

MATERIAL SAFETY DATA SHEET

Yorker (Verticillium chlamydosporium)

Product Identifier-1

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

				[WHMIS Classification] NOT APPLICABLE	
Product Use BIOLOGICAL NEMATICIDE USED IN AGRICULTURE					
Manufacturer's Name AGRILAND BIOTECH LIMITED			Supplier's Name AGRILAND BIOTECH LIMITED		
Street Address 36, PRINCE INDUSTRIAL ESTATE, VILLAGE : MOTA-MOTIPURA			Street Address 36, PRINCE INDUSTRIAL ESTATE, VILLAGE : MOTA-MOTIPURA		
City VADODARA		Province GUJARAT		City VADODARA	
				Province GUJARAT	
Postal Code 391520		Emergency Telephone +91 2667 251296/251596		Postal Code 391520	
				Emergency Telephone +91 2667 251296/251596	
Date MSDS Prepared 18th July 2019		MSDS Prepared By RAMJI MANGUKIA		Phone Number 9825073628	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients (<i>specific</i>)	%	CAS Number	LC ₅₀ of Ingredient (<i>specify species</i>)
Verticillium chlamydosporium (Spore Biomass) of 10⁹ cfu/gm	1.00	NOT APPLICABLE	1. Acute Oral Toxicity to Wistar Rats & Swiss Albino Mice, 2. Acute dermal toxicity to Himalayan Albino rabbit, 3. Primary skin irritation to Himalayan Albino rabbit 4. Irritation to mucus membrane to Himalayan Albino rabbit 5. Acute Intraperitoneal toxicity to Wistar Rats 6. Acute Pulmonary Toxicity to Wistar rats Above test studies were conducted by International Institute of Biotechnology and Toxicology, Paddapai, Tamilnadu. In all tests, all dosages tried were at par with control (no treatment) Product was therefore certified as not affecting adversely at all dosages tested. Hence LD50 or LC50 values were not mentioned.
Carboxy Methyl Cellulose	1.00	9004-32-4	N/A
Talc	98.00	14807-96-6	N/A
Total	100.00		

SECTION 3 — HAZARDS IDENTIFICATION

WHMIS Symbols]

Potential Health Effects **No any specific symptom found on skin contact, eye contact, inhalation and ingestion however first aid measures are given in section 4 of this sheet**

SECTION 4 — FIRST AID MEASURES

Skin Contact	If skin gets contaminated, wash with plenty of water
Eye Contact	If it enters the eyes, flush eyes with plenty of water
Inhalation	No inhalation hazard
Ingestion	No ingestion hazard, however drink water as much as it can be drunk and induce urination



SECTION 5 — FIRE FIGHTING MEASURES

Flammable <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not flammable	If yes, under which conditions?	
Means of Extinction		
Flashpoint (° C) and Method	Upper Flammable Limit (% by volume)	Lower Flammable Limit (% by volume)
Autoignition Temperature (°C)	Explosion Data — Sensitivity to Impact	Explosion Data — Sensitivity to Static Discharge
Hazardous Combustion Products		
[NFPA]		

Leak and Spill Procedures

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Handling Procedures and Equipment
NO SPECIFIC EQUIPMENT or PROCEDURE is REQUIRED
Storage Requirements
TO BE STORED AT COOL AND DRY PLACE

SECTION 7 — HANDLING AND STORAGE

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits <input type="checkbox"/> ACGIH TLV <input type="checkbox"/> OSHA PEL <input type="checkbox"/> Other (<i>specify</i>)
Specific Engineering Controls (<i>such as ventilation, enclosed process</i>)
NO PROTECTION IS REQUIRED
Personal Protective Equipment <input type="checkbox"/> Gloves <input type="checkbox"/> Respirator <input type="checkbox"/> Eye <input type="checkbox"/> Footwear <input type="checkbox"/> Clothing <input type="checkbox"/> Other
If checked, please specify type THOUGH THE PRODUCT IS NON-HAZARDOUS HOWEVER GLOVES AND FACE MASK ARE ADVISED TO WEAR

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State	POWDER	Odour and Appearance	Brown	Odour Threshold (ppm)	Mild fermented odour
Specific Gravity	0.60 GM/ML	Vapour Density (air = 1)	N/A	Vapour Pressure (mmHg)	N/A
Evaporation Rate	NIL	Boiling Point (° C)	N/A	Freezing Point (° C)	N/A
Ph	Neutral	Coefficient of Water/Oil Distribution	N/A	[Solubility in Water]	80%

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability	Yes	If no, under which conditions?
Incompatibility with Other Substances	No	If yes, which ones?

Reactivity, and under what conditions?	No reaction with any substance
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Hazardous Decomposition Products

SECTION 11 — TOXICOLOGICAL INFORMATION

- 1.Acute Oral Toxicity to Wistar Rats & Swiss Albino Mice,
2. Acute dermal toxicity to Himalayan Albino rabbit,
- 3.Primary skin irritation to Himalayan Albino rabbit
4. Irritation to mucus membrane to Himalayan Albino rabbit
5. Acute Intraperitoneal toxicity to Wistar Rats
6. Acute Pulmonary Toxicity to Wistar rats

Above test studies were conducted by International Institute of Biotechnology and Toxicology, Paddapai 601301, Kancheepuram District, Tamilnadu, India. In all tests, all dosages tried were at par with control (no treatment) Product was therefore certified as not affecting adversely at all dosages tested. Hence LD50 or LC50 values were not mentioned.

Acute Dermal Toxicity to Himalayan Albino Rabbit :
Product found nontoxic at all dosages tested

Acute Oral Toxicity to Wistar Rats & Swiss Albino Mice: Product found not adversely affected at all dosages tested.

Acute dermal Toxicity to Himalayan Albino Rabbit : Product found not adversely affected at all dosages tested.

Acute Intraperitoneal Toxicity to Wistar Rat : Product found not adversely affected at all dosages tested.

Acute Pulmonary Toxicity to Wistar Rat : Product found not adversely affected at all dosages tested.

Primary Skin Irritation to Himalayan Albino Rabbit : Product found not adversely affected at all dosages tested.

Irritation to mucus membrane to Himalayan Albino rabbit : Product found not adversely affected at all dosages tested.

Effects of chronic exposure

No chronic study required

Carcinogenicity-IARC : Not Required

Carcinogenicity - ACGIH : Not Required

Reproductive toxicity : Not Required

Teratogenicity : Not Required

Product Identifier- 5 -

Embrototoxicity : Not Required	Mutagenicity : Not Required
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Name of synergistic products/effects : Product is synergistic to all biological products used in agriculture

Product was observed for its adverse effects on beneficial soil microbes and beneficial earthworms and it found safe to all beneficials.

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No specific information is required. Product is very much friendly to soil ecosystem and induces plant growth, hence can be used in crop field or kitchen gardens. Packing material may washed and be sent for recycling.

	PIN
TDG	[DOT]
[IMO]	[CAO]

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SECTION 12 — ECOLOGICAL INFORMATION

[Aquatic Toxicity]

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

SECTION 14 — TRANSPORT INFORMATION : Handle with care, No specific instruction required

SECTION 15 — REGULATORY INFORMATION : Please consider all applicable local laws and regulations

[WHMIS Classification]	[OSHA]
[SERA]	[TSCA]

SECTION 16 — OTHER INFORMATION

The use of the product is intended for plant protection in agriculture by persons having technical skill and at their own discretion and risk. We have already sent guidelines for using this product in the field however no field result can be guaranteed as the results of this product varies with field to field depending upon the local climate and weather conditions.