advisory**

The active ingredients in this product have 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.

Do not make applications when weather conditions favor drift from target area.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use, pour, spill, or store near heat or open flame.

**DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains

**AGRICULTURAL USE REQUIREMENTS CONT.**

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 applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks

**Do not apply by aerial application in the State of New York.**

**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.

Do not enter treated areas without protective clothing until sprays have dried.

**GENERAL INFORMATION**

**Mixing Procedures**

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Agitation is necessary for proper dispersal of the product. Maintain agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

**ARMADA Alone:** Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the ARMADA to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after ARMADA has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**ARMADA + Tank Mixtures:** Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. In general, tank mix partners should be added in this order: (1) products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables); (2) liquid flowables, liquids; and (3) emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

**Note:** When using ARMADA in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using ARMADA in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product that prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

ARMADA is compatible with most insecticide, fungicide, and foliar nutrient products. However, the compatibility of ARMADA with tank mix partners should be tested before use.

To determine biological compatibility with other products, mix the products in the desired proportions, spray on target plants and observe for phytotoxicity seven days after the application.

To determine the physical compatibility of ARMADA with other products, use a jar test, as described below. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Observe all directions, precautions, and limitations on labeling of all products used in tank mixes. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

**Use with additives:** Use of spray additives is not required. Any spray additive should be evaluated prior to use. Do not use in conjunction with organosilicate-based products, or plant injury may occur. Label directions are based on data with no additives.

**Mixing Procedures (Water Soluble Packets)**

The enclosed packets containing ARMADA are water-soluble. Do not allow packets to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer carton/container to protect remaining packets.

To prepare the spray mixture, drop the required number of unopened packets, as determined under 'Recommended Applications', into the spray tank while filling the water to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within a few minutes from the time they were added to the water.

**Attention:** Do not use ARMADA water-soluble packets in a tank-mix with products that contain boron or release free chlorine. The resultant reaction of PVA and boron or free chlorine is a plastic, which is not soluble in water or solvents such as diesel oils, kerosene, gasoline or alcohol. Use of chlorinated water is acceptable. Do not attempt to use the PVA packets directly in liquid fertilizer, diesel oils or summer spray type oils as in ULV or LV uses. PVA Packets are water soluble not fertilizer or oil soluble. If liquid fertilizer or oils are to be added to the mix water, add ARMADA packets first and wait until they are dissolved before adding liquid fertilizer or oil.

**ARMADA Alone:** Add 1/2 of the required water to the mix tank. With the agitator running, add the required number of ARMADA packets to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after ARMADA packets have completely dissolved and dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**ARMADA + Tank Mixtures:** Add 1/2 of the required amount of water to the tank mix. Start the agitation running before adding ARMADA Fungicide water-soluble packets and any tank mix partner(s). In general, tank mix partners should be added in this order: (1) products packaged in water-soluble packaging (such as ARMADA), wettable powders, wettable granules (dry flowables); (2) liquid flowables, liquids; and (3) emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

**Note:** When using ARMADA in tank mixes, all products in water-soluble packaging (including ARMADA) should be added to the tank before any other tank mix partner. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using ARMADA in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product that prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

ARMADA is compatible with most insecticide, fungicide, and foliar nutrient products. However, the compatibility of ARMADA with tank mix partners should be tested before use.

To determine biological compatibility with other products, mix the products in the desired proportions, spray on target plants and observe for phytotoxicity seven days after the application.

Observe all directions, precautions, and limitations on labeling of all products used in tank mixes. Tank mixtures or other applications of

products referenced on this label are permitted only in those states in which the referenced products are registered.

**Use with additives:** Use of spray additives are not required. Any spray additive should be evaluated prior to use. Do not use in conjunction with organosilicate-based products, or plant injury may occur. Label directions are based on data with no additives.

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

**Resistance Management:** ARMADA contains the strobilurin class of chemistry, which exhibits no known cross-resistance to other chemical classes including sterol inhibitors, dicarboximides, benzimidazoles, anilinopyrimidines, or phenylamides. However, certain fungal pathogens are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies. Such strategies may include rotating and/or tank mixing with products having different modes of action; or limiting the total number of applications per season. Bayer encourages responsible product stewardship to ensure effective long-term control of the fungal diseases on this label. See specific recommendations in the turf section and the ornamentals section.

**Maximum Use Rates**

For turfgrass, up to 34 1/2 oz. of ARMADA can be applied per acre per year.

**TURFGRASS DISEASE CONTROL**

ARMADA is a preventive and curative fungicide that may be applied to turf sites including golf courses, institutional, commercial and residential lawns, sod farms, sports fields, parks, municipal grounds and cemeteries.

ARMADA is a broad spectrum fungicide for the control of dollar spot (*Sclerotinia homoeocarpa*), brown patch (*Rhizoctonia solani*), anthracnose (*Colletotrichum graminicola*), red thread (*Corticium fuciforme*), pink patch (*Limonomyces roseipellis*), Leaf spot (*Bipolaris* spp., *Drechslera* spp.), gray leaf spot (*Pyricularia grisea*), rust (*Puccinia* spp.), pink snowmold (*Microdochium nivale*), fusarium patch (*Fusarium nivale*), southern blight (*Sclerotium rolfsii*), stripe smut (*Ustilago striiformis*), rapid blight, and summer patch (*Magnaporthe poae*). When conditions are favorable for *Pythium* blight (*Pythium* spp.), mix a *Pythium* control fungicide with ARMADA.

1. FUNGICIDES SUCH AS ARMADA ARE BEST USED IN A PREVENTIVE DISEASE CONTROL PROGRAM. CURATIVE APPLICATIONS CAN BE MADE FOR CERTAIN DISEASES.

2. It is recommended to apply in 1-2 gals. of water per 1,000 ft.2 to ensure thorough coverage. For soil-borne diseases, use sufficient water to reach the crown and upper root zone.

3. Apply after mowing OR allow sprayed area to completely dry before mowing.

4. For control of both foliar and soil-borne diseases, allow sprayed area to completely dry before irrigation.

5. Under conditions optimum for high disease pressure, use the higher rate and the shorter interval.

6. For optimum turf quality and disease control, use ARMADA in conjunction with turf management practices that promote good health and optimum disease control.

7. Before use of any fungicide, proper diagnosis of the organism causing the disease is important. Use of diagnostic kits or other means of identification of the disease organism is essential to determine the best control measures.

**Tank Mixes**

For more broad-spectrum control ARMADA can be tank mixed with other fungicides. Check compatibility before tank mixing.

ARMADA CAN BE APPLIED TO ALL MAJOR TURFGRASS SPECIES. RATES ARE DEPENDENT UPON DISEASE AND THE ORGANISM THAT IT IS INCITED BY.

**RESISTANCE MANAGEMENT FOR TURFGRASS**  
Do not apply more than 2 sequential ARMADA fungicide applications for gray leaf spot control. Do not apply more than 3 sequential applications of ARMADA fungicide for all other diseases. Alternate with a fungicide having a different mode of action.

Turfgrass Diseases Controlled with ARMADA			
DISEASE	APPLICATION	OZ. OF ARMADA 50 WP PER 1000 SQ. FT.	APPLICATION INTERVAL/TIMING
Dollar Spot	Apply when conditions are favorable for disease development.	0.6-1.2	14-28 days
Brown Patch	Apply when conditions are favorable for disease development.	0.6-1.2	14-28 days
Leaf Spot	Apply when conditions are favorable for disease development.	0.6	14 days
	For curative applications.	1.2	21-28 days
Anthracnose	Apply when conditions are favorable for disease development.	0.6-1.2	14-28 days
Summer Patch	Make initial application when the soil temperatures reach 65°F. Subsequent applications at 21-28 day interval. Do not make more than 3 sequential applications.	1.2	21-28 days
Gray Leaf Spot and Rapid Blight	Apply when conditions are favorable for disease development. For best results on Rapid Blight apply ARMADA at the highest rate.	0.6-1.2	14-28 days
Red Thread, Pink Patch	Apply when conditions are favorable for disease development.	0.6-1.2	14-28 days
Rust	Apply when conditions are favorable for disease development.	0.6-1.2	14-28 days
Southern Blight	Preventive applications only.	0.6-1.2	Repeat at 14-day intervals.
Stripe Smut	Make the first application in the spring just before the turf breaks dormancy followed by a second application just prior to the summer heat stress period and a third application when the cool nighttime temperatures of the late summer or early fall return.	0.6	3 applications/season Spring, Early Summer and Early Fall
Fusarium Patch	Apply when conditions are favorable for disease development.	1.2	Fall-Early Spring
Pink Snow Mold	Apply one application in late fall before snow cover or early spring after snow melts. Do not apply on top of snow.	1.2	Late Fall

Conversion Table for ARAMADA 50WP Turf	
Oz/1,000 ft <sup>2</sup>	Number of 3 oz PVA Packets Per 5000 square feet
0.6	1
1.2	2

For preventive applications apply when conditions are favorable for disease. Use the higher rate/shorter interval for curative applications or under severe disease conditions.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone No. is 800-414-0244 or contact Chemtrec at 800-424-9300.

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

**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 should be followed carefully. However, because of manner of use and other factors beyond Bayer Environmental Science's control it is impossible for Bayer Environmental Science to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** BAYER ENVIRONMENTAL SCIENCE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer Environmental Science is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. Bayer Environmental Science disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER ENVIRONMENTAL SCIENCE'S ELECTION, THE REPLACEMENT OF PRODUCT.

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**NET CONTENTS:**



**Bayer Environmental Science**  
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Bayer Environmental Science  
95 Chestnut Ridge Road  
Montvale, NJ 07645

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