



MICROBIKA™
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1. IDENTIFICATION

Product Name: Excalibur Gold™

Intended Use/Restrictions of use: Microbial biofertilizer for horticulture

Details of Supplier of SDS: Advanced Biological Marketing t/a ABM Africa
P.O. Box 3253
Lichtenburg, 2740, South Africa
E-mail: lab@abmafrica.co.za
Emergency telephone: 082-857 0921

2. HAZARDS IDENTIFICATION

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

Skin Contact: Non-irritant

Eye Contact: Non-irritant

Inhalation: Not an inhalation hazard under normal conditions of use. Certain individuals may become sensitised to the material, as with any other proteinaceous dust.

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	EC#	Classification GHS
Perlite	93763-70-3	Not assigned	Not classified as hazardous
Maltodextrin	9050-36-6	232-940-4	Not classified as hazardous
Trichoderma spp.	Not assigned	Not assigned	Not classified as hazardous

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: Remove person to 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.



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5. FIRE-FIGHTING MEASURES

Type of Material:	Non-combustible solid.
Extinguishing Media:	This product is not flammable or combustible.
Special Exposure Hazards:	This product does not burn freely, but as with several organic powders, flammable dust clouds may be formed in air. Avoid creating dust and keep away from sources of ignition.
Special Protective Equipment:	Wear chemical protections suit, suitable gloves and boots, and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Respiratory protection and protective clothing are recommended. Ensure adequate ventilation.
Environmental Precautions:	Avoid disposal of large amounts into drains, surface water or groundwater.
Disposal Method(s):	Carefully sweep up 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. Do not eat or drink while handling the product. Use respiratory protection and ensure adequate ventilation. 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:	Total inhalable dust: 10 mg/m ³ as an 8-hour time-weighted average (TWA) Respirable dust: 4 mg/m ³ as an 8-hour TWA.
Technical Measures/Precautions:	Adequate ventilation



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**Personal Protection:**

Dust mask (e.g. 3M Dust Respirator 8810)
Safety goggles.
Light-weight protective clothing.
Gloves (plastic or rubber).

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information:

Appearance:	Solid / Powder
Colour:	Grey-green
Smell:	Earthy odour
Formulation Type:	Water dispersible Powder (WS)
Storage Stability:	Store at a constant temperature between 5 and 24°C. Do not freeze. Avoid temperature fluctuations.
Shelf Life:	12 months at room temperature.
Bulk Density:	800 kg/m ³
Flammability:	Non-flammable
Flash Point:	Not applicable
pH:	pH 6-7
pH of 1% Aqueous Dilution:	pH 6-7
Oxidizing Properties:	Non-oxidizing
Corrosiveness:	Non-corrosive
Water Content:	0.5%
Solubility in Water:	Insoluble
Foaming:	Not applicable
Particle size:	Median particle size 15 micron
Volatility:	Non-volatile
Viscosity:	Not applicable

10. STABILITY AND REACTIVITY

Stability:	Fungal spores lose 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.
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.
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. Not classified as dangerous in the meaning of transport regulations.
IMDG:	Not classified as dangerous in the meaning of transport regulations. Not classified as dangerous in the meaning of transport regulations.
ICAO:	
ADR:	

15. REGULATORY INFORMATION

Supply Classification:	None
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Hazard Symbols:	None
Risk Phrases:	May cause sensitisation by inhalation.
Safety Recommendations:	Keep out of reach of children, uninformed persons and animals. Wear protective gloves. Wear respiratory protection and avoid inhalation of the dust. To avoid risks to human health and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Recommended Use:	Active ingredient for biofertilizer for 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 ABM Africa. 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.