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1. IDENTIFICATION

Product Name: Digital

Intended Use/Restrictions of use: Bio-active metabolites of Trichoderma spp. in combination with kelp extract for rapid induction of the plant immune and stress response pathways.

Details of Supplier of SDS: Microbika
P.O. Box 1143
Lichtenburg, 2740, South Africa
E-mail: info@microbika.com
Emergency telephone: 0861-555 777 (AfriTox 24 Hour Service)

2. HAZARDS IDENTIFICATION

Classification of the Substance CLP / GHS / Hazcom 2012 Classification: Not classified as hazardous

Skin Contact: May cause skin irritation

Eye Contact: May cause eye irritation

Inhalation: Not an inhalation hazard under normal conditions of use.

Ingestion: Low toxicity product. It is highly unlikely that a sufficient quantity would be accidentally swallowed to cause any injury.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	EC#	Classification GHS
Seaweed Extract	Not assigned	Not assigned	Not classified as hazardous
Trichoderma metabolites	Not assigned	Not assigned	Not classified as hazardous

A combination of seaweed extract and Trichoderma metabolites in a phosphate buffered solution

4. FIRST AID MEASURES

Skin Contact: Wash exposed skin with soap and water.

Eye Contact: Flush thoroughly with water for 15 minutes. If any irritation persists seek medical attention.

Inhalation: If breathed in, move person into fresh air. Get medical attention if any signs of sensitization (e.g. difficult breathing, chest pain, headache, and flu like symptoms) occur

Ingestion: Drink water, do not induce vomiting. Seek medical attention.

Advice to Physician: Symptomatic treatment

5. FIRE-FIGHTING MEASURES

Type of Material: Non-combustible liquid.

Extinguishing Media: This product is not flammable or combustible. If caught in a fire, use media appropriate for surrounding fire.



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Special Exposure Hazards: This product does not burn freely.
Special Protective Equipment: Normal firefighting bunker gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes. Use protective clothing, gloves, safety goggles and boots. Do not swallow.

Environmental Precautions: Avoid run-off of undiluted material into water courses. Avoid disposal of large amounts into drains, surface water or groundwater.

Disposal Method(s): Carefully clean up spilled material and wash exposed area with soap and water. Dispose material into suitable container, within local regulations.

7. HANDLING AND STORAGE

Handling Precautions: Follow Biosafety Level 1 procedures.
Prevent skin or eye contact
Do not eat or drink while handling the product.
Wash exposed skin with soap and water after handling this product.

Storage Conditions: Store in accordance with package instructions.
Do not freeze.
Store in a cool, dry and dark place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters: Standard precautionary measures for handling chemicals should be observed.

Exposure Controls:

Eye / face protection	Use safety goggles.
Skin protection	Use protective clothing & gloves.
Respiratory protection	No specific recommendation.
Thermal hazards	None.



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9. PHYSICAL AND CHEMICAL PROPERTIES

General Information:

Appearance:	Liquid
Colour:	Dark Brown
Smell:	Light smell of yeast
Formulation Type:	Liquid (LQ)

Storage Stability: Store at a constant temperature between 8 and 24°C. Do not freeze. Avoid temperature fluctuations.

Shelf Life: 12 months at room temperature.

Bulk Density: 1000 kg/m³

Flammability: Non-flammable

Flash Point: Not applicable

pH: pH 5-6

pH of 1% Aqueous Dilution: pH 5-6

Oxidizing Properties: Non-oxidizing

Corrosiveness: Non-corrosive

Water Content: 97%

Solubility in Water: Not applicable

Foaming: Not applicable

Particle size: Not applicable

Volatility: Non-volatile

Viscosity: Not applicable

10. STABILITY AND REACTIVITY

Stability: The combination of seaweed extract and Trichoderma metabolites loses viability with time. This product is stable for 12 months when stored at a constant temperature between 8 and 24°C.

Conditions to Avoid: Avoid temperature fluctuation. Avoid temperatures above 24°C and below 8°C. Do not freeze.

Materials to Avoid: Strong oxidizing agents, acids, alkalis, *non-compatible fungicides and agrochemicals.

Hazardous Decomposition Products: None known



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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity:	> 1.0 x 10 ⁹ CFU/animal (rat)
Eye Irritation:	Minimal irritation (rat)
Skin Irritation:	Non-irritant (rabbit)
Acute Pulmonary:	Non-infective to mammals. > 5.8 x 10 ⁷ CFU/animal (rat)
Acute Intra-peritoneal:	Non-infective to mammals. > 4.9x 10 ⁷ CFU/animal (rat)
Intravenous:	Non-infective to mammals. > 1.0 x 10 ⁷ CFU/animal (rat)
Chronic Effects:	None of the components is known as carcinogenic; does not contain dangerous goods. Not classified by NTP, IARC or OSHA. Non infective and not pathogenic in rat.

12. ECOLOGICAL INFORMATION

Environmental Behaviour:	Trichoderma occurs naturally in the soil Ascophyllum Kelp is a non-hazardous soluble nutrient
Mobility and Bio-accumulation potential:	Estimated half-life of conidia spores in water is around 6 weeks.
Ecotoxic Effects:	There are no published reports of disease associated with Trichoderma in birds, wild mammals, fish, insects, Earthworms and plants.
General Information:	No acute or chronic effects are known.

13. DISPOSAL CONSIDERATIONS

Precautions:	None of the ingredients raise concern for the environment.
Disposal of Product:	Unwanted product may be safely disposed of in a land-fill or discarded as non-hazardous waste in accordance with local regulations.

14. TRANSPORT INFORMATION

Road/rail:	Not classified as dangerous in the meaning of transport regulations.
IMDG:	Not classified as dangerous in the meaning of transport regulations.
ICAO:	Not classified as dangerous in the meaning of transport regulations.
ADR:	Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Supply Classification:	None
Hazard Symbols:	None
Risk Phrases:	None
Safety Recommendations:	Keep out of reach of children, uninformed persons and animals.



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Wear protective gloves.

Wear protective goggles

Do not swallow.

To avoid risks to human health and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Recommended Use:

Biofertilizer for use as foliar and or soil application for Agricultural crops and Horticulture

Further Information:

Product classified and safety datasheet produced according to GHS directives.

The information contained in this SDS was compiled using the latest and most reliable information available to Microbika Pty Ltd. The data is based on the current expertise and presents the health, safety and environmental aspects of this product. They form no guarantee of product properties. Recommendations presented in this SDS apply only to the product as originally supplied. If other ingredients are used in the processing of this product, the recommendations for the use and handling of that product must be verified.

This document contains important information in order to ensure the safe storage, handling and use of this product. The information in this document must be brought to the attention of the safety/health/environmental advisor within your organisation. The information in this document must be made known to everyone whose work involves this product.