

# **FOR CONTROL OF FAIRY RING (SEVERAL MUSHROOM FUNGI) IN TURFGRASS - CALIFORNIA**

## General Information

## Product Information

Xzemplar fungicide is a suspension concentrate (SC). The active ingredient in Xzemplar, fluxapyroxad, belongs to the succinate-dehydrogenase (SDHI) inhibitor class of fungicides. To maximize disease control, apply Xzemplar in a regularly scheduled protection spray program and use in a rotation program with other fungicides. Because of its high specific activity, Xzemplar has good residual activity against target fungi.

## Mode of Action

Fluxapyroxad, the active ingredient in Xzemplar, belongs to the group of respiration inhibitors classified by the US EPA and Canada PMRA as a target site of action Group 7 fungicide.

## Resistance Management

Xzemplar contains fluxapyroxad, a Group 7 fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of target site Group 7, such as the dicarboximides, sterol inhibitors, benzimidazoles or phenylamides. Fungal isolates resistant to Group 7 fungicides may eventually dominate the fungal population if Group 7 fungicides are used predominantly and repeatedly in the same turfgrass area in successive years as the primary method of control for the targeted pathogen species. This may result in reduction of disease control by Xzemplar.

To maintain the performance of Xzemplar in turfgrass, DO NOT exceed the total number of sequential applications of Xzemplar. Adhere to the label instructions regarding the sequential use of Xzemplar or other target site of action Group 7 fungicides which have a similar site of action on the same pathogens.

## Resistance Management Advisory

The following recommendations may be considered to delay the development of fungicide resistance:

1. Tank mixtures - Use tank mixtures with fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern. BASF recommends using at least the minimum labeled rates of each fungicide in the tank mix.
2. Integrated Pest Management (IPM) - Integrate Xzemplar into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Xzemplar can be used in advisory (disease forecasting) programs that recommend application timing based on environmental factors favorable for disease development.
3. Monitoring - Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If Xzemplar appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative or local turfgrass expert for further investigation.

For control of turfgrass diseases not listed on this label, Xzemplar can be tank mixed with labeled rates of other fungicides. Follow label directions of any tank mix product and apply at the specified rate based on target disease.

## Restrictions and Limitations

Maximum seasonal use rate - DO NOT apply more than a total of 47.0 fl ozs of Xzemplar per acre per year (1.08 fl ozs/1,000 sq ft/year) [0.91 lb ai/A/year].

New York State maximum seasonal use rate - DO NOT apply more than a total of 41 fl ozs of Xzemplar per acre per year (0.94 fl oz/1,000 sq ft/year).

DO NOT apply more than two (2) sequential applications of Xzemplar. Following a sequential application of Xzemplar, DO NOT reapply until another effective, non-Group 7 fungicide has been used.

- For use on turfgrass only.
- After application, allow foliage to dry prior to mowing.
- DO NOT apply through any type of irrigation equipment.

- This product cannot be used to formulate or reformulate any other pesticide product.
- Aerial application is permitted on sod farms only.
- For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).
- Xzemplar fungicide is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

### Application Instructions

Use Xzemplar for disease control in the following turf use sites:

- Golf courses
- Residential, institutional, commercial, and municipal lawns
- Parks
- Recreational areas including sports and athletic fields
- Cemeteries
- Sod farms

Xzemplar controls a range of diseases. See Application Rates and Intervals table for specific use instructions.

### Application Use Rates

Apply Xzemplar prior to disease development or in the early stages of development. Calibrate sprayer prior to use. Apply Xzemplar at the rates indicated in the Application Rates and Intervals table in 1 to 4 gallons of water per 1,000 square feet (44 to 174 gallons per acre). For maximum efficacy under heavy disease pressure or on higher cuts of turf, apply 2 to 4 gallons of water per 1,000 square feet. Use the shorter specified application interval and/or the higher specified rate when prolonged favorable disease conditions exist. Repeat applications at the specified interval, as necessary.

DO NOT exceed the specified application rate or fail to follow the use restrictions listed in the Resistance Management and Restrictions and Limitations sections. All applications must be made according to the use directions. Failure to follow directions and precautions on this label may result in turfgrass injury and/or inferior disease control.

### Ground Application

Apply Xzemplar fungicide using sufficient water volume and pressure for adequate coverage of the turf foliage. Apply Xzemplar at the rates indicated in the Application Use Rates section.

### Aerial Application

Aerial application is permitted on sod farms only.

Apply Xzemplar at the rates indicated in the Application Use Rates section in no less than 10 gallons of spray solution per acre. Repeat applications at the specified interval as necessary. DO NOT apply when conditions favor drift from target area.

For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

### Spray Drift Management

DO NOT make applications when conditions favor drift beyond the target application area. When drift may be a problem, take measures to reduce drift, including:

1. DO NOT spray if wind speeds exceed 10 mph. If nontarget crops are located downwind, use caution when spraying if wind is present.
2. Use caution when conditions are favorable for drift (high temperatures and or low relative humidity).
3. DO NOT apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.

For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wingspan or rotor diameter. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided. Make aerial or ground applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). DO NOT apply when wind velocity exceeds 10 mph. Avoid applications when wind gusts approach 10 mph. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications

when wind direction is toward the aquatic area.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature. DO NOT make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

#### Uses and Turfgrass Tolerance

For use on turfgrass only. Due to variability within turfgrass species, application techniques and possible tank mixes, neither the manufacturer nor the seller has determined whether or not all turfgrasses are tolerant to Xzemplar under all conditions. Therefore, apply the labeled use rate of Xzemplar on a small test area under conditions expected to be encountered and monitor for any adverse effects before applying Xzemplar to the targeted area.

#### Cleaning Spray Equipment

Spray equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure turfgrass was used prior to Xzemplar.

#### Limitations, Restrictions, and Exceptions

For control of fairy ring (Several mushroom fungi such as but not limited to Lycoperdon, Marasmius or Tricholoma spp.) in turfgrass in California

#### Directions For Use

- Apply 0.26 fl oz/1000 sq ft (11.4 fl ozs/A) of Xzemplar fungicide to control fairy ring. For other application instructions, follow intervals and comments associated with the instructions for controlling Brown patch on the Xzemplar label.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

#### Rates

[field\\_rates 0](#)

[field\\_rates 1](#)

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Restricted Entry Interval

12 hours

Timings

[Prior to disease development or in the early stages of development.](#)