



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION**

March 27, 2023

Jennifer Fulford  
Agent for Moghu Research Center, Ltd.  
c/o toXcel, LLC  
7140 Heritage Village Plaza  
Gainesville, VA 20155

**Subject:** Label Amendment – update Environmental Hazards section to add estuarine/marine invertebrate toxicity, aquatic organism drift, and additional surface water advisory statements; and add CA state-requested use restrictions for additional turf species

Product Name: PoaCure  
EPA Registration Number: 89633-4  
Application Date: February 24, 2023  
Decision Number: 590833

Dear Jennifer Fulford:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims

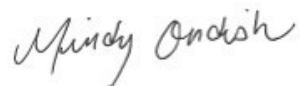
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substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

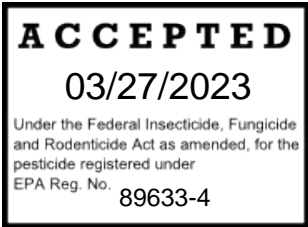
If you have any questions, please contact me at [ondish.mindy@epa.gov](mailto:ondish.mindy@epa.gov) or at (202)566-2857.

Sincerely,

A handwritten signature in cursive script that reads "Mindy Ondish".

Mindy Ondish  
Product Manager 23  
Herbicide Branch  
Registration Division (7505T)  
Office of Pesticide Programs

Enclosure



Methiozolin	Group	<b>30</b>	Herbicide
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# PoaCure®

## PRE- AND POST EMERGENCE GRASS HERBICIDE FOR SELECTIVE CONTROL OF ANNUAL BLUEGRASS AND ROUGHSTALK BLUEGRASS<sup>[1]</sup> IN GOLF COURSE TURF INCLUDING CREEPING BENTGRASS PUTTING GREENS

**ACTIVE INGREDIENT**

Methiozolin\* ..... 25% (w/w)

**OTHER INGREDIENTS** ..... 75% (w/w)

**TOTAL**..... 100%

\*5-(2,6-Difluoro-benzyloxymethyl)-5-methyl-3-(3-methyl-thiophen-2-yl)-4,5-dihydro-isoxazole  
This product contains 2.0 lbs. active ingredient per gallon.

*Contains petroleum distillates*

### KEEP OUT OF REACH OF CHILDREN DANGER/PELIGRO

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.)

FIRST AID	
<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 15-20 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, and then continue rinsing.</li> <li>Call poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor for treatment advice.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give <b>any</b> liquid to the person. Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air. If person is not breathing, call 911 or an ambulance, and 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>
For emergency information regarding the use of this product call the <b>National Pesticides Information Center</b> at 1-800-858-7378, 8:00 AM to 12:00 PM Pacific Time (PST), Monday to Friday. Or, call the poison control center 1-800-222-1222. <b>Have the product container or label with you when calling the poison control center, or doctor or when going for treatment.</b>	
NOTE TO PHYSICIAN: Contains petroleum distillate-vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.	

Manufactured for  
Moghu Research Center Ltd.  
B-228, GAJEONG-RO 99  
YUSEONG, DAEJEON, 34115, SOUTH KOREA

EPA Registration No. 89633-4  
EPA Establishment No. 93519-KOR-1

Net Contents: \_\_ gal.

## PRECAUTIONARY STATEMENTS

### HAZARD TO HUMANS AND DOMESTIC ANIMALS

#### DANGER

Corrosive. Causes skin burns. Do not get in eyes, on skin or on clothing. Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Contains petroleum distillates. Wear coveralls, long-sleeve shirt and long pants, socks and shoes, chemical-resistant gloves made of barrier laminate, nitrile/neoprene rubber  $\geq$  14 mils, or viton  $\geq$  14 mils, and protective eyewear (goggles, face shield, or safety glasses).

When mixing/loading wear a chemical resistant apron. For overhead exposure wear chemical resistant headgear. When cleaning equipment wear a chemical-resistant apron.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to estuarine/marine 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 wash-water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

#### Groundwater Advisory:

This chemical and a degradate of concern have properties and characteristics associated with chemicals detected in groundwater. This chemical and a degradate of concern may leach into groundwater 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 medium potential for reaching both surface water and aquatic sediment via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of methiozolin and a degradate of concern from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come in contact with an oxidizing agent. Hazardous chemical reaction may occur.

### DIRECTIONS FOR USE

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

Read entire Directions for Use and Disclaimer of Warranties before using this product.

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, consult the agency in your state responsible for pesticide regulation.

### PRODUCT INFORMATION

**PoaCure**<sup>®</sup> is a pre- and post-emergence herbicide that will selectively control annual bluegrass (*Poa annua* var. *annua*), perennial type of annual bluegrass<sup>[1]</sup> (*Poa annua* var. *reptans*), and roughstalk bluegrass<sup>[1]</sup> (*Poa trivialis*) in various established golf course turf including [1] bent grass putting greens, [2] fairways, and other turf areas consisting of various cool and warm season turfgrasses.

**PoaCure**<sup>®</sup> exhibits strong seed head suppression activity when applied at the flowering stage of annual bluegrass.

**PoaCure**<sup>®</sup> provides pre-emergence control of crabgrass<sup>[1]</sup> (*Digitaria* sp.) and goosegrass<sup>[1]</sup> (*Elucineindica*), and certain broadleaf weeds such as common speedwell<sup>[1]</sup> (*Veronica arvensis*), Persian speedwell<sup>[1]</sup> (*Veronica persicaria*), common chickweed<sup>[1]</sup> (*Stellaria media*), big chickweed<sup>[1]</sup> (*Cerastium vulgatum*), and hairy bittercress<sup>[1]</sup> (*Cardamine hirsuta*). **PoaCure**<sup>®</sup> controls resistant biotypes of *Poa annua*; but specific efficacy may vary depending on resistance mechanism.

[<sup>1</sup>Not for use in the State of California]

**PoaCure**<sup>®</sup> inhibits fatty acid thioesterase (FAT), an enzyme in lipid biosynthesis in plants.

**PoaCure**<sup>®</sup> is a very slow acting herbicide. The typical herbicidal symptom is stunting in susceptible grasses. *Poa* growth is stopped within a day, but it is difficult to recognize in golf course environments where low mowing is regularly practiced. There are almost no visual symptoms such as yellowing, whitening, burning, or twisting in the first 2 weeks. Stunting becomes visually obvious 2 to 3 weeks after application, followed by slow desiccation of the entire plant starting from the meristematic tissue. *Poa* responses become clear in about 1 month, including an off-colored to slightly brownish tint and sunken appearance. Usually, *Poa* fades away in the second month. This process typically happens faster during fall applications or when temperature declines; and may be slower during spring applications or when it warms up.

**PoaCure**<sup>®</sup> activity is mainly based on root uptake, and thus enhanced by irrigation or rainfall (0.1 to 0.2") after spray before foliage dries. Post-application irrigation (to wash off the foliage) is required to obtain optimum activity, especially for fairway height turfgrass, or any situation having high foliage interception of spray droplets such as with high plant density, stolon/leaf overlap, or high thatch accumulation.

Apply **PoaCure**<sup>®</sup> using a wide range of spray volumes from 30 to 200 gallons per acre. Do not tank mix with an adjuvant.

Apply **PoaCure**<sup>®</sup> when the average daily temperature is between 50° and 80 °F, when both *Poa* weeds and turfgrasses are actively growing. Do not apply **PoaCure**<sup>®</sup> prior to or during periods of heat stress and winter dormancy, or to turf that is stressed by management activities such as core cultivation, scalping, or top dressing.

Apply **PoaCure**<sup>®</sup> at a rate of 0.2 to 0.4 gallons per acre, which is equivalent to 0.6 to 1.2 fluid ounces per 1,000 ft<sup>2</sup>, or 1.9 to 3.8 liters per hectare, respectively, at each application time.

**PoaCure**<sup>®</sup> activity is most efficient when used in repeated applications in 2- to 3-week- intervals. The number of applications is between 1 and 6, depending on locations (see Tables below).

Apply **PoaCure**<sup>®</sup> using conventional ground application equipment.

#### **Resistance Management Recommendations:**

For resistance management, **PoaCure**<sup>®</sup> is a Group 30 herbicide. Any weed population may contain or develop plants naturally resistant to **PoaCure**<sup>®</sup> and other Group 30 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

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

- Follow the directions for use to the best practices in controlling *Poa* species. **PoaCure**<sup>®</sup>'s program is intended for multiple applications over several growing season cycles to slowly control *Poa* while minimizing disruption in play on the golf course.
- Rotate the use of **PoaCure**<sup>®</sup> or other Group 30 herbicides within a season sequence with different herbicide groups that control the same weeds in an area.
- Adopt an integrated weed-management program (IPM) for herbicide use that includes scouting and uses historical information related to herbicide use and that considers biological

and other management practices.

- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by using an alternative herbicide from a different group or by physical removal of the weeds. Prevent movement of resistant weed seeds to other areas by cleaning equipment when moving between areas.
- If *Poa* is not controlled while following the use directions, and resistance is suspected to **PoaCure**<sup>®</sup>, discontinue use of this product and switch to another management strategy. Hand-picking of the remaining resistant *Poa* or renovation of the affected golf course turf may be necessary to remove the *Poa*.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crop and weed biotypes.
- For further information or to report suspected resistance, contact Moghu Research Center representatives at <http://poacure.com>.

**PoaCure**<sup>®</sup> activity is most efficient when used according to the use directions below.

## RESTRICTIONS

1. Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.
2. Do not apply this product through any type of irrigation system.
3. Do not apply this product by air.
4. In the State of New York, do not apply **PoaCure**<sup>®</sup> within 100 feet of any water body that connects with any offsite water bodies such as a freshwater lake, pond, river, stream or wetland.

## Mechanical stresses:

1. Do not apply **PoaCure**<sup>®</sup> within one week of aeration followed by aggressive topdressing and brushing. If the application timing overlaps with aeration, skip or delay the application of **PoaCure**<sup>®</sup> until turf has recovered. For example, if you applied **PoaCure**<sup>®</sup> two times in March at 2-week intervals and aerated in early April, then skip the third application. Resume application at 4 weeks from the second application or about 2 weeks after aeration.
2. Do not use a roller to press the surface within 2 days after spraying.
3. High traffic, scalped, machine-injured areas etc. may be sensitive to **PoaCure**<sup>®</sup>. Avoid application to these stressed areas.

**Shade, saturated soil conditions, or extended rainfall during/after treatment:** Unfavorable bentgrass responses are expected to be greater under these conditions. Do not apply, or if you have applied and observe any sign of thinning in these areas, skip an application until your turf grass is fully recovered.

**Summer to early fall application:** Do not apply when summer air temperatures are consistently above 85 °F or immediately following stressful summer weather. Allow at least a month for the

turfgrass to fully recover in cool weather before starting applications.

**Late fall to winter application:** Do not apply when consistent freezing temperatures are expected. Application may still be made when occasional frosts occur in the morning.

**Post-application aerification:** Do not aerate within a week after application. Immediate post-application aeration will destroy the herbicide treatment layer on the soil surface and *Poa* control efficacy will decrease.

**Plant Growth Regulators (PGRs):** During application sequences of *PoaCure*®, stop using any PGR, except for Trinexapac-ethyl, until *Poa* control is completed. PGRs may negatively impact turfgrass health, and are generally antagonistic to *PoaCure*® action.

**Other herbicides or fungicides:** Do not tank-mix with any other products.

## [1] DIRECTIONS FOR USE IN PUTTING GREENS

### Turfgrass species:

- Creeping bentgrass, *Agrostis stolonifera*
- Hybrid bermudagrass<sup>[1]</sup>, *Cynodon dactylon* x *C. transvaalensis*

[<sup>1</sup>Not for use in the State of California]

### Mixing Instructions

Add 0.2 gallons of *PoaCure*® and 30-200 gallons of water per acre to sprayer device.

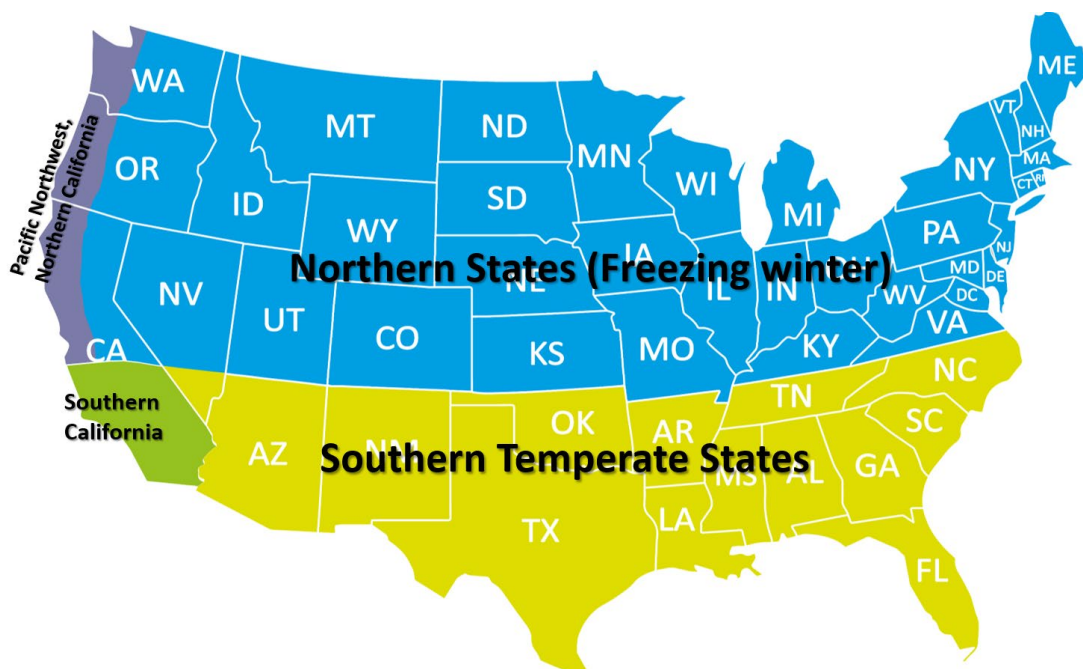
### Rate, regional application time, number of applications, maximum application rates, and re-treatment interval

Application rate (gallons per acre/lbs ai per acre)	Region**	Application time	Number of applications	Re-Treatment Interval (Weeks)	Maximum annual application rate (gallons per acre per year/lbs. ai per acre per year)
0.2*/0.4	Northern States (Freezing winter)	October to November	1 to 2	2 to 3	1.0/2.0
		April to June	1 to 3		
	Southern Temperate States	November to February	1 to 5		1.0/2.0
	Pacific Northwest, Northern California	February to November	1 to 6		1.2/2.4
	Southern California	November to May	1 to 6		1.2/2.4

\*This rate is equivalent to 0.6 fluid ounces *PoaCure*® per 1,000 ft<sup>2</sup>, or 1.9 liters per ha, or 0.4 lbs. active ingredient (ai) per acre.

\*\* Generally, the climate description is as follows: (1) Northern States (Freezing winter): Typical temperate climates with hot summer and freezing winter and/or permanent snow cover, and long

winter and cool summer in the Mountains (CO, WY, MT, ID, UT, NV, Eastern part of WA, OR, CA, some part of northern AZ), the application window can vary depending on spring and fall season year by year, and the micro-climates within states; (2) Southern Temperate states: Temperate climates with mild winter and hot/long summer, the application window can vary depending environmental conditions and the micro-climates within states; (3) Pacific Northwest and Northern California; Cool for the whole year; the application window can vary depending environmental conditions and the micro-climates within states. (4) Southern California: Hot in summer and cool in winter. However, specific micro-climate may vary significantly within a region. The application window can vary depending on environmental conditions and the micro-climates within states. The geographical regions are as shown in the map below.



## RESTRICTIONS

- Do not apply when creeping bentgrass is in heat stress or has poor root development.
- Do not apply prior to or during creeping bentgrass winter dormancy and until fully greened up and there is active plant growth (Northern States).
- Do not over-seed creeping bentgrass within 45 days of the last application.
- Do not apply to putting greens consisting of velvet bentgrass or colonial bentgrass.
- Do not apply to hybrid bermudagrass putting greens over-seeded with rough bluegrass (*Poa trivialis*).

## PRECAUTIONS

- **PoaCure®** has not been evaluated under all microclimates or against all biotypes of annual and roughstalk bluegrass. Therefore, performance may be less effective in some locations and against some biotypes of these weed species.
- **PoaCure®** may temporarily reduce overall turfgrass cover when *Poa* weed infestation is high.



**[2] DIRECTIONS FOR USE IN PERMANENTLY ESTABLISHED GREEN COLLARS, APPROACHES, FAIRWAYS, OR TEES**

**Turfgrass species:**

- Creeping bentgrass<sup>[1]</sup>, *Agrostis stolonifera*
- Kentucky bluegrass<sup>[1]</sup>, *Poa pratensis*
- Perennial ryegrass<sup>[1]</sup>, *Lolium perenne*
- Fescues<sup>[1]</sup>, *Festuca rubra* or *F. arundinacea*
- Bermudagrass, *Cynodon dactylon*
- Hybrid bermudagrass, *Cynodon dactylon* x. *C. transvaalensis*
- Zoysiagrass<sup>[1]</sup>, *Zoysia japonica* or *Z. matrella*
- Seashore paspalum<sup>[1]</sup>, *Paspalum vaginatum*
- Kikuyugrass<sup>[1]</sup>, *Pennisetum clandestinum*

[<sup>1</sup>Not for use on these species in the State of California]

**Mixing Instructions**

Add 0.4 gallons of **PoaCure**<sup>®</sup> and 30-200 gallons of water per acre to sprayer device.

**Rate, regional application time, number of applications, maximum application rates, and re-treatment interval**

Application rate (gallons per acre/lbs. ai per acre)	Region**	Application time	Number of applications	Re-treatment Interval (Weeks)	Maximum annual application rate (gallons per acre per year/lbs. ai/acre/yr)
0.4*/0.8	Northern States (Freezing winter)	September to November	1 to 3	2 to 3	2.4/4.8
		April to June	1 to 3		
	Southern Temperate States	October to February	1 to 3		1.2/2.4
	Pacific Northwest, Northern California	February to November	1 to 4		1.6/3.2
	Southern California	November to May	1 to 4		1.6/3.2

\*This rate is equivalent to 1.2 fluid ounces **PoaCure**<sup>®</sup> per 1,000 ft<sup>2</sup>, or 3.8 liters per ha, or 0.8 lbs. active ingredient (ai) per acre.

\*\* Generally, the climate description is as follows: (1) Northern States (Freezing winter): Typical temperate climates with hot summer and freezing winter and/or permanent snow cover, and long winter and cool summer in the Mountains (CO, WY, MT, ID, UT, NV, Eastern part of WA, OR, CA, some part of northern AZ), the application window can vary depending on spring and fall season year by year, and the micro-climates within states; (2) Southern Temperate states: Temperate climates with mild winter and hot/long summer, the application window can vary depending environmental conditions and the micro-climates within states; (3) Pacific Northwest and Northern California; Cool for

the whole year; the application window can vary depending environmental conditions and the micro-climates within states. (4) Southern California: Hot in summer and cool in winter. However, specific micro-climate may vary significantly within a region. The application window can vary depending on environmental conditions and the micro-climates within states. The geographical regions are as shown in the map above in [1] DIRECTIONS FOR USE IN PUTTING GREENS.

## RESTRICTIONS

- Do not over-seed within 45 days of the last application or apply **PoaCure**<sup>®</sup> within 12 weeks of over-seeding.

## PRECAUTIONS

- **PoaCure**<sup>®</sup> has not been evaluated under all microclimates or against all biotypes of annual and roughstalk bluegrass. Therefore, performance may be less effective in some locations, and against some biotypes of these weed species.
- **PoaCure**<sup>®</sup> may temporarily reduce overall turfgrass cover when *Poa* weed infestation is high.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original, tightly closed container in a secure, dry area inaccessible to children.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or other procedures approved by state and local authorities.

## WARRANTY STATEMENT

Moghu Research Center warrants that this product complies with the specifications expressed on the label. To the extent consistent with applicable law, Moghu Research Center makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose.