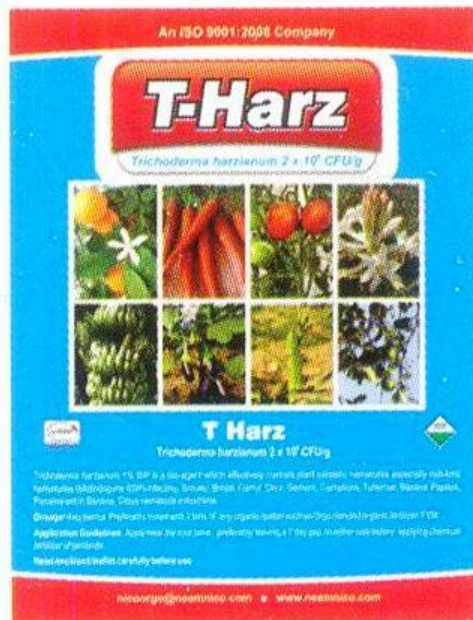


# Trichoderma harzianum



Trichoderma harzianum is an antagonistic fungus that is capable of hyperparasitizing pathogenic fungi. Its importance as a biocontrol agent is because it is able to attack a large variety of phytopathogenic fungi responsible for major crop diseases, such as: Botrytis, Fusarium and Penicillium sp., R. solani, S.rolfsii and Phythium aphanidermatum. T-harz produces various metabolites such as several lytic enzymes, including a  $\beta$ -1,3-glucanase, and antibiotics which control disease causing microbes. In addition it stimulates plant defense mechanisms. T-harz increases the rate of plant growth and development by developing more roots which help the crops to become more resistant to drought. T-harz has an additional benefit of being able to solubilise phosphates and micronutrients.

**Dosage :**

4 kg per ha. Preferably mixed with 2 tons of any organic matter such as Orgo blended organic fertilizer/FYM.

**Packaging :**

500gm LDPE bag

1kg LDPE bag

**Application Guidelines :**

Apply near the root zone,preferably leaving a 7 day gap on either side before applying chemical fertilizer or pesticide.



## Certificate of Analysis

# T-HARZ

*Trichoderma harzianum 1% w.p.*

Batch No. : 017  
Date of analysis : 01/08/2014  
Mfg. Date : 01/08/2014  
Expiry Date : 01/01/2015

Sr. No.	Characteristic	Requirement	Results Obtained
1	Color	Off white	Complies
2	Physical nature	Free flowing powder.	Complies
3	Count	$2.0 \times 10^6$ CFU/gm.	Complies

**Remark:** The above product complies as per specification.

**For Nico Orgo Manures**

**For Nico Orgo Manures**

**Quality Control Dept.**

**Partner**

Microbiologist

# Material Safety Data Sheet

## NICO ORGO MANURES

### 1. Chemical Products and Company Identification

Product Name : T-HARZ

Produce Code : *Trichoderma harzianum*

Chemical Formula : Mixture

Other Designations : Powdered Formulation Containing Agriculturally  
beneficial microorganisms.

Company:

**NICO ORGO MANURES**

Opp. Railway Station,

Dakor – 388 225

(Gujarat – India)

Phone: +91-2699-244403, 244611

Fax : +91-2699-244903

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### 2. Composition / Information on Ingredients

No Hazardous Ingredients.

Contains naturally-occurring, non-pathogenic, microorganisms in powdered formulation. This includes *Trichoderma harzianum* popularly used in agriculture for disease control. See Product label for method of application, dosage and recommendations. Not for food, feed or drug use.

\*\*\*\*\*

### 3. Hazards Identification

Emergency Overview : No known health hazards

Primary Entry Routes : Oral (swallowing), Inhalation

Acute Effects (Signs and Symptoms of Overexposure) :

Eyes : Liquid may cause mechanical irritation of eyes

Skin : No known hazard

Inhalation : Inhalation of large amounts may cause discomfort

Ingestion : No known hazard

Chronic Effects : No known hazard

Medical Conditions Aggravated by Exposure : None known

Target Organs : None

Carcinogenicity : None

HMIS : Health – 0, Flammability – 0, Reactivity – 0

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#### 4. First Aid Measures

Eyes : Flush with water for at least 15 minutes. Get medical attention if irritation persists.

Skin : Wash with soap and water

Inhalation : Remove person to fresh air. Get medical attention if discomfort Persists

Ingestion : No treatment necessary

\*\*\*\*\*

#### 5. Fire Fighting Measures

Flash Point : None

Autoignition Temperature : Not Applicable

Explosive Limits : LEL: Not Applicable  
UEL: Not Applicable

Extinguishing Media : Use media suitable for  
surrounding fire

Unusual Fire or Explosive Hazards : Not Known

Fire Fighting Instructions : No special requirement

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**6. Accidental Release Measures**

Large Spill / Leak Procedure : Contain spill and recover for use  
or disposal

Small Spills : Flush area with water

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**7. Storage and handling**

Storage Requirements : Store in original container in  
clean, cool and dry place. Use  
before expiration date printed on  
package

Handling Precautions : No special handling requirements.  
Follow normal hygienic and  
housekeeping standards for  
agricultural products

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**8. Exposure Control / Personal Protection**

Ventilation : Special ventilation is not required

Protective Clothing / Equipment : No special requirement

Respirator : Not required

Contaminated Equipment : Clean with soap and water

Comments : Practice general personal hygiene  
after using this product. Wash hands  
with soap and water before eating,  
drinking or smoking.

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## 9. Physical and Chemical Properties

Physical State : Powder

Colour : White to Pale yellow

Odour : Mild

Water Solubility : Soluble

% Volatile volume : Not determined

Specific Gravity : 1

Vapour Pressure : Not determined

Vapour Density : Not determined

pH : 6.5 – 7.0

Melting Point : Not Determined

Boiling Point : N.A.

Freezing Point : N.A.

\*\*\*\*\*

## 10. Stability and Reactivity

Stability : Stable

Conditions to avoid : None  
Hazardous Polymerization : Will not occur  
Chemical Incompatibilities : Avoid contact with any chemical  
Hazardous products of decomposition : None

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**11. Toxicological Information**

Eye Effects / Eye Irritation : Non-irritating  
Acute Oral Effects : None  
Acute Inhalation Effects : None  
Acute Dermal Effects : None  
Skin Irritation : Non-irritating  
Skin Sensitization : Not a skin sensitizer

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**12. Ecological Information**

The product contains non-pathogenic bacterial strains that occur naturally in soil and is biodegradable.

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**13. Disposal Consideration**

Disposal: Small amounts of the product which cannot be used according to the label instructions may be disposed off in a landfill

RCRA Waste Status: This product is not regulated as a hazardous waste. State and local regulation may affect the disposal of this product. Consult your state, local or provincial environmental agency for disposal of waste other than by use according to instructions.

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**14. Transport Information**



Transportation Data : This product is not regulated as a hazardous material for all modes of transportation

Hazard Class : Not Applicable

ID No. : Not Applicable

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**15. Regulatory Information**

TSCA : All components of this product are listed on TSCA Inventory

SARA Section 313 : Contains no reportable components

OSHA Hazard Classification : Non Hazardous

Proposition 65 : Contains no components subject to Warning requirement

WHMIS / Controlled Products Regulations: This products has been classified in accordance with the hazard criteria of the CPR and this MSDS contains all of the information required by the CPR

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**16. Other Information**

NFPA Ratings

Health : 0

Flammability : 0

Reactivity : 0

Specific Hazard : Not Applicable

Information presented on this Material Safety Data Sheet is believed to be accurate at the time of publication. No warranty, expressed or implied, is made with regard to this information. This information may not be adequate for every application, and the user must determine the suitability of this information due to the manner / conditions of use, storage or local regulations.

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