

# Green tonic

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## FORTIFIANTS NATURELS

### **Trichoderma viridae**

***Trichoderma viridae*** is a carrier based biological fungicide contains the conidia and the mycelial fragments of the antagonistic fungus, *Trichoderma viride* @  $1 \times 10^{12}$  per gram of the product.

***Trichoderma viridae*** suppress the population of pathogen through competition, antagonism, antibiosis, predation and hyperparasitism. *Trichoderma* produce both volatile and non-volatile antibiotics which are inhibitory to majority of the target pathogen and also cause lysis of host hyphae through production of enzymes.

#### **MODE OF ACTION**

- It controls the pathogen by substrate competition for nutrients available in the soil, Antibiosis and Mycoparasitism.
- It is a preventive biological (living) fungicide that attacks disease pathogens before they reach the root system. It starts immediately protecting the delicate root system.
- It also grows on root surfaces and surrounding soil particles and provides prolonged protection.

#### **Dosage**

- **Soil application** @ 3kg/acre along with any organic fertilizer (without pathogenic contaminants)
- **Seed treatment** @ 10g per kg of seeds as per standard wet treatment.
- **Seedling /root treatment** @ 2kg/acre prior to planting. Over dosing does not cause any harmful side effects

## MATERIAL SAFETY DATA SHEET 1/2

Section	Category	Details
Section - 1	Processed & Packed by	Ecots Bio Products [P] Ltd 90A, Sethumadi Rd, Vettaikaranpudur, Coimbatore, India 642129
Section - 2	Mfg License No	PR-173/RS-CBE/2008-2011
Section - 3	Composition	<i>Trichoderma viridae spores and Dispersible powder</i>
Section - 4	First aid measures	Eyes : Mildly irritating to eyes. Skin : Mildly irritating to skin. Frequent and prolonged contact may cause dermatitis. No effect should occur, If promptly washed off. Inhalation : If present as high concentration of air borne dust prolonged contact may cause irritation to nose and throat, May cause coughing and shortness of breath. Ingestion : May cause diarrhea, Nausea, Vomiting and cramps, weakness and circulatory problems.
Section - 5	Measures and fighting against fire	Fire extinguishing media :CO <sub>2</sub> , Dry chemicals
Section - 6	Measures in case of leak or unforeseen release	1. Remove persons not wearing protective clothing from spill area. 2. ventilate spill area 3. Avoid contamination of stream and sewers 4. Absorb on to clay, absorbent material.
Section - 7	Storage and handling	Handling : Avoid dropping the container from the top. Storage : Store in a well ventilated place. Keep container closed when not in use. Away from food, direct sunlight . Away from high temperature
Section - 8	Exposure control and personal protection	Not applicable
Section -9	Physical and chemical properties	Nature : White Powdery Odour : Characteristic odour Solubility in Water : Sparingly soluble Boiling Point : Not applicable Melting point : Not applicable
Section -10	Stability and reactivity	Not applicable
Section -11	Toxicological information	Non Toxic and Non - Virulent
Section -12	Ecological information	Waste Disposal Method: Dispose of in accordance with all federal, state and local standards.
Section -13	Elimination considerations	Not Applicable
Section -14	Transport information	Shipping Name : Trichoderma viridae Shipping containers Marking : Trichoderma viridae Shipping Containers Lables : Trichoderma viridae Flammability : Not Flammable

## MATERIAL SAFETY DATA SHEET 2/2

Section -15	Regulations information	Designation : Eco- friendly Origin : Non Hazardous Material
Section -16	Protection information	<ul style="list-style-type: none"> <li>• Chemical safety goggles.</li> <li>• Use protective clothing, gloves and mask.</li> <li>• Mechanical exhaust required.</li> <li>• Safety shower and Eye bath.</li> <li>• Avoid contact with eyes.</li> <li>• Wash thoroughly after handling.</li> <li>• Keep Tightly closed. Store in a cool dry place.</li> </ul>
Section -17	Emergency and first aid procedure	<ul style="list-style-type: none"> <li>• In case of Contact, immediately flush eyes or skin with copious amount of water for atleast 15 min while removing contaminated clothing and shoes.</li> <li>• If Inhaled, Move to fresh air, If not breathing give artificial respiration. If breathing is difficult give oxygen.</li> <li>• If swallowed, Wash mouth with water, provided person is conscious.</li> </ul>
Section -18	Handling and storage conditions	Normal House Keeping Procedures
Section -19	Spill or leak procedures special	Not Applicable
Section -10	USE	Agriculture purpose

### Specification

Sl. No	Parameters	Content
1.	Form and appearance	White Colour free flowing powder
2.	pH	7.0 to 8.0
3.	CFU's on selective medium	$2 \times 10^{12}$ colony per gram minimum
4.	Other microbial contaminants	Not exceeding $1 \times 10^4$
5.	Stability of cfu's at 30 ° C and 65 % RH	1 yr



129, rue de Paris – 94220 CHARENTON – FRANCE  
Tél. : + 33 (0) 1.41.79.33.20 – Fax : + 33 (0) 1.41.79.33.28  
Email : info@vertinnov.fr – www.vertinnov.fr

