

BOSCALID GROUP 7 FUNGICIDE

# Ruby

For Disease Control on Golf Course Turfgrass and Ornamentals.

**ACTIVE INGREDIENT:**

Boscalid\*: 3-pyridinecarboxamide, 2-chloro-N-(4'-chloro(1,1'-biphenyl)-2-yl)- ..... WT. BY %  
70.0%

**OTHER INGREDIENTS:** ..... 30.0%

**TOTAL:** ..... 100.0%

\*Ruby contains 0.044 lb. of boscalid in 1 oz.

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)

See label booklet for complete First Aid, Precautionary Statements,  
Directions For Use, and Storage and Disposal.

EPA Reg. No. 83529-164

EPA Est. No. **OP** 62171-MS-003; **MA** 83411-MN-001;

**VP** 07401-TX-001; **MX** 97107-MEX-001

The EPA Establishment Number is identified by the circled letters above that match the first two letters in the batch number.

Manufactured For:

**Sharda USA LLC** 

7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

**Net Contents: 0.49 lb. (0.22 kg)**

<b>FIRST AID</b>	
<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 eye.</li> <li>• Call a 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.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<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 INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, 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>
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at <b>1-800-222-1222</b> .	

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

#### **WARNING**

Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

##### **Applicators and other handlers must wear:**

- Protective eyewear (goggles, face shield or safety glasses)
- Long-sleeved shirt and long pants
- Chemical-resistant gloves of any waterproof material including barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber (includes natural rubber blends and laminates)  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or viton  $\geq$  14 mils
- Shoes plus socks

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.

## USER SAFETY RECOMMENDATIONS

### Users should:

- Wash hands 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

**DO NOT** apply directly to water, areas where surface water is present, or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate.

### Surface Water Advisory

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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 boscalid 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.

### Groundwater Advisory

Boscalid is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## DIRECTIONS FOR USE

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

This labeling must be in the possession of the user at the time of application.

**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.

**FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.**

### 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 for all crops, except table grapes that may be subject to cane turning or cane girdling. The REI is 5 days for treated table grapes grown on T-trellis systems.

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:

- Protective eyewear (goggles, face shield or safety glasses)
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material including barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber (includes natural rubber blends and laminates)  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or viton  $\geq$  14 mils
- Shoes plus socks

### 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, nurseries, or greenhouses.

**DO NOT enter or allow others to enter treated areas until sprays have dried.**

### MANDATORY SPRAY DRIFT MANAGEMENT

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 ft. above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use nozzles and pressure that deliver a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters
- If the windspeed is 10 miles per hour or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the windspeed is between 11 - 15 miles per hour, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

*(continued)*

## MANDATORY SPRAY DRIFT MANAGEMENT *(continued)*

### **Airblast Applications:**

- Sprays must be directed into the canopy.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- **DO NOT** apply during temperature inversions.

### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use nozzles and pressure that deliver a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size - Ground Boom**

- **Volume** - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Boom Height - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **Controlling Droplet Size - Aircraft**

- **Adjust Nozzles** - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **Release Height - Aircraft**

Higher release heights increase the potential for spray drift.

#### **Boomless Ground Applications**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications

Take precautions to minimize spray drift.

### Shielded Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### Temperature And Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft disease generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## PRODUCT INFORMATION

**Ruby** is a systemic anilide fungicide for the control of dollar spot (*Sclerotinia homoeocarpa*) and bentgrass dead spot (*Ophiosphaerella agrostis*) in turfgrass grown on golf courses and for several foliar and soilborne diseases in greenhouse and outdoor ornamentals. See **ORNAMENTALS** section and **Table 3** for additional use sites. Optimum disease control is achieved when **Ruby** is applied in a regularly scheduled preventive spray program and is used in a rotation program with other effective fungicides. Because of its high specific activity, **Ruby** has good residual activity against target fungi.

For the control of turfgrass and ornamental diseases not listed on this label, **Ruby** may 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. All applications must be made according to the use directions that follow. Failure to follow directions and precautions on this label may result in turfgrass and ornamentals injury and/or inferior disease control.

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## GOLF COURSE TURFGRASS

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### APPLICATION INFORMATION - FOR GOLF COURSE TURFGRASS

**Ruby** is a systemic fungicide for the control of dollar spot and bentgrass dead spot of golf course turfgrass. **Ruby** may be applied as a solo foliar spray or in tank mixes with other registered turfgrass fungicides. **DO NOT** exceed the specified application rate or fail to comply with use restrictions listed in the **Resistance Management and Restrictions for Golf Course Turfgrass**. All applications must be made according to the use directions that follow.

### Restrictions for Golf Course Turfgrass:

- **This product is for golf course and ornamentals use only. DO NOT use on residential turfgrass, turfgrass being grown for sale, or other commercial use such as sod production, seed production, or for research purposes.**
- **DO NOT** apply more than a total of 1.1 oz. (0.0484 lb. a.i.) of **Ruby** per 1,000 sq. ft. per year (48 oz.; 2.11 lbs. a.i. **Ruby** per acre per year).
- **DO NOT** apply more than 2 sequential applications of **Ruby**. Then alternate to another effective fungicide before reapplying **Ruby**.
- **DO NOT** exceed a maximum single application rate of 8 oz. (0.35 lb. a.i.) per acre.
- **DO NOT** exceed 6 applications per year using an application rate of 8 oz. (0.35 lb. a.i.) per acre.
- **DO NOT** exceed 8 applications per year using an application rate of 5.7 oz. (0.25 lb. a.i.) per acre.
- **DO NOT** apply this product to turfgrass except for golf course turfgrass.
- **DO NOT** apply through any type of irrigation equipment.
- This product cannot be used to formulate or reformulate any other pesticide product.
- The minimum retreatment interval of **Ruby** is 14 days.

### Uses and Tolerances

**Ruby** can be used only on turf grown on golf courses. Due to variability within turfgrass species, application techniques and possible tank mixes, neither the manufacturer nor the seller has determined if **Ruby** has adequate tolerance on all turfgrasses under all conditions. Therefore, apply the specified rate of **Ruby** on a small test area under conditions expected to be encountered and monitor for any adverse effects before applying **Ruby** to the targeted area.

### Spray Instructions

For maximum efficacy, apply **Ruby** prior to or in the early stages of disease development. For maximum efficacy, apply **Ruby** at the rates indicated in **Table 1** in 2 - 4 gals. of water per 1,000 sq. ft. (87 - 174 gals. per acre). 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.

- **Ruby** is most effective when applied preventively.
- Actual length of disease control will vary depending on environmental conditions, disease pressure, and turfgrass management practices.
- Calibrate sprayer prior to use.
- After application, allow foliage to dry prior to mowing or irrigation.
- Apply **Ruby** using sufficient water volume and pressure for adequate coverage of the foliage.
- Apply **Ruby** as instructed in the Specific Use Directions with ground spray equipment.

### Resistance Management

**Ruby** contains a Group 7 (carboxamide) fungicide. Any fungal population may contain individuals naturally resistant to **Ruby** and other Group 7 (carboxamide) fungicides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To maintain the performance of **Ruby** in turfgrass, **DO NOT** exceed the total number of sequential applications of **Ruby**. Adhere to the label instructions regarding the consecutive use of **Ruby**.

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

- Rotate the use of **Ruby** or other Group 7 (carboxamide) 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 local Sharda USA LLC representative. You can also contact your pesticide distributor or university extension specialist to report resistance

**DO NOT** make more than 2 sequential applications of **Ruby** for disease control, especially for dollar spot or bentgrass dead spot in golf course turfgrass. Then alternate to another effective fungicide before reapplying **Ruby**.

#### **Additives and Tank Mixing Information for Golf Course Turfgrass**

It is the pesticide end-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.

Due to the large number of additives or adjuvants that may be used, neither the manufacturer nor the seller has determined whether **Ruby** can be used safely with all additives on golf course turfgrass.

#### **Tank Mix Partners/Components**

**Ruby** is compatible with most fungicide, insecticide, and fertilizer products. If tank mixtures are used, adhere to restrictions due to rates, label directions and precautions on all labels. Physical incompatibility, reduced disease control, or turfgrass injury may result from mixing **Ruby** with fungicides, herbicides, insecticides, additives, or fertilizers. To improve control of certain diseases, **Ruby** may be tank mixed with other effective fungicides, including active ingredients vinclozolin, iprodione, and propiconazole.

#### **Compatibility Test for Tank Mix Components**

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre:

1. **Water** - For 87 gals. per acre (2 gals. per 1,000 sq. ft.) spray volume, use 14.4 cups (3.5 liters) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
2. **Water-Dispersible Products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)** - Cap the jar and invert 10 cycles.
3. **Water-Soluble Products** - Cap the jar and invert 10 cycles.
4. **Emulsifiable Concentrates (oil concentrate or methylated seed oil when applicable)** - Cap the jar and invert 10 cycles.
5. **Water-Soluble Additives** - Cap the jar and invert 10 cycles.
6. Let the solution stand for 15 minutes.
7. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.



## Mixing Order

Limit amount of spray mixture prepared to that needed for immediate use.

1. **Water** - Begin by agitating a thoroughly clean sprayer tank 1/2 full of clean water.
2. **Products in PVA Bags** - Place the water-soluble PVA bag into the mixing tank. The water-soluble PVA bag will dissolve in water to allow the contents to disperse. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
3. **Water-Dispersible Products (dry flowables such as Ruby, wettable powders, suspension concentrates, or suspo-emulsions)**
4. **Water-Soluble Products**
5. **Emulsifiable Concentrates (oil concentrate or methylated seed oil when applicable)**
6. **Water-Soluble Additives (AMS or UAN when applicable)**
7. Remaining quantity of water.

Maintain maximum constant agitation during application. **DO NOT** allow mixture to stand for extended periods prior to application.

## Cleaning Spray Equipment

Spraying 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 **Ruby**.

### APPLICATION DIRECTIONS - FOR GOLF COURSE TURFGRASS

Use **Ruby** for the control of dollar spot and bentgrass dead spot in golf course turfgrass. For maximum efficacy, apply **Ruby** prior to or in the early stages of disease development. Apply **Ruby** at the rates indicated in **Table 1** in 2 - 4 gals. of water per 1,000 sq. ft. (87 - 174 gals. per acre). 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.

**Table 1 - Application Rates and Intervals for Ruby on Golf Course Turfgrass**

Disease (Pathogen)	Rate (Oz. Ruby per 1,000 Sq. Ft.)	Rate (Oz. Ruby per Acre)	Application Intervals	Application Instructions
<b>Dollar Spot</b> <i>Sclerotinia homoeocarpa</i>	0.13 - 0.18 (0.006 - 0.008 lb. a.i.)	5.7 - 8.0 (0.25 - 0.35 lb. a.i.)	14 - 28 days	Begin applications prior to or in the early stages of disease development. Use the shorter specified application interval and/or the higher specified rate when prolonged favorable disease conditions exist.
<b>Bentgrass Dead Spot</b> <i>Ophiopogon sp.</i>	0.18 (0.008 lb. a.i.)	8.0 (0.35 lb. a.i.)	14 days	

**Table 2 - Dilution Table for Spray Solutions of Ruby**

Rate (Oz. Ruby per 1,000 Sq. Ft.)	Oz. Ruby per 100 Gals. Spray Solution		
	Spray Volume 2 Gals. per 1,000 Sq. Ft.	Spray Volume 3 Gals. per 1,000 Sq. Ft.	Spray Volume 4 Gals. per 1,000 Sq. Ft.
0.13	6.5	4.3	3.3
0.18	9.0	6.0	4.5

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## ORNAMENTALS

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Use not permitted in California unless otherwise directed by supplemental labeling.

### APPLICATION INFORMATION - FOR ORNAMENTALS

Use **Ruby** for control of certain foliar and soilborne diseases, including blights, rots, leaf spots, and powdery mildews of ornamental plants. **Ruby** may be used to control certain diseases of container, bench, flat, plug, bedgrown or field-grown ornamentals grown in outdoor nurseries, retail nurseries, forest and conifer nurseries and plantations, golf courses, residential and commercial landscapes, interiorscapes, greenhouses, lathhouses, shadehouses, and containers.

**DO NOT** exceed the application rate or fail to comply with the use restrictions listed in the **Resistance Management** and **Restrictions for Ornamentals** sections. Make all applications according to the use directions that follow. Failure to follow directions and precautions on this label may result in injury and/or inferior disease control.

#### Restrictions for Ornamentals:

- **This product is for golf course and ornamentals use only. DO NOT use on residential turfgrass, turfgrass being grown for sale, or other commercial use such as sod production, seed production, or for research purposes.**
- **DO NOT** apply more than a total of 48 oz. (2.11 lbs. a.i.) of **Ruby** per use site acre per year.
- **DO NOT** exceed a maximum single application rate of 16 oz. (0.70 lb. a.i.) per acre per.
- **DO NOT** exceed 3 applications per year using an application rate of 16 oz. (0.70 lb. a.i.) per acre.
- **DO NOT** exceed 12 applications per year using an application rate of 4 oz. (0.18 lb. a.i.) per acre.
- **DO NOT** apply to plants that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications.
- **DO NOT** use on crops intended for food or feed use.
- **DO NOT** use in vegetables grown in greenhouses for crop production or in vegetable production of transplants for outdoor use.
- **DO NOT** expose grapes of varieties Concord, Fredonia, Niagara, Noiret (NY73.0136.17), Rougeon, Steuben, and Worden to spray or drift containing **Ruby** because injury may result.
- **DO NOT** apply to fruit trees, nut trees, or vines that will bear harvestable fruit within 12 months.
- The minimum retreatment interval of **Ruby** is 7 days.

#### Uses and Tolerances

The phytotoxic potential of **Ruby** has been assessed on a wide variety of common ornamental plants with no phytotoxicity observed. Refer to **Table 8. Ruby Tolerant Plant Species** for the list of plants shown to be tolerant to **Ruby**. Not all plant species and their varieties and cultivars have been tested for tolerance to **Ruby**, possible tank mix combinations of **Ruby**, pesticide treatments preceding or following those of **Ruby**, and combinations of **Ruby** with adjuvants or surfactants. Local conditions can also influence plant tolerance and may not match those under which Sharda USA LLC has conducted testing. Therefore, before using **Ruby**, test the product on a sample of the plant to be treated to ensure that a phytotoxic response will not occur prior to large-scale use.

Apply **Ruby** according to the instructions, rate, timing, resistance management and adjuvant use directions in **Table 3, Table 4, Table 5, and Table 6** in this label. **Ruby** may be applied by ground sprayers such as tractor ground-boom, backpack/hand-boom, hand-wand, etc.; aerial spray with fixed-wing aircraft or helicopter; and by chemigation using sprinkler and drip irrigation.

#### Aerial Application Directions

**Ruby** may be applied aerially to field-grown nursery plants using a minimum of 10 gals. per acre of finished spray solution. Use the **Ruby** rate per 100 gals. in **Table 4** concentrated into 10 gals. per acre only for aerial applications. **DO NOT** apply aerially when environmental conditions favor drift from target area. Drift potential is lowest when wind speed does not exceed 10 mph.

**Table 3 - Use Sites and Application Techniques for Ornamentals and Flower Bulbs**

Use Sites	Application Techniques	Application Equipment
Outdoor nurseries (container, bench, flat, plug, bed-grown or field-grown)	Ground (foliar spray or drench) Chemigation Aerial (foliar spray)	Tractor ground-boom, backpack, hand-wand Sprinkler and drip irrigation Aircraft (fixed-wing and helicopter)
Retail nurseries	Ground (foliar spray or drench)	Tractor ground-boom, backpack, hand-wand
Forest and conifer nurseries and plantations	Ground (foliar spray) Aerial (foliar spray)	Tractor ground-boom, backpack, hand-wand Aircraft (fixed-wing and helicopter)
Greenhouses, lathouses, and shadehouses	Ground (foliar spray or drench)	Tractor ground-boom, backpack, hand-wand
Containers	Ground (foliar spray or drench)	Tractor ground-boom, backpack, hand-wand
Residential and commercial landscapes	Ground (foliar spray)	Tractor ground-boom, backpack, hand-wand
Interiorscapes	Ground (foliar spray)	Backpack, hand-wand
Recreational areas including parks and sports fields where ornamentals and bulbs are present	Ground (foliar spray)	Tractor ground-boom, backpack, hand-wand

**Use Precautions for Sprinkler and Drip Irrigation Applications**

**Drip Irrigation:** **Ruby** may be applied through drip irrigation systems to potted ornamentals or to bedded, field-grown ornamentals for soilborne disease control. Apply 8 - 16 oz. **Ruby** per acre as a preventive disease application. The soil or potting media must have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least 24 hours following drip application.

**Sprinkler Irrigation:** **Ruby** may be applied by sprinkler irrigation to potted ornamentals or to bedded, field-grown ornamentals. Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems.

**DO NOT** apply this product through any other type of irrigation system, except as specified on this label.

Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines, or wheel lines other than continuous-move) are used, apply this product by injection into no more than the last 20 - 30 minutes of the set.

**DO NOT** spray when conditions favor drift beyond the area intended for application. Plant injury and lack of effectiveness can occur with misapplication or drift. Thorough coverage of foliage is required for good control.

Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. 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.

The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. 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 the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. 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. Systems must use a metering pump, such as a 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.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, must shut the system down and make necessary adjustments should the need arise. **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.

### Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such 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. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow 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 must 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 2 times the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point that pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a 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.

### Resistance Management

**Ruby** contains a Group 7 (carboxamide) fungicide. Any fungal population may contain individuals naturally resistant to **Ruby** and other Group 7 (carboxamide) fungicides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To maintain the performance of **Ruby** in turfgrass, **DO NOT** exceed the total number of sequential applications of **Ruby**. Adhere to the label instructions regarding the consecutive use of **Ruby**.

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

- Rotate the use of **Ruby** or other Group 7 (carboxamide) 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 local Sharda USA LLC representative. You can also contact your pesticide distributor or university extension specialist to report resistance

**DO NOT** make more than 2 sequential applications of **Ruby**. Then alternate with a fungicide of a different mode of action before reapplying **Ruby**. **DO NOT** alternate **Ruby** with other Group 7 fungicides.

### **Integrated Pest (Disease) Management (IPM)**

**Ruby** must be integrated into an overall disease and pest management program that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, pruning, plant residue management, proper timing and placement of irrigation, and manipulation of environmental conditions to prevent fungal development where possible.

### **Additives and Tank Mixing Information for Ornamentals**

It is the pesticide end-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.

**Ruby** can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives for use on ornamentals.

Label directions are based on data without additives. Additives or spray adjuvants are usually not necessary for use with **Ruby**. If so desired, use only surfactants approved for ornamental plants in combination with **Ruby**. Test the product on a sample of the plant to be treated to ensure that injury will not occur prior to large-scale use. **DO NOT** use organosilicone-based adjuvants with **Ruby** because injury may result on certain ornamental species. **Always** test tank mixes on a small group of representative plants prior to broad-scale use.

Under some conditions, the use of additives or adjuvants may improve the performance of **Ruby**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence plant tolerance and may not match those under which Sharda USA LLC has conducted testing. Physical incompatibility, reduced disease control, or plant injury may result from mixing **Ruby** with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives), test the combination on a small portion of the plant to be treated to ensure that a phytotoxic response will not occur as a result of application.

Consult a Sharda USA LLC representative or local agricultural authorities for more information concerning additives.

### **Compatibility Test for Tank Mix Components**

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre:

1. **Water** - For 100 gals. per acre spray volume, use 16 cups (1 gal.) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.

2. **Water-Dispersible Products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)** - Cap the jar and invert 10 cycles.
3. **Water-Soluble Products** - Cap the jar and invert 10 cycles.
4. **Emulsifiable Concentrates (oil concentrate or methylated seed oil when applicable)** - Cap the jar and invert 10 cycles.
5. **Water-Soluble Additives** - Cap the jar and invert 10 cycles.
6. Let the solution stand for 15 minutes.
7. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

#### Mixing Order

1. **Water** - Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **Products in PVA Bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. **Water-Dispersible Products (such as Ruby, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)**
6. **Water-Soluble Products**
7. **Emulsifiable Concentrates (such as oil concentrates when applicable)**
8. **Water-Soluble Additives (such as ammonium sulfate (AMS) or urea ammonium nitrate (UAN) when applicable)**
9. Remaining quantity of water.

Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application.

#### Cleaning Spray Equipment

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure plants was used prior to **Ruby**.

### APPLICATION DIRECTIONS - FOR ORNAMENTALS

#### Foliar-Directed and Crown-Directed

Apply **Ruby** at use rates and intervals stated in **Table 4** and **Table 7**. Apply **Ruby** as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Thorough coverage and wetting of foliage, crown and base of the plant and growth media surrounding the crown is necessary for best control. Refer to **Table 4** for specific use directions for control of specific diseases. Repeat applications at specified intervals (plus alternations for resistance management).

#### Drench

**Ruby** may be applied preventively as a drench treatment for control of certain soilborne, seedling and crown diseases in production ornamentals including *Rhizoctonia solani* and *Fusarium* spp. For control of *Phytophthora* spp. and *Pythium* spp., apply **Ruby** in tank mix with another fungicide effective against these diseases.

Thorough coverage and wetting of root zone, crown and base of the plant and surrounding growth media is necessary for best control. Use enough solution to wet the root zone of the plant. Provide a well-drained substrate at the time of application. Avoid watering plants for several hours before application to improve plant uptake of the product. Repeat applications as needed within 7 - 21 days.

**Applications Made to Plugs and Propagation Trays or Beds:** Use a broadcast or directed spray applied in sufficient water to obtain thorough coverage of the plant crown and plant stem with thorough wetting of the soil surface.

See **Table 5** and **Table 6** for more information regarding drench treatments. Sharda USA LLC does not advise using **Ruby** alone after symptoms of soilborne disease have become evident because control may not be satisfactory.

#### Dip Application for Bulbs

**Post-Harvest Dipping of Bulbs for the Reduction of Basal Rot and Blue Mold on Freshly Dug Plant Material:** Clean and treat bulbs within 24 - 48 hours of digging. Follow instructions below for preparing dip mixture, dipping, and drying of bulbs.

**Pre-Plant Dipping for Basal Rot on Bulbs Prior to Planting into Fields or Bulbs Used in Containers:** Start with clean, dry bulbs. Follow instructions below for preparing dip mixture, dipping, and drying of bulbs.

**Instructions for Preparing Ruby Mixture, Dipping, and Drying of Bulbs:** Prepare mixture in water with the amount of **Ruby** stated in **Table 6**. Keep dip mixture well agitated prior to and during the submersion of bulbs so that **Ruby** is uniformly dispersed.

Submerge the bulbs completely in the dipping mixture for 15 - 30 minutes. Follow normal drying procedures, such as allowing a minimum of 2 days for bulb drying when using a forced-air rack and/or greater drying time when using ambient air conditions while holding bulbs in racks or bins.

#### Discard Mixture:

1. When it becomes dirty; or
2. After using 5 times; or
3. After 24 hours, whichever occurs first.

**Table 4 - Ruby Application Rates and Intervals on Ornamentals Foliar Diseases**

Disease (Pathogen)	Rate per Application (Oz. Ruby per 100 Gals.)	Application Interval*
<b>Powdery Mildews</b> <i>Oidium</i> spp. <i>Sphaerotheca</i> spp. <i>Uncinula</i> spp.	4 - 8 (0.18 - 0.35 lb. a.i.)	7 - 10 days
<b>Leaf Spots</b> <i>Alternaria</i> spp.	4 - 8 (0.18 - 0.35 lb. a.i.)	7 - 14 days
<b>Rots, Blights</b> Botrytis Rot ( <i>Botrytis</i> spp.)	8 - 16 (0.35 - 0.70 lb. a.i.)	7 - 14 days
<b>Blossom Blight</b> Monilinia Blossom Blight ( <i>Monilinia</i> spp.)	4 - 8 (0.18 - 0.35 lb. a.i.)	7 - 14 days

Use preventively. Begin applications when conditions are favorable for fungal infection, prior to disease symptom development.

\*The stated interval applies to conditions under which moderate-to-high disease pressure is expected. If conditions are unfavorable for infection or if disease pressure is absent, the interval may be extended up to 28 days.

**Table 5 - Ruby Treatment Rates for Drench Treatments to Control Certain Soilborne Diseases**

Disease (Pathogen)	Rate per Application (Oz. Ruby per 100 Gals.)	Application Instructions
<b>Soilborne Disease</b> <i>Fusarium</i> spp. <i>Rhizoctonia solani</i> <i>Sclerotinia</i> spp.	12 - 16 (0.53 - 0.70)	Use as a preventive treatment. Drench the soil with a solution of 12 - 16 oz. of <b>Ruby</b> per 100 gals. Thorough coverage and wetting of root zone, crown and base of the plant, and surrounding growth media is necessary for best control.  Use enough solution to wet the root zone of the plant. Provide a well-drained substrate at the time of application. Avoid watering plants for several hours before application to improve plant uptake of the product. Repeat applications as needed within 7 - 21 days.  <b>Applications made to plugs and propagation trays or beds:</b> Use a broadcast or directed spray applied in sufficient water to obtain thorough coverage of the plant crown and plant stem with thorough wetting of the soil surface.
<b>Soilborne Disease</b> <i>Phytophthora</i> spp. <i>Pythium</i> spp.	12 - 16 (0.53 - 0.70)	For control of <i>Phytophthora</i> spp. and <i>Pythium</i> spp., apply <b>Ruby</b> in tank mix with another fungicide effective against these diseases using application instructions above for <i>Fusarium</i> , <i>Rhizoctonia</i> , and <i>Sclerotinia</i> .

**Table 6 - Ruby Treatment Rates for Dip Treatments of Ornamental Bulbs**

Disease (Pathogen)	Rate per Application (Oz. Ruby per 100 Gals.)	Application Instructions
<b>Basal and Bulb Rot</b> <i>Fusarium</i> spp.	12 - 16 (0.53 - 0.70)	<p><b>Post-harvest dipping of bulbs for the reduction of basal rot and blue mold on freshly dug plant material:</b> Clean and treat bulbs within 24 - 48 hours of digging. Follow instructions below for preparing dip mixture, dipping, and drying of bulbs.</p> <p><b>Pre-plant dipping for basal rot on bulbs prior to planting into fields or bulbs used in containers:</b> Start with clean, dry bulbs. Follow instructions below for preparing dip mixture, dipping, and drying of bulbs.</p> <p><b>Instructions for preparing Ruby mixture, dipping, and drying of bulbs:</b> Prepare mixture in water with the amount of <b>Ruby</b> stated in <b>Table 6</b>. Keep dip mixture well agitated prior to and during the submersion of bulbs so that <b>Ruby</b> is uniformly dispersed. Submerge the bulbs completely in the dipping mixture for 15 - 30 minutes. Follow normal drying procedures, such as allowing a minimum of 2 days for bulb drying when using a forced-air rack and/or greater drying time when using ambient air conditions while holding bulbs in racks or bins.</p> <p><b>Discard Mixture:</b></p> <ol style="list-style-type: none"> <li>1. When it becomes dirty; or</li> <li>2. After using 5 times; or</li> <li>3. After 24 hours, whichever occurs first.</li> </ol> <p><b>DO NOT</b> discard the runoffs and wastes from the dipping operation in a drainage that could contaminate public water systems.</p>
<b>Blue Mold</b> <i>Penicillium</i> spp.	12 - 16 (0.53 - 0.70)	



**Table 7 - Rate Conversions for Volume-Based and Surface Area-based Applications of Ruby**

Spray Volume per Acre (Gals.)	Ruby Rate			Boscalid Rate (Lb. a.i. per 100 Gals.)	Acres Treated per Lb. of Ruby
	Oz. per 100 Gals.	Oz. per Acre	Lb. per Acre		
100	4	4	0.25	0.175	4
	8	8	0.50	0.35	2
	16	16	1	0.70	1

**Plant Tolerance**

Plants listed in **Table 8** have been found to be tolerant to **Ruby** when it is applied according to the use directions stated in this label.

The phytotoxic potential of **Ruby** has been assessed on a wide variety of common ornamental plants with no phytotoxicity observed. Not all plant species and their varieties and cultivars have been tested for tolerance to **Ruby**, possible tank mix combinations of **Ruby**, pesticide treatments preceding or following those of **Ruby**, and combinations of **Ruby** with adjuvants or surfactants. Local conditions can also influence crop tolerance and may not match those under which Sharda USA LLC has conducted testing. Therefore, before using **Ruby**, test the product on a sample of the crop to be treated to ensure that a phytotoxic response will not occur prior to large-scale use.

Additives or spray adjuvants are usually not necessary for use with **Ruby**. If they are needed, use only surfactants approved for ornamental plants in combination with **Ruby**. Test the product combination on a sample of the crop to be treated to ensure that a phytotoxic response will not occur prior to large-scale use. **DO NOT** use organosilicone-based adjuvants with **Ruby** because crop phytotoxicity may result on certain ornamental species.

**Table 8 - Ruby Tolerant Plant Species**

Common Name (Scientific Name)	Common Name (Scientific Name)	Common Name (Scientific Name)
Almond, Non-Bearing ( <i>Prunus dulcis</i> )	Azalea ( <i>Rhododendron</i> spp.)	Bugleweed ( <i>Ajuga</i> spp.)
Apple, Non-Bearing ( <i>Malus</i> spp.)	Bachelor Button ( <i>Centaurea montana</i> )	Burning Bush ( <i>Euonymus alatus</i> )
Apricot, Non-Bearing ( <i>Prunus armeniaca</i> )	Balloon Flower ( <i>Platycodon grandiflora</i> )	Butterfly Bush ( <i>Buddleia</i> spp.)
Arborvitae, American ( <i>Thuja occidentalis</i> , <i>T. plicata</i> , <i>T. occidentalis</i> )	Bamboo, Heavenly ( <i>Nandina domestica</i> Thunb.)	Caladium ( <i>Caladium</i> spp.)
Ash, Red ( <i>Fraxinus pennsylvanica</i> )	Bee Balm ( <i>Monarda didyma</i> )	Camellia, Japanese ( <i>Camellia japonica</i> )
Asparagus, Ornamental ( <i>Asparagus officinalis</i> )	Bellflower, Clustered ( <i>Campanula glomerata</i> )	Cape Jasmine ( <i>Gardenia jasminoides</i> )
Astilbe ( <i>Astilbe</i> Buch.-Ham spp.)	Blanket Flower ( <i>Gaillardia grandiflora</i> )	Cedar, Japanese ( <i>Cryptomeria japonica</i> )
Aucuba, Japanese ( <i>Aucuba japonica</i> )	Boxwood (Common, Japanese) ( <i>Buxus</i> spp. ( <i>B. sempervirens</i> , <i>B. microphylla</i> ))	Chamaecyparis ( <i>Chamaecyparis pisifera</i> )
Avens ( <i>Geum chiloense</i> )	Brachyscome ( <i>Brachyscome</i> spp.)	Chrysanthemum ( <i>Chrysanthemum hortorum</i> )

(continued)

**Table 8 - Ruby Tolerant Plant Species (continued)**

Common Name (Scientific Name)	Common Name (Scientific Name)	Common Name (Scientific Name)
Columbine ( <i>Aquilegia</i> spp.)	Ivy, Common ( <i>Hedera helix</i> )	Primrose, Showy ( <i>Oenothera speciosa</i> )
Coral Bells ( <i>Heuchera brizoides</i> )	Jessamine, Yellow ( <i>Gelsemium sempervirens</i> )	Privet ( <i>Ligustrum</i> spp.)
Crabapple ( <i>Malus</i> spp.)	Juniper ( <i>Juniperus</i> spp.)	Purslane ( <i>Portulaca oleracea</i> l.)
Crambe ( <i>Crambe abyssinica</i> Hochst.)	Lamb's Ear ( <i>Stachys byzantina</i> )	Quince, Non-Bearing ( <i>Cydonia oblonga mill</i> )
Dahlia ( <i>Dahlia pinnata</i> )	Larkspur ( <i>Delphinium</i> spp.)	Rose ( <i>Rosa</i> spp.)
Daylily ( <i>Hemerocallis</i> l. spp.)	Liatris, Gayfeather ( <i>Liatris</i> spp.)	Rose Moss ( <i>Portulaca grandiflora hook</i> )
Dogwood ( <i>Camus sanguinea</i> )	Lily, Fortnight ( <i>Dietes vegeta</i> )	Sago Palm ( <i>Cycas revoluta Thunb.</i> )
Fern, Ornamental ( <i>Nephrolepis</i> spp.)	Liriope ( <i>Liriope muscari</i> )	Snapdragon, Great ( <i>Antirrhinum majus l.</i> )
Fir, Douglas ( <i>Pseudotsuga menziesii</i> )	Magnolia, Star ( <i>Magnolia stellata</i> )	Speedwell, Spiked ( <i>Veronica spicata</i> )
Foxglove ( <i>Digitalis parviflora</i> )	Mandevilla ( <i>Mandevilla</i> spp.)	Spindle Tree, Japanese ( <i>Euonymus japonicus Thunb.</i> )
Gazania ( <i>Gazania hybridens</i> )	Maple (Amur, Norway, Sugar) ( <i>Acer</i> spp.)	Spruce ( <i>Picea</i> spp.)
Geranium ( <i>Pelargonium</i> spp.)	Maudlin, Blue ( <i>Ageratum houstonianum</i> )	Spurge, Japanese ( <i>Pachysandra terminalis Sieb.</i> )
Gooseberry, Chinese ( <i>Actinidia chinensis planch</i> )	Meadow Sage ( <i>Salvia superba</i> )	Star Jasmine ( <i>Trachelospermum jasminoides</i> )
Grape, Non-Bearing ( <i>Vitis</i> spp.)	Morningglory, Dwarf ( <i>Convolvulus tricolor l.</i> )	Stonewall ( <i>Sedum</i> spp.)
Gypsophila ( <i>Gypsophila paniculata</i> )	Myrtle, Common ( <i>Myrtus communis</i> )	Sunflower ( <i>Helianthus annuus</i> )
Hawthorn, Indian ( <i>Raphiolepis indica</i> )	Oak (Red, Bur) ( <i>Quercus</i> spp. <i>Q. rubra</i> , <i>Q. macrocarpa</i> )	Thistle, Globe ( <i>Echinops ritro</i> )
Hemlock, Canadian ( <i>Tsuga canadensis</i> )	Olive, Fragrant ( <i>Osmanthus fragrans</i> )	Tickseed ( <i>Coreopsis lanceolata</i> )
Hibiscus ( <i>Hibiscus rosa sinensis</i> )	Pansy, Dwarf ( <i>Viola kitaibeliana</i> )	Tulip ( <i>Tulipa</i> l. spp.)
Holly (Japanese, Chinese, Yaupon) ( <i>Ilex</i> spp. <i>I. crenata</i> , <i>I. vomitoria</i> )	Peach, Non-Bearing ( <i>Prunus persica</i> )	Verbena ( <i>Verbena peruviana</i> )
Hosta ( <i>Hosta</i> spp.)	Periwinkle, Lesser ( <i>Vinca minor</i> )	Water Elder ( <i>Viburnum opulus</i> )
Hyacinth ( <i>Hyacinthus orientalis l.</i> )	Photinia, Red-Tipped ( <i>Photinia fraseri</i> )	Waxmyrtle, Southern ( <i>Myrica cerifera</i> )
Hydrangea ( <i>Hydrangea</i> spp.)	Pine (Black, White) ( <i>Pinus strobus</i> )	Wormwood ( <i>Artemisia absinthium</i> )
Impatiens (spp., Balsam, New Guinea) ( <i>Impatiens</i> spp.)	Plum, Purple Leaf ( <i>Prunus cerasifera</i> )	Yarrow, Fern-Leaf ( <i>Achillea filipendulina</i> )
Iris ( <i>Iris</i> spp.)	Poinsettia ( <i>Euphorbia pulcherrima</i> )	

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE: DO NOT** store at extreme temperatures. Store in a dry place away from heat or open flame.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of 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:**

**Non-Refillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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 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. Then, for plastic containers, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities. For metal containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**Non-Refillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** 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 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for plastic containers, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities. For metal containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**Refillable Fiber Drums with Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with this fungicide only. **DO NOT** reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: **DO NOT** reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities.

*(continued)*

## STORAGE AND DISPOSAL (continued)

### CONTAINER HANDLING: (continued)

**All Other Refillable Containers:** Refillable container. Refilling container: Refill this container with this pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Disposing of container: **DO NOT** reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for plastic containers, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities. For metal containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER!**

### 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. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, SHARDA USA LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Sharda USA LLC nor Seller shall be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC AND 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 THE PRODUCT OR, AT THE ELECTION OF SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sharda USA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Sharda USA LLC.

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BOSCALID GROUP 7 FUNGICIDE

# Ruby

For Disease Control on Golf Course Turfgrass and Ornamentals.

<b>ACTIVE INGREDIENT:</b>	<b>WT. BY %</b>
Boscalid*: 3-pyridinecarboxamide, 2-chloro-N-(4'-chloro(1,1'-biphenyl)-2-yl)-.....	70.0%
<b>OTHER INGREDIENTS:</b> .....	30.0%
<b>TOTAL:</b> .....	100.0%

\*Ruby contains 0.044 lb. of boscalid in 1 oz.

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)

**FIRST AID - 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. **IF SWALLOWED:** • Immediately call a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person. **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 treatment advice. **IF INHALED:** • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice. **HOTLINE NUMBER** - Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at 1-800-222-1222.

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS - WARNING** - Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

## ENVIRONMENTAL HAZARDS

**DO NOT** apply directly to water, areas where surface water is present, or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate. **Surface Water Advisory:** Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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 boscalid 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. **Groundwater Advisory:** Boscalid is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal. **PESTICIDE STORAGE:** **DO NOT** store at extreme temperatures. Store in a dry place away from heat or open flame. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of 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: Non-Refillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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 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. Then, for plastic containers, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities. For metal containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

See label booklet for complete Precautionary Statements and Directions For Use.

### Manufactured For:

Sharda USA LLC, 7217 Lancaster Pike, Suite A, Hockessin, Delaware 19707

EPA Reg. No. 83529-164

EPA Est. No. **OP** 62171-MS-003; **MA** 83411-MN-001;

**VP** 07401-TX-001; **MX** 97107-MEX-001

The EPA Establishment Number is identified by the circled letters above that match the first two letters in the batch number.

**Net Contents: 0.49 lb. (0.22 kg)**

OPEN HERE