



# TOPGUARD

## TERRA<sup>®</sup>

FUNGICIDE

For Use on cotton and alfalfa.

EPA Reg. No. 279-3594

EPA Est. No. 70815-GA-001

<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
*Flutriafol .....	42.0%
<b>OTHER INGREDIENTS:</b> .....	58.0%
<b>TOTAL:</b>	100.0%

\*Contains 4.16 pounds per gallon of the active ingredient flutriafol. Suspension concentrate.

### KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUTION

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.)

See additional precautionary statements and Directions for Use in booklet.

Read the entire label before using this product.

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> <li>• Call a poison control center or doctor immediately for treatment advice.</li> </ul>
<b>If on skin</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOTLINE 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 1-800-331-3148 for emergency medical treatment information.	
<b>Note to Physician:</b> No specific antidote. Treat symptomatically.	
<b>For SPILLS Contact CHEMTREC 1-800-424-9300</b>	

Sold By



FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104

Net Contents: 2.5 Gallons

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators must wear:** long-sleeved shirt and long pants, chemical-resistant gloves (Barrier Laminate, Butyl Rubber, Nitrile rubber  $\geq 14$  mils, Neoprene rubber  $\geq 14$  mils, Natural Rubber  $\geq 14$  mils, Polyethylene, Polyvinyl chloride  $\geq 14$  mils, or Viton®  $\geq 14$  mils), and shoes plus socks.

**Mixers and Loaders must wear:** long-sleeved shirt and long pants, shoes plus socks, and chemical resistant gloves (Barrier Laminate, Butyl Rubber, Nitrile rubber  $\geq 14$  mils, Neoprene rubber  $\geq 14$  mils, Natural Rubber  $\geq 14$  mils, Polyethylene, Polyvinyl chloride  $\geq 14$  mils, or Viton®  $\geq 14$  mils) and safety glasses.

Follow 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.

### ENGINEERING CONTROLS STATEMENT

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 thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing/PPE 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 formulated 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. Do not contaminate water when disposing of equipment washwater or rinsate.

**Ground Water Advisory:** Flutriafol has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisory:** This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any 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.

**In California, this product may only be applied to fields that are not irrigated, or are irrigated using pressurized irrigation methods such as macro-sprinkler, micro-sprinkler, or drip systems.**

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers 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). The REI for each crop is located in the use directions for each crop.

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, and shoes plus socks.

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store unused product in original container in a cool, dry, secure area.

**Pesticide Disposal:** Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

##### Container Handling:

**Nonrefillable container:** Do not reuse or refill this container.

**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  $\frac{1}{4}$  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 2 more times. Once container is rinsed, offer for recycling if available 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.

## PRODUCT DIRECTIONS

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH RESTRICTIONS, PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

### Chemigation:

#### Application through Irrigation Systems (Chemigation):

Apply TOPGUARD TERRA Fungicide through irrigation to crops at rates and timings specified in this label. Chemical tank and injector system must be thoroughly cleaned before and after use. Flush system with clean water.

**Drip Irrigation:** Use TOPGUARD TERRA Fungicide for control of diseases at rates and timing as specified in this label. Ensure adequate soil moisture prior to utilizing TOPGUARD TERRA Fungicide in a drip irrigation system. Restriction: Do not apply TOPGUARD TERRA Fungicide through drip irrigation that is deeper than 12" below the soil surface.

Discontinue drip irrigation application at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. Delay subsequent irrigation (water only) for at least 24 hours following drip application for best results.

#### Operating Requirements for Application through Irrigation Systems:

1. Restriction: Do not use chemigation when conditions are favorable for drift to non-target areas.
2. To prevent water-source contamination from backflow, a functional check valve, vacuum relief valve, and low-pressure drain should be located on the irrigation pipeline.
3. To prevent backflow back toward the injection pump, the pesticide injection pipeline must be equipped with a functional, automatic, quick-closing check valve.
4. To prevent fluid from being withdrawn from the supply tank when the irrigation system is shut down, the pesticide injection pipeline should also be equipped with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock.
5. The system must also contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops and a functional pressure switch to stop the pump motor when water pressure decreases to a point at which pesticide distribution is adversely affected.
6. A metering pump, constructed of materials compatible with pesticides and capable of being fitted with a system interlock, such as a positive displacement injection pump (e.g., a diaphragm pump), must be included in the system.
7. A knowledgeable person responsible for the chemigation system should shut the system down and turn the irrigation water off, ensuring enough time for the pesticide to be flushed through all lines and nozzles.
8. No irrigation system, including those in greenhouses, used to distribute pesticides can be connected to a public water source unless safety measures and devices prescribed in the pesticide label for such connection are in place.

#### Specific Instructions for Public Water Systems:

1. Public water system means a system that provides piped water for human consumption if the system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. All measures and devices listed in the above section, "Operating Requirements for Application through Irrigation Systems", must be operational for connection to a public water system.
3. Additionally, chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

**Crop Rotation:** Fields treated with TOPGUARD TERRA Fungicide may be planted to the following crops and plant back intervals.

Crop	Plant back interval
Alfalfa, barley, field corn; field corn grown for seed; popcorn; sweet corn; cotton; cucurbits; fruiting vegetables; grapes; hops; Brassica leafy vegetables crop group 5; leafy vegetables, except Brassica, crop group 4; peanut; pome fruit; grain sorghum; soybean; stone fruit; strawberry; sugar beet; tomato; tree nuts; triticale; or wheat	Immediately
Rice	30 days
All other crops	Prohibited

**Tank Mixing:** TOPGUARD TERRA Fungicide may be tank mixed with other fungicides, herbicides, insecticides, and/or other additives unless prohibited on the label of the tank mix partner. Follow more restrictive labeling of any tank mix partner. Although TOPGUARD TERRA Fungicide is compatible with most products, not all combinations have been tested. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Use the compatibility jar test to ensure physical compatibility. Before applying any tank mixture not specifically recommended on this label, the crop safety of the target crop should be confirmed by applying the mixture to a small area of the target crop in accordance to the label instructions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Compatibility Jar Test:** TOPGUARD TERRA Fungicide is compatible with most products, however not all combinations have been tested. Use the following compatibility jar test to ensure physical compatibility.

Using a quart jar, add the proportionate amounts of the products to approximately one quart of water with agitation. Add wettable powders and water dispersible granular products first, next liquid flowables, then emulsifiable concentrates, and last liquid soluble products. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding products to the spray tank. Use tank mix combinations on a small number of plants before treating larger areas. When tank mixing, follow more restrictive labeling of any tank mix partner. Do not tank mix with any product that contains a prohibition on tank mixing.

**Spray Equipment/Volume:** TOPGUARD TERRA Fungicide should be applied in 5-10 gallons total spray volume per acre.

**Resistance Management:** For resistance management, TOPGUARD TERRA Fungicide contains a group 3 fungicide (Flutriafol.)

Any fungal population may contain individuals naturally resistant to TOPGUARD TERRA Fungicide and other Group 3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of TOPGUARD TERRA Fungicide or other Group 3 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as

well as cultural, biological and other chemical control practices.

- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact your pesticide distributor or university extension specialist to report resistance.

**High Disease Pressure:** Use the higher specified rate of TOPGUARD TERRA Fungicide when the crop is grown under irrigation or when the field has a history of high root rot disease pressure.

## CROP USE DIRECTIONS

### Product Information:

TOPGUARD TERRA Fungicide works by forming a protective barrier around the crop root at the point of disease infection. Precipitation in the form of rainfall or irrigation is required to move the product into the infection zone. The amount of water required will vary with soil type, soil moisture, and rainfall or irrigation intensity.

### Use Directions for Cotton

Diseases	Product Rate (fl oz/A)
Cotton Root Rot (Phymatotrichopsis omnivora)	4 – 8 (0.13-0.26 lb ai/A) (see cotton row spacing table below for rate chart depending on row width)

### Application Directions

#### Application Methods:

**T-Band Application:** Apply TOPGUARD TERRA Fungicide in a concentrated 3-4 inch wide band at planting perpendicular to row direction after furrow opening and seed placement but prior to furrow closure with press wheel.

**Modified In-Furrow Application:** Apply using a splitter/Y shaped application mechanism that directs the product on the sides of seed furrow and not in direct contact with the seed.

**Drip Irrigation:** This product may be applied through drip irrigation systems where drip tape is not deeper than 12 inches below the soil surface. Apply only through drip irrigation systems configured with drip tape directly below the row and running in the same direction as the rows.

#### Application Methods to use by Field Irrigation Type

##### Overhead or Sprinkler Irrigation Fields:

- T-Band is the preferred application method under these cropping systems.
- Modified In-Furrow can be used. Avoid applying product in direct contact with seed.

##### Dryland Fields:

- Modified In-Furrow application technique may provide more consistent control under low rainfall conditions.
- Application using a T-Band method requires rainfall to move the product into the disease infection zone below the soil surface.

##### Furrow and Drip Irrigated Fields:

- Apply in T-Band, Modified In-Furrow, or through drip tape.
- When using the Modified In-Furrow application method sufficient irrigation must be applied to thoroughly wet the TOPGUARD TERRA Fungicide treated zone after cotton has emerged.
- For T-Band applications, the top of the bed must be thoroughly wetted after the cotton has emerged.
- Follow instructions in chemigation section of this label when applying through drip irrigation systems.

#### NOTICE for All Applications Methods and Field Conditions:

Heavy rainfall or irrigation within 3 days after planting may delay emergence.

#### Restrictions:

- No single application may exceed 8 fl oz of product (0.26 lb ai)/A.
- Do not apply more than one soil application per year.
- Do not apply more than 0.488 lbs ai flutriafol / acre per year (including soil and foliar applications).
- Do not apply with liquid fertilizer.
- Restricted Entry Interval (REI) for all activities is 12 hours.
- Preharvest Interval: Do not apply within 30 days of harvest.

Cotton row spacing table

Cotton Row Spacing (inches)	Fluid Ounces of Product to be Applied/1000 Row Feet	
	4 fl oz/A product rate	8 fl oz/A product rate
30	0.23	0.46
32	0.24	0.48
36	0.28	0.56
38	0.29	0.58
40	0.31	0.62

30" = 17,424 row ft. per acre, 32" = 16,315 row ft. per acre, 34" = 15,374 row ft. per acre,  
36" = 14,520 row ft. per acre, 38" = 13,754 row ft. per acre, 40" = 13,068 row ft. per acre.

#### Formula:

$$\frac{\text{Selected Use Rate (fl oz/A)}}{[\text{Row ft for row spacing}/1000 \text{ ft}]} = \text{fl oz of product to be applied per 1000 row ft.}$$

#### Example of 30" row spacing at 4 fl oz/A:

$$\frac{4 \text{ fl oz/A}}{[17,424/1000]} = 0.23 \text{ fl oz of product to be applied per 1000 row ft.}$$

**Use Directions for ALFALFA**

TOPGUARD TERRA Fungicide works by forming a protective barrier around the alfalfa root at the point of disease infection. Precipitation in the form of rainfall or irrigation is required to move the product into the infection zone. The amount of water required will vary with soil type, soil moisture, and rainfall or irrigation intensity.

**Application Method:**

Apply TOPGUARD TERRA Fungicide as a broadcast spray application at a minimum spray volume of 10 gallons per acre or 5 gallons by air, or through sprinkler irrigations systems designed as described in the Chemigation section of this label. For continuous-move irrigation systems, apply the labeled rate in 1/2 acre-inch or more per acre. For stationary or non-continuous moving systems, inject TOPGUARD TERRA Fungicide spray mixture during the first 20-30 minutes of the set to insure fungicide reaches the soil surface. Applications should be made postemergence to alfalfa at the timing(s) outlined below.

Disease	Product Rate	Application Directions
Texas Root Rot / Cotton Root Rot ( <i>Phymatotrichopsis omnivora</i> )	7.5 -12 (0.24-0.39 lb ai/A)	<p><b>Single Application:</b> Apply in early spring prior to three (3) inches of new growth on the alfalfa OR after first cut of alfalfa when alfalfa is between two (2) and three (3) inches regrowth.</p> <p>Use the highest specified product rate when field is known to have high levels of cotton root rot disease pressure.</p>
	<p>First application: 7.5-12 fl oz/A (0.24-0.39 lbs ai/A)</p> <p>Second application: 6-7.5 fl oz/A (0.2-0.24 lbs ai/A)</p>	<p><b>Split Application:</b> Apply in first application in early spring prior to three (3) inches of new growth on the alfalfa. Apply second application after second or third cutting on alfalfa when alfalfa is between two (2) and three (3) inches regrowth.</p> <p>Use split application under the following situations:</p> <ul style="list-style-type: none"> <li>• High intensity production practices</li> <li>• 2<sup>nd</sup> year of established plantings and older</li> </ul> <p>Use the highest specified product rate when field is known to have high levels of cotton root rot disease pressure.</p>
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• No single application may exceed 12 fl oz/A of product (0.39 lb ai)/A</li> <li>• Make only one application per cutting.</li> <li>• Do not apply more than two applications per year.</li> <li>• Do not exceed 19.5 fl oz (0.63 lb ai)/A per year.</li> <li>• Preharvest Interval (PHI): Do not apply within 14 days of harvest.</li> <li>• Restricted Entry Interval (REI) is 12 hours.</li> </ul>		

**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 must 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 beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, Buyer assumes the risk of any such use.**

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