

## SAFETY DATA SHEET

### 1. Product and Company Identification

**Product Name:** Root Guard  
**Manufacturing Number:** Not Available  
**Supplier:** AECI Plant Health  
P.O. Box 14418  
Witfield 1467  
South Africa  
**Telephone No:** +27 (0) 11 823 8000  
+27 (0) 21 858 1140  
**Website:** www.aeciworld.com

### 2. Hazards Identification

#### Classification of the mixture

Not classifiable according to GHS regulations.

**Label elements:** None.

**Precautionary statements:** P102: Keep out of reach of children.  
P234: Keep only in original packaging.  
P270: Do not eat, drink or smoke when using this product.  
P402 + P404: Store in a dry place. Store in a closed container.

**Other hazards:** This mixture does not contain any substances, which are persistent, bioaccumulative and toxic (PBT). This mixture does not contain any substances which are very persistent and very bioaccumulative (vPvB).

### 3. Composition / Information on Ingredients

**Substances:** N/A

#### Mixture:

| Name                         | CAS No.        | Weight (%) |
|------------------------------|----------------|------------|
| <i>Trichoderma harzianum</i> | Not Applicable | 1-30.00%   |
| Sugar                        | 57-50-1        | 70-99.00%  |

**Product description:** 2 x 10<sup>9</sup> spores of *Trichoderma harzianum* per gram of product.  
Spores formulated in a soluble sugar carrier.

**Dangerous ingredients:** None

#### 4. First Aid Measures

|                      |  |
|----------------------|--|
| <b>Inhalation:</b>   | Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.                                     |
| <b>Skin Contact:</b> | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice. |
| <b>Eye Contact:</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.                                  |
| <b>Ingestion:</b>    | Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.  |

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms:** May cause allergic skin reaction. May cause redness and tearing of eyes.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to physicians:** Treat symptomatically.

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#### 5. Fire Fighting Measures

##### **Suitable extinguishing media:**

Dry chemical, CO<sub>2</sub>, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog, or regular foam.

##### **Unsuitable extinguishing media:**

None.

##### **Specific hazards arising from the chemical:**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

##### **Hazardous combustion products:**

Carbon oxides.

##### **Explosion data**

**Sensitivity to Mechanical Impact:** None.

**Sensitivity to Static Discharge:** None.

##### **Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray.

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#### 6. Accidental Release Measures

##### **Personal precautions, protective equipment, and emergency procedures**

##### **Personal precautions:**

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Avoid creating dust.

##### **For emergency responders:**

Use personal protection recommended in Section 8. Ventilate the area.

**Environmental precautions**  
**Environmental precautions:**

Prevent entry into waterways, sewers, basements, or confined areas.

**Methods and material for containment and cleaning up**

**Methods for containment:**

Prevent dust cloud. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up:**

Avoid creating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Sweep up and shovel into suitable containers for disposal.

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## 7. Handling and Storage

**Precautions for safe handling**

**Advice on safe handling:**

Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing. Wash contaminated clothing before reuse. Do not eat, drink, or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities**

**Storage conditions:**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink, and animal feeding stuffs. Keep in properly labeled containers. Keep cool. Protect from sunlight.

**Packaging materials:**

Do not reuse container.

**Incompatible materials:**

Strong oxidizing agents and Broad-spectrum fungicides.

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## 8. Exposure Controls / Personal Protection

**Control parameters**

The usual precautionary measures for handling chemicals should be observed. Provide adequate ventilation.

**Appropriate engineering controls**

Engineering controls ensure adequate ventilation, especially in confined areas. Showers, eyewash stations and ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye / face protection:**

Tight sealing safety goggles.

**Skin and body protection:**

Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

**Respiratory protection:**

Ensure adequate ventilation, especially in confined areas.

**General Hygiene Considerations:**

When using do not eat, drink, or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling. Keep away from food, drink, and animal feeding stuffs. Wash contaminated clothing before reuse.

## 9. Physical and Chemical Properties

|  |  |
|--|--|
| <b>Physical state:</b>                 | Mixture of Powder and Granular                                       |
| <b>Colour:</b>                         | Powder is Green; Granular is White                                   |
| <b>Odour:</b>                          | No odor detected   |
| <b>pH:</b>                             | 6.14 (1% W/V in distilled water)                                     |
| <b>Moisture %:</b>                     | <3 %   |
| <b>Density:</b>                        | 1.717 g/ml   |
| <b>Solubility:</b>                     | <i>Trichoderma</i> conidia not soluble but sugar carrier is soluble. |
| <b>Solubility in organic solvents:</b> | Not soluble  |
| <b>Partition coefficient:</b>          | Not applicable   |
| <b>Vapor pressure:</b>                 | Not applicable   |
| <b>Boiling point:</b>                  | Not applicable   |
| <b>Melting point:</b>                  | Not applicable   |
| <b>Flash point:</b>                    | Not flammable  |
| <b>Explosive properties:</b>           | Not explosive  |
| <b>Auto-ignition temp:</b>             | Not applicable   |

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## 10. Stability and Reactivity

### Reactivity

No data available.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

High temperatures and UV light which may reduce spore viability.

### Incompatible materials

Strong oxidizing agents and Broad-spectrum fungicides.

### Hazardous Decomposition Products

Carbon oxides.

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## 11. Toxicological Information

### LD<sub>50</sub>:

Acute Oral LD<sub>50</sub> (rat): > 5000 mg/kg  
Acute Dermal LD<sub>50</sub> (rat): > 2020 mg/kg

Eye Irritation (rabbit): Not Classified as an eye irritant per GHS classification criteria.

Skin Irritation (rabbit): Not Classified as a skin irritant per GHS classification criteria.

Inhalation LC<sub>50</sub> (rat): >2.03 mg/L (4 HR)

Skin Sensitization: Not a sensitizer per GHS classification criteria.

### Local effects:

May cause allergic reaction in sensitive persons.

### Skin irritant (rabbit):

Does not cause skin irritation.

### Eye irritant (rabbit):

Not Classified as an eye irritant per GHS classification criteria.

### Chronic toxicity:

Non-carcinogenic, non-teratogenic, non-mutagenic or reproductive, not harmful in laboratory animals.

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## 12. Ecological Information

### **Trichoderma Root Guard, Strain DSM33649**

#### **Springtale (*Fosomia candida*)**

**LC<sub>50</sub> (28 days, Adult mortality):** >1000 mg/kg soil dry weight

**EC<sub>50</sub> (28 days, Reproduction):** >1000 mg/kg soil dry weight

**NOEC for mortality:** 1000 mg/kg soil dry weight

**LOEC for mortality:** >1000 mg/kg soil dry weight

**NOEC for reproduction:** 1000 mg/kg soil dry weight

**LOEC for reproduction:** >1000 mg/kg soil dry weight

#### **Earthworm (*Eisenia fetida*)**

**LC<sub>50</sub>:** >1000 mg/kg soil dry weight

**NOEC for mortality:** 1000 mg/kg soil dry weight

**NOEC for biomass changes:** 1000 mg/kg soil dry weight

#### **Honeybee (*Apis mellifera*)**

**Acute Oral LC<sub>50</sub>:** 1.31 x 10<sup>7</sup> cfu/ml

**Fish toxicity:** Unknown – avoid contamination into water bodies.

**Biodegradability:** Biodegradable.

**Mobility:** Does not leach into ground water.

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## 13. Disposal Considerations

Shake all the pesticide formulation out of the bag into the spray or mixing tank. Turn the bag inside out. Hold the bag over the spray or mixing tank and rinse the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Do not bury, burn, or donate the bag to any other parties that may use it as a container for foodstuffs. These bags cannot be recycled and must be incinerated by a licensed incineration facility.

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## 14. Transport Information

**UN number:** Not classified

**UN Proper shipping name:** Not classified

**Transport hazard class(es):** Not classified

**Packing Group:** Not applicable

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## 15. Regulatory Information

**Safety, health, and environmental regulations / legislation specific for the mixture**

**Authorisations:** Not relevant

**Restrictions on use:** Not relevant

### **Chemical Safety Assessment**

**Advice on product handling can be found in sections 7 and 8 of this SDS.**

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## 16. Other Information

**Issue Date** 27/03/2023  
**Revision Date:** 27/03/2023  
**Revision Note:** No information available.

The purpose of the above information is to describe the product only in terms of health and safety requirements. The information given should not, therefore, be construed as guaranteeing specific properties or as a specification. Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.

Contact Numbers: +27 (0) 11 823 8000 // +27 (0) 21 858 1140

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