

**Spot-Less™ Biofungicide**

Manufactured exclusively by Turf Science Laboratories, Inc., for use in the BioJect®

**ACTIVE INGREDIENT:**

*Pseudomonas aureofaciens* strain Tx-1\* ..... 1.0%  
 Inert Ingredients: ..... 99.0%  
 Total ..... 100.0%

NONPLANT FOOD INGREDIENT

\*Contains at least 2.9 x 10<sup>11</sup> viable cells/fl. oz.

**KEEP OUT OF REACH OF CHILDREN  
 CAUTION**

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

**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 advice.

**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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Information Center at 1-800-858-7378 for emergency medical treatment information.

**Environmental Hazards**

Do not apply directly to water, or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

**Directions for Use**

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

**Spot-Less™** is a liquid biological fungicide for use on turf grass, including golf courses.

**Spot-Less™** is effective on the following pests:

- Dollar Spot - (*Sclerotinia homeocarpa*)
- Anthracnose - (*Colletotrichum graminicola*)
- Pythium - (*Pythium aphanadermatium*)
- Microdochium patch (Pink Snow Mold) - (*Microdochium nivale*)

**Spot-Less™ Biofungicide** is the product of a BioJect® fermentation cycle. During periods of high disease pressure, apply **Spot-Less™** 5-7 times per week during evening hours through over-head Chemigation systems. For a conventional sprayer, apply 2-4 pints of **Spot-Less™** using a minimum of 50 gallons of water per acre and treat as necessary to control pests. Treat unoccupied turf preferably when the golf course is closed to the public. Avoid use of treated areas until sprays have dried.

Only trained operators may use the BioJect® system. Refer to the BioJect® Operators Manual for specific operating and handling instructions and Labeling for additional product information.

**Manufacturer's Warranty**

Turf Science Laboratories, Inc. makes no warranty, expressed or implied; or merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. Users assume all risk of use; storage or handling not in strict accordance with the accompanying directions.



EPA Reg No: 75801-1  
 EPA Est No: 75801-CA-001

2121 Hoover Avenue National City, CA 91950  
 1-800-864-4266

11-17-04

Net Contents: 1 gallon (3.79L)

**ACCEPTED**

1 of 5  
 11/22/2004

NOV 22 2004

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 75801-1

## **Spot-Less™ Biofungicide**

### **Directions for Use**

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

#### **Application Site:**

Spot-Less™ is a liquid biological fungicide for use on turf grass including golf courses. Do not use Spot-Less™ on turf grown for sale or other commercial use, such as, sod, commercial seed production or research purposes.

#### **Target Pests:**

- Dollar Spot – (*Sclerotinia homeocarpa*)
- Anthracnose – (*Colletotrichum graminicola*)
- Pythium – (*Pythium aphanadermatium*)
- Microdochium patch (Pink Snow Mold) – (*Microdochium nivale*)

#### **Application Using the BioJect® Automatic Fermentation System**

Refer to the BioJect® Operators' Manual for specific operating and handling instructions. Only trained operators may use the BioJect® system.

*Spot-Less™ Biofungicide* is applied using the BioJect® system. During evening hours, treat only unoccupied turf (preferably when the golf course, or other facility, is closed to the public). Avoid use of treated areas until mists have settled and sprays have dried.

A quality control check, using the BioJect® System Quality Control Checklist (page 3), is mandatory for each BioJect® fermentation cycle. If any checklist item does not function properly, the resulting batch must be aborted and appropriately disposed.

**NOTE:** Use only potable water in the BioJect® system, for operation (fermentation) and disinfection.

#### **Frequency of Application:**

Apply during periods of high disease 5-7 times per week through over-head chemigation systems.

#### **Chemigation:**

Refer to the section entitled **Chemigation Instructions** (page 4) for directions on chemigation. Do not apply this product through any irrigation system, unless the chemigation labeling is followed.

#### **Conventional Sprayer:**

Fill the supply tank with a minimum of 50 gallons of potable water. Check pH of the water and buffer as necessary to a range of 6.0 to 8.0. Add 2-4 pints of *Spot-Less™ Biofungicide*. Note: Do not add any other products to the tank mixture. Using lowest setting, agitate the mixture for approximately three minutes. For best results, mix and apply during evening twilight.

### BioJect® System Quality Control Checklist

A quality control check is mandatory prior to the initiation of each fermentation service cycle for *Spot-Less™ Biofungicide*. If any checklist item does not function properly, or if procedures are not followed, the resulting batch must be aborted and appropriately disposed.

Item	Quality Control Check
UV light – operating properly.	Visually observe and confirm the UV light is attached to the water input line. Visually observe and confirm the UV light emits a purple glow. Verify, per bulb manufacturer’s instructions, the scheduled maintenance and replacements are followed.
Inoculum - properly added to the BioJect® fermentation tank.	Visually observe and confirm the inoculum pump’s activity during addition.
Disinfecting cycle - occurred immediately after fermentation.	Visually observe and confirm the disinfectant pump is operating during the clean-in-place (CIP) cycle.
Appropriate media - added to the fermentation tank.	Confirm the nutrient medium added to the BioJect® is MD-1/2.

### Spot-Less™ Biofungicide Disposal & Storage

Do not contaminate water, feed or food by disposal.

**Disposal of Defective Batches:**

Prior to disposal, defective batches (including partially used batches) must be disinfected with common household bleach (4-6% Sodium Hypochlorite). Add 1ℓ (0.25 gallons) of bleach per 27 gallon fermentation batch (1% v/v or 10,000 ppm). Allow bleach solution to disinfect for a minimum of five minutes. Dispose of the disinfected batch in the sewer system.

**Pesticide Storage:** Store in original bags and keep closed. Refrigerate at 40-55°F.

**Pesticide Disposal:** Disinfect with common household bleach (4-6% Sodium Hypochlorite). Wastes resulting from the use of this product may be disposed of on site or an approved waste disposal facility.

**Container Disposal:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## Chemigation Instructions

Inject this product into over-head sprinkler. The BioJect® automatic fermentation system can be used with this irrigation method. Do not apply this product through any other type of irrigation system. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

### Over-Head Sprinkler System Requirements:

1. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline, to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump. And connected to prevent fluid from being withdrawn from the supply tank when the irrigation system is automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the pump motor system stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. The action of the metering pump delivering the *Spot-Less™ Biofungicide* into the chemigation system will provide all of the necessary mixing. Application of *Spot-Less™ Biofungicide* can be continuous for the duration of the irrigation schedule.

**Testing for *Spot-Less™ Biofungicide* Fermentation Quality:**

1. The quality of a *Spot-Less™ Biofungicide* fermentation can be measured on site using a LaMotte Turbidity Test Kit Code #7519. Follow LaMotte's procedure for using the kit and obtain the resulting Jackson Turbidity Unit (JTU) reading. Convert the JTU reading to CFU/ml using the figure below. The minimum reading for *Spot-Less™ Biofungicide* performance on turf is  $5E+07$  CFU/ml. If your fermentation is below that level, your BioJect® Service Technician will make necessary adjustments to restore BioJect® fermentation quality.

