

68539-3

8-20-2004

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T-22G Biological Fungicide

(Alternate Brand Names: RootShield® Granules Biological Fungicide; T-22 G Granules Biological Fungicide; TurfShield® Granules Biological Fungicide)

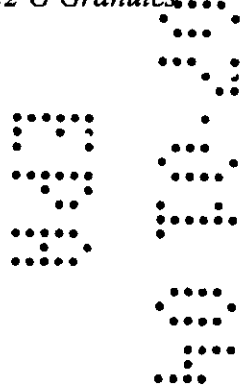
ACTIVE INGREDIENT

Trichoderma harzianum Rifai strain KRL-AG2* 1.15%

OTHER INGREDIENTS 98.85%

TOTAL 100.00%

*Contains at least 1.0 x 10⁷ colony forming units per gram dry weight.



**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS-CAUTION: Avoid contact with skin or eyes. Avoid breathing dust.

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 an appropriate 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.

USER SAFETY RECOMMENDATIONS

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

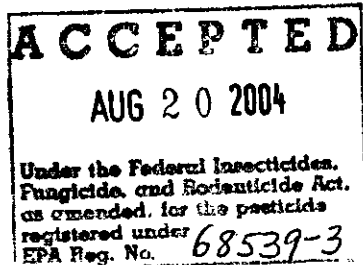
ENVIRONMENTAL HAZARDS

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 cleaning equipment or disposing of equipment wash water.

EPA Reg. No.: 68539-3
EPA Est. No.: 068539-NY-001

Manufactured by: BioWorks, Inc., 122 North Genesee Street, Geneva, New York 14456

Net Contents: _____
Lot No.: _____
Use Before: _____



MASTER LABEL

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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.

There are no restrictive entry interval (REI) requirements.

GENERAL INFORMATION

T-22G is a preventative biological fungicide for control of soilborne plant pathogens and plant root diseases. The active ingredient is a microbe, *Trichoderma harzianum* Strain T-22 (KRL-AG2), which when applied as an inoculant to soil, planting mixes or turf, grows onto plant roots as they develop and provides protection against plant root pathogens such as *Pythium*, *Rhizoctonia*, *Fusarium*, *Cylindrocladium* and *Thielaviopsis*.

T-22G can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients in accordance with the more restrictive of label limitation and precautions. No label dosage rates should be exceeded. This product can not be used with any product containing a label prohibition against such mixing. This product is not compatible with chemicals that contain the following active ingredients: benomyl, imazilil, propiconazole, tebuconazole, and triflumizole. Do not apply T-22G immediately before these pesticides are used. Where early season seed rot and seedling diseases are expected, use chemically treated seed or other appropriate measures for stand establishment and T-22G for root disease control.

Note: T-22G contains live spores of a microbe that must be used prior to disease onset. Strain T-22 becomes active in soil at temperatures above 50°F and is not effective while temperatures remain cold. T-22G can be applied to sterilized or fumigated soil but must be applied after sterilization or fumigation.

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

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

APPLY VIA GROUND APPLICATION ONLY.

CROPS	USE	RATE
Agronomic Row or Other Field Crops: Buckwheat, Corn (grain, seed, sweet corn, silage, popcorn, high oil), Cotton, Canola, Safflower, Sunflower	In-furrow	5.0 – 12.0 lbs. / acre
Berries and Small Fruits: Blackberries, Blueberries, Currants, Elderberries, Gooseberries, Huckleberries, Loganberries, Raspberries, Strawberries, Grapes	In-furrow	5.0 – 12.0 lbs. / acre
Bulb Crops: Garlic, Leeks, Onions, Shallots	In-furrow	5.0 – 12.0 lbs. / acre
Citrus Fruits: Citrus Hybrids, Grapefruit, Kumquat, Limes, Oranges, Pummelos	In-furrow	5.0 – 12.0 lbs. / acre
Cucurbit Vegetables: Cucumbers, Melons, Gourds Pumpkins, Squash	In-furrow	5.0 – 12.0 lbs. / acre
Flowers, Bedding Plants, and Ornamentals	In-furrow Greenhouse planting mix Nursery planting mix Nursery bed applications	5.0 – 12.0 lbs. / acre 1.0 – 3.0 lbs. / cubic yd. soil mix 1.0 – 3.0 lbs. / cubic yd. soil mix 0.5 – 7.5 lbs. / 1000 sq. ft. incorporated with rake or tiller
Fruiting Vegetables: Eggplant, Sweet and Hot Peppers, Tomatillos, Tomatoes	In-furrow Greenhouse planting mix	5.0 – 12.0 lbs. / acre 1.0 – 3.0 lbs. / cubic yd. soil mix
Herbs, Spices, and Mints	In-furrow Greenhouse planting mix	5.0 – 12.0 lbs. / acre 1.0 – 3.0 lbs. / cubic yd. soil mix
Hydroponic Crops: Cucumbers, Tomatoes, Lettuce, Herbs and Spices.	Greenhouse planting mix	1.0 – 3.0 lbs. / cubic yd. soil mix

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<p>Leafy Vegetables and Cole Crops: Arugula, Celery, Chervil, Endive, Fennel, Lettuce (head and leaf), Parsley, Radicchio, Rhubarb, Spinach, Swiss Chard, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mustard Greens, Asparagus</p>	<p>In-furrow Greenhouse planting mix Nursery bed application</p>	<p>5.0 - 12.0 lbs. / acre 1.0 - 3.0 lbs. / cubic yd. soil mix 0.5 - 7.5 lbs. / 1000 sq. ft. incorporated with rake or tiller</p>
<p>Legume Vegetable and Field Crops: Snap and Dry Beans, Lentils, Succulent and Dry Peas, Peanuts, Soybeans</p>	<p>In-furrow</p>	<p>5.0 - 12.0 lbs. / acre</p>
<p>Pome Fruit: Pears, Quince</p>	<p>In-furrow Greenhouse planting mix Nursery planting mix Trees, shrubs, and other transplants</p>	<p>5.0 - 12.0 lbs. / acre 1.0 - 3.0 lbs. / cubic yd. soil mix</p>
<p>Root Crops: Beets, Sugarbeets, Red Beets, Carrots, Celeriac, Chicory, Horseradish, Parsnip, Radish, Rutabaga, Salsify, Turnips</p>	<p>In-furrow</p>	<p>1.0 - 3.0 lbs. / cubic yd. soil mix 0.2 - 8.0 oz. / transplant hole and incorporate</p>
<p>Shadehouse and Outdoor Nursery Crops: Deciduous trees (Maple, Oak, etc.), Ornamentals, Grapes, Citrus, Pine</p>	<p>In-furrow Greenhouse planting mix Nursery planting mix Trees, shrubs, and other transplants</p>	<p>5.0 - 12.0 lbs. / acre 1.0 - 3.0 lbs. / cubic yd. soil mix 1.0 - 3.0 lbs. / cubic yd. soil mix 0.2 - 8.0 oz. / transplant hole and incorporate</p>
<p>Stone Fruit: Apricots, Cherries, Nectarines, Peaches, Plums, Prunes</p>	<p>In-furrow Greenhouse planting mix Nursery planting mix Trees, shrubs, and other transplants</p>	<p>5.0 - 12.0 lbs. / acre 1.0 - 3.0 lbs. / cubic yd. soil mix 1.0 - 3.0 lbs. / cubic yd. soil mix 0.2 - 8.0 oz. / transplant hole and incorporate</p>
<p>Tree Nuts: Almonds, Beech Nuts, Brazil Nuts, Butternuts, Cashews, Chestnuts, Filberts, Hickory Nuts, Macadamia</p>	<p>In-furrow Greenhouse planting mix Nursery planting mix Trees, shrubs, and other transplants</p>	<p>5.0 - 12.0 lbs. / acre 1.0 - 3.0 lbs. / cubic yd. soil mix 1.0 - 3.0 lbs. / cubic yd. soil mix 0.2 - 8.0 oz. / transplant hole and incorporate</p>

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<p>Nuts, Pecans, Pistachios, Walnuts</p> <p>Turfgrass:-Turf, sports fields, parks, established and new preparation of golf course tees, greens, fairways and roughs, seed production, sod production</p>	<p>Broadcast to established turf</p> <p>New turf seedlings</p>	<p>1.0 – 3.0 lbs. / 1000 sq. ft. or 40 – 120 lbs. / acre</p> <p>1.0 – 4.0 lbs. / 1000 sq. ft. or 40 – 120 lbs. / acre and incorporate</p>
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IN-FURROW SOIL TREATMENT: Apply T-22G from a granular applicator at the rate of 5-12 pounds per acre. For best results apply 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.

BROADCAST APPLICATION TO ESTABLISHED TURF: Using conventional broadcast application equipment, apply T-22G at 1-3 pounds per 1000 square feet of turf, or 40-120 pounds per acre, as a preventative treatment to control the below-ground phases of plant diseases, such as *Pythium*, *Rhizoctonia*, *Fusarium* and *Sclerotinia homeocarpa*. Application of T-22G should be made when turf is actively growing. The initial application should be made when soil temperatures reach 50°F to insure colonization of the turf roots by the beneficial microbe. In general, a second application four weeks after the initial treatment is necessary to establish Strain T-22 on turf roots. Additional applications of T-22G every 4-6 weeks may be needed to maintain effectiveness when conditions favor root disease development.

T-22G is used as a component of a disease management program to control the belowground phase of various turf pathogens. Other components of a disease management program should be used to control foliar phases of diseases.

NEW TURF SEEDINGS: Broadcast T-22G at 1-4 pounds per 1000 square feet or 40-120 pounds per acre just prior to or at the time of seeding. Incorporate into the soil surface or cover with mulch along with the grass seed. Application of irrigation water will help move T-22G into the soil.

GREENHOUSE PLANTING MIX AMENDMENT: Mix T-22G with planting mixes at a rate of 1-3 pounds per cubic yd. (loose) mix. For best results, thoroughly incorporate T-22G into planting mixes during mix preparation or at pot filling.

NURSERY PLANTING MIX AMENDMENT: For nursery planting mixes apply T-22G at the rate of 1-3 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 T-22G into the soil. If soil is fumigated or steam sterilized apply T-22G after treatment.

TREES, SHRUBS, AND OTHER TRANSPLANTS: Apply T-22G granules to the planting hole at a rate of 0.2 - 8.0 ounces and incorporate into the planting soil or soil mix.

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STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry place. Do not store near food or feed commodities. 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 the 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, and 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. To the extent permitted by state law, Seller shall not be liable for consequential, special or indirect damages resulting from use or handling of this product and 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

US Patent No. 5,260,213