

Safety Data Sheet

Section 1: Identification

Product Name:	Biofurt
Synonyms:	None
Active Ingredient (A.I.):	Vascular Arbuscular <i>Mycorrhizae</i> propagules: Mixture of three (3) <i>Glomus</i> species: Minimum 200 propagules/g. <i>Trichoderma</i> spores: Mixture of six (6) <i>Trichoderma asperellum</i> strains: Minimum 1.1 x 10 ⁸ CFU/g.
A.I. Carrier:	Perlite
CAS Number:	130885-09-5 (For Perlite)
EC Number:	Not applicable
Molecular Formula:	Not applicable
Product Use:	A soil conditioner, water/nutrient retainer, and supplier or additional beneficial micro-organisms
Physical State:	Granular crystals, off-white and blue particles
Company Identification:	I-CAT International Consulting and Trading (Pty) Ltd.
Physical Address:	38 Amatole Road N4 Gateway Industrial Park West Willow Park Manor Extension 65 Pretoria

Directors:

JJ van Reenen, AD van der Merwe, WD Warries, LP Jansen van Rensburg

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Lynwood Ridge
0040

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In case of spillage: HAZMAT: 0800 147 112

Section 2: Hazard(s) Identification

Classification per SANS 10234 (GHS), CLP and (EC) No 1272/2008, is not applicable.

Physical Hazard: None Known

Health Hazard: None Known

Aquatic Hazard: None Known

Pictograms: None

Signal Word: None

Hazard Statement: Spilled product in contact with moisture causes surface to become extremely slippery

Precautionary Statement:

P102	Keep out of reach of children
P260	Do not breathe dusts or mists
P264	Wash thoroughly after handling
P270	Do not eat, drink when using this product

Additional information:

A.I. carrier (Perlite – mineral composed of sodium potassium aluminium silicate of variable composition) is considered as a nuisance dust only. Non-hazardous.

Vascular Arbuscular *Mycorrhizae* propagules and *Trichoderma* spores – Common beneficial micro -organisms never shown to be a causal agent in human illness.

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Section 3: Composition and Information on Ingredients

The Beneficial micro-organisms are the main active ingredients.

Name	CAS Number	EC Number	%
Vascular Arbuscular <i>Mycorrhizae</i> propagules: Mixture of three (3) <i>Glomus</i> species	-	-	Minimum 200 propagules/g
<i>Trichoderma</i> spores: Mixture of six (6) <i>Trichoderma asperellum</i> strains	-	-	Minimum 1.1 x 10 ⁸ CFU/g

Note the Percentage Perlite (carrier or micro-organisms) is not made available.

The table below lists the rest of the Biofurt composition.

Name	Composition	Concentration %
Potassium polyacrylate (Stockosorb)	Nitrogen, Potassium, Calcium, Zinc, Copper, Iron, Boron, Manganese.	65
Nitroactra	-	15
Bone meal	Nitrogen, Phosphorus, Calcium, Magnesium, Sulphur, Sodium, Chloride, Copper, Iron, manganese, Zinc, Boron, Molybdenum	12
Biocult (micro-organisms)	Provided above	8

Section 4: First Aid Measures

Eye Contact: Do not rub eyes. Thoroughly wash out the opened eye/s with plenty of water for at least 15 min. Ensure that you occasionally lift the upper and lower eye lids. Remove contact lenses if it's easy to do so and continue rinsing the eyes. Consult a doctor if necessary.

Inhalation: Move into fresh air and consult a doctor if necessary. If not breathing give artificial respiration or oxygen by a qualified person. Maintain an open-air way. Loosen tight clothing, such as collars, tie and belts.

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Skin contact: Wash off with plenty of soap and water, consult a doctor if necessary. Remove any contaminated clothing.

Ingestion: Rinse out the mouth and drink plenty of water. Consult a doctor if pain or discomfort occurs. Never induce vomiting.

If unsure consult a doctor and take this SDS with you.

Section 5: Fire Fighting Measures

Suitable extinguishing media:

Water, dry chemical powder, alcohol resistant foam, carbon dioxide or sand can be used.

Unsuitable extinguishing media:

None identified.

Special Hazards arising from the substance or mixture:

The following may be released: carbon monoxide or nitrogen oxides.

Advice to firefighters and protective equipment:

No special equipment is required. A dust mask can be advantageous. Avoid creating a dust cloud.

Section 6 – Accidental Release Measures

Personal Precaution:

Personal protective clothing including a dust mask can be used as safeguard measures. Wash hands/or areas of skin contact with soap and water after handling the product. Keep in mind that spilled product in contact with water or moisture causes product to become slippery. For further information see Section 8.

Emergency Procedure:

Immediately isolate the spill and prevent further spillage. Keep unauthorized personnel or bystanders away from the spill.

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Environmental Precaution:

Collect and flush small residuals with much water into the drain for subsequent biological waste effluent treatment. Prevent entry of the spilled product into main waterways, sewers or confined areas.

Methods for Clean up:

Avoid creating a dust cloud. Clean-up can be accomplished by sweeping with a broom and shovelling the product in appropriate labelled containers. Alternatively, a vacuum using a spark proof vacuuming system could be used.

Other Information:

See Section 13 for disposal Considerations.

Section 7 – Handling and Storage

Precautions for safe handling:

Avoid creating a dust cloud. Do not inhale the product. Respiratory/dust masks and other personal protective equipment and clothing, such as gloves and safety glasses should be worn, as safeguard measures. PPE that is heavily contaminated with the product can be washed or disposed of.

After working with the product ensure you wash your hands before eating, drinking or smoking.

Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated area that is dry, and below 32 °C. Ensure that the containers are tightly sealed. Avoid direct sunlight and excess heat. Ensure no unauthorised entry.

Section 8 – Exposure Controls and Personal protection

Components with workplace control parameters.

Value: 0.05mg/m³

Occupational exposure limits (OEL):

Perlite (CAS 93-763-3) Exposure limits in air: TLV 10 mg/m³ (ACGIH), PEL 15 mg/m³ (OSHA).

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Remarks:

Recommended limit for fine, inhalable polyacrylate dust below 0.01mm particle size. Provisional result of inhalation studies on animals using comparable dusts.

Engineering Controls:

Ensure that there is adequate ventilation. Ensure that there are safety showers and eye wash stations near the location where work is conducted. No Special requirements under normal use conditions.

Personal Protection:

Ensure that there is adequate ventilation. Avoid contact with skin and eyes. Use safety glasses, dust coat/overall, dust masks and gloves when handling the product. Use respiratory protection when exceeding limit and dust is formed. All PPE must be approved under standards such as OSHA 29 CFR 1910.132 or EU directive 89/686/EEC.

Hygiene measures:

Obey reasonable safety precautions and practice good housekeeping.

Section 9 - Physical and Chemical Properties

Appearance	Solid (powder)
Colour	Off-white with blue particles
Odour	Slight organic odour
Particle Size	0.8 µm – 0.2mm
pH	7.7 at 1.0g/l
Melting Point	Not Analysed
Boiling Point	Not Analysed
Flash Point	Not Applicable
Evaporation Rate	Not Analysed
Flammability	Not Analysed
Upper/Lower explosion limits	Not Applicable
Vapour Pressure	<20hPa at 20°C
Vapour Density	Not Analysed
Bulk Density	~700kg/m ³

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Solubility in Water	Insoluble (swell to a gel upon contact with water)
Water retention	1g <= 125ml
Viscosity, Dynamic	At 20°C / not applicable
Partition Coefficient: n-octanol/water	Not Analysed
Auto-ignition temperature	Not Analysed
Decomposition temperature	Not Analysed
Oxidising Properties	Not Analysed
Pyrophoricity	Not Analysed

Section 10 – Stability and Reactivity

Reactivity:

Stable under recommended storage conditions

Stability:

Stable under recommended storage condition. The substance won't form toxic compounds if released to the atmosphere.

Possibility of Hazardous Reactions:

None known, if stored and handled as recommended.

Conditions to Avoid:

Heat, Flames and sparks. The product should be kept below 32 °C.

Hazardous Decomposition Products:

Thermal decomposition can lead to the formation of: carbon monoxide and nitrogen oxide.

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Section 11 – Toxicological information

Acute Toxicity:

Oral: LD50 / Dose: >5000mg/kg/limit test

Dermal: LD50 / Dose: >2000mg/kg/limit test

Likely routes of exposure: Skin, eye contact and Inhalation

Target Organs: Skin, Eyes, respiratory System

- a) Skin Corrosion/irritation:** Rabbit / method: OECD Nr. 404 – non irritative to the skin.
- b) Eye Damage/irritation:** Rabbit / method: OECD Nr. 405 – non irritative; but could cause damage to the eyes.
- c) Respiratory and Skin Sensation:** No Sensitization.
- d) Teratogenicity:** No Information

Section 12 – Ecological Information

Phytopathogens: Below threshold limits.

Ecotoxicity: Non-toxic to the environment.

Elimination information (persistence and degradability) / Biodegradability:

Result: Not rapidly degradable under aerobic conditions.

Ciliate toxicity: Tetrahymena pyriformis / EC50>6000mg/l.
Exposure time: 24:00h.

Bacterial toxicity: Ps. Putida / EC50>6000mg/l.
Exposure time: 24:00h.
Method: DEV L8

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Fish toxicity: *Leuciscus idus* / LC50 >550mg/l.
Exposure time: 96:00h.
Method: OECD203

Fish toxicity: *Danio rerio* / LC50>4000mg/l.
Exposure time: 96:00h.
Method: OECD203

Section 13 – Disposal Considerations

Disposal should comply with the waste disposal legislation (GN R. 634, 635 and 636) as well as any other municipal regulations. The preferred methods of disposal are firstly recycling or re-using and lastly landfill. In this case the containers cannot be reused for any other purpose. This product should never be disposed of down any drains or sewage lines. Open dumping or burning is prohibited.

Packaging/Containers:

The empty containers will still contain vapours and product residues. Triple rinse or preferably pressure rinse empty containers before disposal. The rinse water must also be collected. Do not re-use the containers for any other purposes. Nor the empty containers or product should ever be burned.

Section 14 – Transport Information

Land transport:

ADR: Not dangerous goods.

RID: Not dangerous goods.

Sea transport:

IMDG: Not dangerous goods.

Air transport:

ICAO/IATA: Not dangerous goods.

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Section 15 – Regulatory Information

Relevant Regulations: SANS 10234, SANS 10228.

Regulated by the Fertilizers, Farm Feeds, Agricultural remedies and stock Act, Act No 36 of 1947.

South African Occupational Health and Safety Act, Act No 85 of 1993.

GHS / Transport Labelling:

Labelling according to EEC directive.

Symbol: None

Risk Phrases: R22 – Harmful if swallowed.

Safety Phrases: S 1/2 – Keep locked and out of reach of children.

Section 16 – Any other Relevant information

Residual monomers: Acrylic acid <600ppm.

Date of issue: 2nde Issue; 7 May 2020

Compiled by: I-CAT International Consulting and Trading (Pty) Ltd.

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To be noted:

The information contained in this SDS is based upon data considered to be accurate at the time of preparation. I-CAT International Consulting and Trading (Pty) Ltd, has taken reasonable care in the preparation of this SDS, however it assumes no responsibility or liability to the accuracy as well as the suitability of the information, for both the intended purpose of this product or any consequences of its use. Since regulatory standards and guideline recommendations are revised on a continues basis, I-CAT International Consulting and Trading (Pty) Ltd cannot insure that the information contained in this SDS will be current at the time of use.

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