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**MATERIAL SAFETY DATA SHEET**

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**1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION**

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GENERAL USE: Biological Fungicide  
COMMON NAME: RootShield<sup>®</sup> Granules

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**MANUFACTURED FOR:**

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**EMERGENCY TELEPHONE NUMBER:**

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BioWorks<sup>®</sup> Inc.  
100 Rawson Rd, Suite 205  
Victor, NY 14564

**BioWorks, Inc:** 800-877-9443  
**CHEMTREC:** 800-424-9300

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**2. COMPOSITION, INFORMATION ON INGREDIENTS**

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Product contains the following ingredients:

COMPONENT	CAS No.	%	OSHA PEL	ACGIH
<i>Trichoderma harzianum</i> Rifai strain KRL-AG2	67892-31-3	1.15	N/E	N/E
Inert ingredients	confidential	98.85	N/E	N/E

N/E = Not Established

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**3. HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW:** Grey or green granules with earthy odor. Dust may cause eye, skin and respiratory tract irritation.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:** Dust may irritate the respiratory tract.

**EYE CONTACT:** Dust may cause irritation.

**SKIN CONTACT:** Dust may cause irritation.

**INGESTION:** Active ingredient has shown no mammalian toxicity.

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### 3. HAZARDS IDENTIFICATION (CONTINUED)

CHRONIC: No known effects.

CARCINOGENICITY: The ingredients in this product are not listed by NTP, OSHA, or IARC as a carcinogen.

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### 4. EMERGENCY AND FIRST AID MEASURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT: Remove contaminated clothing. Wash thoroughly with soap and water immediately. Get medical attention if irritation develops.

EYE CONTACT: In cases of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION: If swallowed, do NOT induce vomiting. Call a physician.

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### 5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not determined

EXTINGUISHING MEDIA: Not combustible.

SPECIAL FIRE-FIGHTING PROCEDURES: Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus and full protective equipment.

UNUSUAL FIRE and EXPLOSION HAZARDS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will produce oxides of carbon, and silicon.

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## 6. ACCIDENTAL RELEASE MEASURES

GENERAL: Take all additional action necessary to prevent and remedy the adverse effects of the spill. This product should be prevented from entering bodies of water.

SPECIFIC: In case of spill, collect material immediately. Wipe residual material from surfaces with cloth. Do not wash residues into drains or other waterways.

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## 7. HANDLING and STORAGE

Avoid contact with skin and eyes. Wash hands thoroughly before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

Store in original container in a cool, dry place. Do not store near food or feed commodities. Prevent exposure to moisture. Do not store at above 75°F for prolonged periods. Keep container tightly closed when not in use.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with skin or clothing. Use only outdoors. Keep container tightly closed. .

### PERSONAL PROTECTION:

RESPIRATORY: When opening or dumping 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 approximate N-95, R-95, P-95 or HE filter for biological products.

PROTECTIVE GLOVES: Use protective gloves.

OTHER: Applicators and other handlers must wear: long-sleeved shirt, long pants, socks and shoes, Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

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## 9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE: grey or green granules

ODOR: earthy odor

VAPOR PRESSURE: Not applicable

MELTING POINT: Not determined

SPECIFIC GRAVITY: 0.61 g/cm<sup>3</sup>

BOILING POINT: Not determined

SOLUBILITY in water: Insoluble

VISCOSITY: Not determined

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## 10. STABILITY and REACTIVITY

**STABILITY:** Stable under normal recommended storage and handling conditions. (see section 7)

**HAZARDOUS POLYMERIZATION:**  
Will not occur.

**INCOMPATIBILITY:** Strong acidic materials.

**HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:** Thermal decomposition will produce oxides of carbon and silicon.

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## 11. TOXICOLOGICAL INFORMATION

Active ingredient is practically non-toxic, non-allergenic and non-pathogenic to mammals. Pre-existing medical conditions should not be aggravated by exposure.

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## 12. ECOLOGICAL INFORMATION

**FISH TOXICITY:** No data available.

**DAPHNIA MAGNA TOXICITY:** No data available.

**ALGAE:** No data available

**OTHER:** Do not apply directly to water, to areas where surface water is present.

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## 13. DISPOSAL CONSIDERATIONS

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning . If burned, stay out of smoke.

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#### 14. TRANSPORT INFORMATION (not meant to be all inclusive)

D.O.T.- Land, air and sea

PROPER SHIPPING NAME: Not regulated

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#### 15. REGULATORY INFORMATION (not meant to be all inclusive)

## UNITED STATES

FIFRA (Federal Insecticide, Fungicide and Rodenticide Act): Regulated,  
EPA Reg. No. 68539-3SARA Hazard Class:  Acute  Chronic  Flammable  Pressure  Reactive  
 NoneSARA 313  Yes  No, ChemicalSARA 302  Yes  No, ChemicalCERCLA:  Yes  No, Chemical

RQ: none

RCRA:  Yes  No

## NFPA Hazard Rating:

Health: [1]  
Fire: [1]  
Reactivity: [0]  
Special: [ ]

## NFPA Hazard Rating Scale:

0 = Minimal 3 = Serious  
1 = Slight 4 = Severe  
2 = Moderate

## HMIS Codes:

Health: [1]  
Fire: [1]  
Reactivity: [0]

## HMIS Hazard Rating Scale:

0 = Minimal 3 = Serious  
1 = Slight 4 = Severe  
2 = Moderate

## CANADA

WHMIS: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*

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## 16. OTHER INFORMATION

MSDS SUMMARY: MSDS revised November 14, 2008.

CONTACT: BioWorks®  
100 Rawson Rd, Suite 205  
Victor, NY 14564

TELEPHONE: 800.877.9443

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