

# RootShield® Granules

*Biological Fungicide*

## ACTIVE INGREDIENT

*Trichoderma harzianum* Rifai strain KRL-AG2 1.15%\*

**OTHER INGREDIENTS** 98.85%

**TOTAL** 100.00%

\*Contains at least 1.0 x 10<sup>7</sup> colony forming units per gram dry weight.

US Patent No. 5,260,213

EPA Reg. No. 68539-3

EPA Est. No. 068539-NY-001

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**FIRST AID**

In case of contact, flush eyes with plenty of water. Get medical attention if irritation persists.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

**CAUTION:** Avoid contact with skin or eyes. Avoid breathing dust. Do not store near food or feed.

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, 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.

### USER SAFETY RECOMMENDATIONS

Users should: Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

## GENERAL INFORMATION

RootShield Granules is a preventative biological fungicide for control of soilborne plant pathogens and plant root diseases. The active ingredient is a beneficial microbe, *Trichoderma harzianum* strain T-22 (KRL-AG2). Applied as an inoculant to soil or planting mix, RootShield Granules actively grows onto plant roots as they develop and provides prolonged protection against plant root pathogens such as *Pythium*, *Rhizoctonia*, *Fusarium*, *Cylindrocladium* and *Thielaviopsis*. RootShield Granules can be used alone or in conjunction with certain chemical fungicides; consult RootShield Compatibility Chart for detailed information. Where early season seed rot and seedling diseases are expected, use chemically treated seed or other appropriate measures for stand establishment and RootShield Granules for prolonged root disease control.

**NOTE:** RootShield Granules contains live spores of a beneficial microbe. For best results, RootShield Granules must be used prior to disease onset. RootShield Granules become active in soil at temperatures above 50° F and is not effective while temperatures remain cold. RootShield Granules can be applied to sterilized or fumigated soil but **MUST BE APPLIED AFTER STERILIZATION OR FUMIGATION.**

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected workers may be in the area during application. For any requirement specific to your state or tribe, consult the agency responsible for pesticide regulation.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

## PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: a) long sleeved shirt and long pants; b) shoes plus socks; c) when dumping or opening bags, or other operations where dusts may be created, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any N-95, R-95, P-95 or HE filter for biological products.

Follow manufacturer's directions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**There are no restrictive entry interval (REI) requirements.**

Biological fungicide for use in soil applications (drench, in soil furrow, potting soil and broadcast) in or on all raw agricultural commodities, food and fiber crops, ornamentals, landscape plants, and trees, including tree seedlings for transplanting into the forest.

**NOTE: DO NOT APPLY TO:** sugarcane, pechay, mushrooms, tobacco, kiwi, lemon, apple, oats, barley, rice and chickpea. **Not for use on aquatic crops.**

## APPLY VIA GROUND APPLICATION ONLY.

**GREENHOUSE PLANTING MIX AMENDMENT:** Mix RootShield Granules at a rate of 1 to 1.5 pounds per cubic yard (loose) mix. For best results, thoroughly incorporate RootShield Granules into planting mixes during mix preparation or at pot filling. RootShield Granules can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients; consult RootShield Compatibility Chart for detailed information.

**NURSERY PLANTING MIX AMENDMENT:** For nursery planting mixes apply RootShield Granules at the rate of 1 to 1.5 pounds per cubic yd. (loose) mix. For nursery beds, incorporate at a rate of 0.5-7.5 pounds per 1000 square feet of bed by raking or tilling. Application of irrigation water will help move RootShield Granules into the soil. If soil is fumigated or steam sterilized apply RootShield Granules after treatment. RootShield Granules can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients; consult ROOTSHIELD® compatibility chart for detailed information.

**IN-FURROW SOIL TREATMENTS:** Apply RootShield Granules at a rate of 5– 12 pounds per acre. For best results, apply RootShield Granules using a metering device, such as a Gandy applicator or equivalent, mounted to deliver granules into the furrow just behind the furrow opener. Apply in furrow at seeding or to established crops as a side dress.

**TREES, SHRUBS AND OTHER TRANSPLANTS:** Apply RootShield Granules to the planting hole at a rate of 0.2 – 8 ounces and incorporate into the planting soil or soil mix.

## CROPS ON WHICH ROOTSHIELD GRANULES MAY BE USED

CROPS	USE	RATE
<b>Flowers, Bedding Plants, and Ornamentals</b> such as: Anthurium, Azalea, Carnation, Chrysanthemum, Dianthus, Dieffenbachia, Dracaena, Ficus, Gardenia, Gladiolus, Impatiens, Lilies, Marigold, Pansy, Petunia, Poinsettia, Pothos, Rhododendron, Roses, Schefflera, Spathiphyllum, Tulips, Vinca.	Greenhouse planting mix	1.0 - 1.5 lbs./cubic yd soil mix
	Nursery planting mix	
	Nursery bed applications	1.0 - 1.5 lbs./1000 sq feet
<b>Fruiting Vegetables</b> such as: Eggplant, Sweet and Hot Peppers, and Tomatoes.	In-furrow	5.0 – 12.0 lbs./acre
	Greenhouse planting mix	1.0 – 1.5 lbs./cubic yd soil mix
<b>Herbs, Spices, and Mints</b> such as: Sage, Rosemary, Thyme, Peppermint, and Dill.	In-furrow	5.0 – 12.0 lbs./acre
	Greenhouse planting mix	1.0 – 1.5 lbs./cubic yd soil mix
<b>Hydroponic Crops</b> such as: Cucumbers, Tomatoes, Lettuce, Herbs and Spices.	Greenhouse planting mix	1.0-1.5 lbs./cubic yd soil mix
<b>Leafy Vegetables and Cole Crops</b> such as: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Celery, Collards, Endive, Kale, Kohlrabi, Lettuce (head and leafy), Mustard Greens, Parsley, Spinach	In-furrow	5.0 – 12.0 lbs./acre
	Greenhouse planting mix	1.0 – 1.5 lbs./cubic yd soil mix
<b>Pome Fruit</b> such as: Pear.	In-furrow	5.0 – 12.0 lbs./acre
	Greenhouse planting mix	1.0 – 1.5 lbs./cubic yd soil mix
	Trees	
<b>Shadehouse and Outdoor Nursery Crops</b> such as: Deciduous trees (Maple, Oak, etc.), Grapes, Citrus, and Pine.	In-furrow	5.0 – 12.0 lbs./acre
<b>Stone Fruit</b> such as: Peaches, Plums, and Nectarines.	Nursery Planting Mix	1.0 – 1.5 lbs./cubic yd soil mix
	Trees	0.2 – 8.0 oz./transplant hole and incorporate
<b>Tree Nuts</b> such as: Pecans, Pistachios, Almonds, and Walnuts.	In-furrow	5.0 – 12.0 lbs./acre
	Nursery planting mix	1.0 – 1.5 lbs./cubic yd soil mix
	Trees	

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in a cool dry place. Do not store at temperatures above 75°F for prolonged periods. Keep container tightly closed when not in use.

**DISPOSAL:** Do not contaminate food or feed by disposal. Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility. Do not reuse container. Dispose of empty container in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

**NOTICE TO BUYER AND SELLER:** Seller warrants that this product conforms to the description on the label and is reasonably fit for the purposes stated on the label when used and stored in accordance with directions under normal conditions of use. This warranty does not extend to use of this product contrary to label directions or under conditions not reasonably foreseeable by the Seller; Buyer and User assume the risk of any such use. Seller disclaims all other warranties express or implied, including any warranty of fitness or merchantability. Seller shall not be liable for consequential, special or indirect damages resulting from use or handling of this product. Seller's sole liability and Buyer's and User's exclusive remedy shall be limited to refund of the purchase price.

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified.

Country: United States of America  
Lot No.

**In Case of Emergency,  
Call CHEMTREC: (800) 424-9300**

*Manufactured in the USA by:*

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