



# Stellar™ FUNGICIDE

## FOR PYTHIUM CONTROL IN TURFGRASS

Active Ingredient	By Wt.
* Fluopicolide.....	5.54%
** Propamocarb Hydrochloride .....	55.40%
Other Ingredients .....	39.06%
Total.....	100.00%
* 2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide	
** propyl[3-(dimethylamino)propyl]carbamate hydrochloride	

Stellar™ Fungicide is a suspendable concentrate fungicide containing 0.52 lb fluopicolide per gallon and 5.2 lbs of propamocarb hydrochloride per gallon.

EPA Reg. No. 59639-143 EPA Est. 39578-TX-01

**SHAKE WELL BEFORE USING  
AGITASE BIEN ANTE USO**

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Wear long-sleeved shirt and long pants, socks, shoes and gloves. Remove and wash contaminated clothing before reuse.

#### FIRST AID

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.  
(continued)

#### FIRST AID (continued)

**If inhaled:** 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 swallowed:** 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 in eyes:** 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.

#### 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 **800-892-0099** for emergency medical treatment information.

### 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 A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as natural rubber ≥ 14 mils, socks and shoes.

#### 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 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 from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water by disposing of equipment washwaters or rinsate.

## **DIRECTIONS FOR USE**

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

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

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 such as natural rubber  $\geq$  14 mils, socks and shoes.

### **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, greenhouses or sodfarms.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

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

## **DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY**

**IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.**

### **RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

### **LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label,  
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under average use conditions, when used strictly in accordance with the label **and subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND AS WARRANTIES, EITHER EXPRESSED OR IMPLIED.**

No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

#### **LIMITATION OF LIABILITY**

**To the extent consistent with applicable law Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR 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 THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

#### **PROMPT NOTICE OF CLAIM**

To the extent consistent with applicable law allowing such requirements, Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is later, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law, if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

#### **NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty** and **Limitation of Liability**, which may not be modified by any oral or written agreement.

## **TANK MIXES**

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, consistent with applicable law.**

Read and follow the entire label of each product to be used in the tank mix with this product.

## **GENERAL INFORMATION**

*Stellar* Fungicide is formulated as 5.7 lbs ai/gal suspendable concentrate (SC). The active ingredients in *Stellar* Fungicide are fluopicolide and propamocarb hydrochloride. *Stellar* Fungicide exhibits protective, curative, eradivative and antispore activity. Fluopicolide is locally systemic, translaminar and also moves systemically via xylem tissue.

*Stellar* Fungicide is most effective when applied in a regularly scheduled spray program used in combination and/or rotation with other effective fungicides that have different modes of action (i.e., non Group 28 & 43 fungicides).

#### **MODE OF ACTION**

*Stellar* Fungicide is active against selective oomycetes. It exhibits the typical mode of action of specific systemic fungicides against oomycete fungi affecting several steps in the reproduction cycle.

Biochemical studies have shown that fluopicolide has an effect on spectrin-like proteins, believed to play a role in maintaining the membrane stability in ascomycete fungi or oomycetes, especially during hyphal tip extension. Microscopy studies demonstrate that fluopicolide induces a quick redistribution of these proteins from the membrane to the cytoplasm in both hyphae and zoospores.

Propamocarb is believed to effect lipids and membrane synthesis, resulting in altered cell membrane permeability.

#### **RESISTANCE MANAGEMENT**

*Stellar* Fungicide contains fluopicolide and propamocarb which are group 43 & 28 fungicides, respectively. The target sites of action of Groups 28 & 43 fungicides are specific but the biochemical modes of action are not known. Fungal isolates with acquired resistance to fluopicolide and propamocarb may eventually dominate the fungal population if *Stellar* Fungicide is used repeatedly and not rotated or combined with other modes of action. Repeated use may result in partial or total loss of control of these pathogens by *Stellar* Fungicide. To maintain the performance of *Stellar* Fungicide do not exceed the labeled number of sequential or seasonal applications in the "Directions for Use". Adhere to label instructions regarding the consecutive use of *Stellar* Fungicide. The following recommendations may be considered to delay the development of fungicide resistance:

- **Integrated Pest Management (IPM):** *Stellar* Fungicide must be integrated into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, certified crop advisor and/or Valent representative for additional IPM strategies established for your area. *Stellar* Fungicide may be used in Agricultural Extension advisory (disease forecasting) programs, that recommend application timing based on environmental factors favorable for disease development.

- **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.

- **Reporting:** If a Group 28 & 43 target site fungicide appears to be less or no longer effective against a pathogen that it previously controlled or suppressed, contact a Valent representative, local extension specialist, or certified crop advisor to assist in determining the cause of reduced performance.

#### **RAINFASTNESS**

Foliar sprays are rainfast 2 hours after application. Do not apply for foliar disease control if measurable rain is expected within 2 hours of application or foliar disease control may be reduced.

#### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND *STELLAR* FUNGICIDE**

A jar test should be performed before mixing commercial quantities of *Stellar* Fungicide, when using *Stellar* Fungicide for the first time, or when a new water source is being used.

1. Add 1 pt of the water plus adjuvant to a quart jar. The water should be from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 2.5 ml (1/2 tsp) of *Stellar* Fungicide to the quart jar, gently mix until product goes into suspension.
3. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
4. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: thickening texture (coagulated) like gelatin.

#### **SPRAYER PREPARATION**

Before applying *Stellar* Fungicide, start with clean, well maintained application equipment. The spray tank, hoses and booms must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply *Stellar* Fungicide. If two or more products were tank mixed prior to *Stellar* Fungicide

application, the most restrictive cleanup procedure should be followed.

#### **MIXING INSTRUCTIONS**

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, slowly add the *Stellar* Fungicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
3. If tank mixing *Stellar* Fungicide with other labeled pesticides, add water soluble packets first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions.
4. Add any required adjuvants.
5. Fill spray tank to desired level with water. Agitation should continue until all spray solution has been applied.

#### **SPRAYER CLEANUP**

Spray equipment must be cleaned each day following *Stellar* Fungicide application. After *Stellar* Fungicide is applied, the following steps must be used to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Drain tank completely.
4. Remove all nozzles and screens and rinse them in clean water.
5. The rinsate solution may be applied to the turfgrass recommended on this label. Do not exceed the maximum labeled use rate. If cleaners are used, consult the cleaner label for disposal instructions. If no instructions are given, dispose of rinsate at an approved waste disposal facility.

#### **APPLICATION EQUIPMENT**

Application equipment must be clean and in good repair. Nozzles should be frequently checked for accuracy.

#### **CARRIER VOLUME**

Apply *Stellar* Fungicide in sufficient water to ensure thorough coverage. Thorough coverage is required for optimal disease control. For ground application to turfgrass, apply a minimum of 2 gallons of spray mixture per 1,000 sq ft to assure uniform coverage.

#### **CHEMIGATION**

Do not use this product via chemigation on turfgrass.

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#### **TURFGRASS**

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*Stellar* Fungicide prevents and controls damping off, root rot and stem diseases caused by pythium blight infesting turfgrass. Pythium blight is sometimes referred to as greasy spot or cottony blight and is in a group of fungi known as water molds. This disease is common in turfgrass areas with poor soil drainage and a wet turfgrass canopy. High humidity and high temperatures provide an ideal environment for development of pythium blight. Pythium blight occurs in all cool season grasses, but is especially prevalent in creeping bentgrass, annual bluegrass and perennial ryegrass.

## DIRECTIONS FOR USE ON TURFGRASS

Turfgrass	Diseases	Application Rate	Special Instructions
<b>Established and Overseeded Turfgrass:</b> Golf Course Turf Sod Farms	Pythium Blight Pythium Damping Off	1.2 fl oz per 1000 sq ft (52 fl oz/A)	The maximum <i>Stellar</i> Fungicide application rate is 2.4 fl oz per 1000 sq ft per year (104 fl oz/A per year).  Apply in a minimum volume of 2 gals per 1000 sq ft.  <b>Overseeded Turf:</b> Apply after seed germination to prevent pythium damping off.  <b>Established Turf:</b> Apply when conditions favor disease development. Favorable conditions included high temperatures and high humidity.  Do not apply more than two (2) applications of <i>Stellar</i> Fungicide per season.  If necessary, make an additional application on a 14 day interval.

## STORAGE AND DISPOSAL

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

### PESTICIDE STORAGE

Store in a cool dry place.

Keep pesticide in original container.

Keep container closed when not in use.

Do not put concentrate or dilute into food or drink containers.

Do not store in or around the home.

Do not store at temperature below 32°F. If the product is exposed to temperatures below 32°F, thaw at 50°F or higher and shake gently to unify the product. For help with any spill, leak, fire or exposure involving this material, call day or night 1-800-892-0099.

### PESTICIDE DISPOSAL

Waste 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. Offer for recycling, if available. Clean container promptly after emptying. 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 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 two more times.

*Stellar* is a trademark of Valent U.S.A. Corporation

*Products That Work, From People Who Care* is a registered trademark of Valent U.S.A. Corporation

Manufactured for

**Valent U.S.A. Corporation**

P.O. Box 8025 Walnut Creek CA 94596-8025

Form 1689-C Made in U.S.A.

EPA Reg. No. 59639-143 EPA Est. 39578-TX-01

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions on the product label for the most current directions and precautionary statements.

Always check with your state to verify state registration status or call 800-89-VALENT (898-2536).



For state registration and/or supplemental labels, please call or visit us online.

*Products That Work, From People Who Care*® | [www.valentpro.com](http://www.valentpro.com) | 800-89-VALENT (898-2536)

**Read and follow the label instructions before using.**

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