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# BIOHUB ENDO-4

## Safety Data Sheet



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# Overview

## 1. Identification of the Material and Manufacturer

<b>Product Name</b>	BioHub Endo-4
<b>Intended Use</b>	Agricultural rehabilitation soil improver
<b>Details of Company</b>	Biostim Pty Ltd PO Box 9151 Pacific Paradise, Qld. 4564
<b>Emergency Contact</b>	+(61)-7 5329 2143

## 2. Hazards Identification

### Non-Hazardous according to the criteria of Worksafe Australia

This product has been assessed in accordance with Model Work Health and Safety Regulations. Safety phases

- Do not breathe dust.
- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable gloves.
- Use only in well ventilated areas.

Cases of legionnaires disease have been associated with breathing dusts from products of this type. While this is uncommon, you should take suitable precautions against dusts when using this product.

## 3. Composition/Information on Ingredients

<b>Chemical Name</b>	Beneficial endomycorrhizal propagules and proprietary ingredients
<b>Solubility in Water</b>	99.9% soluble

**Ingredients** Mycorrhizal fungi and perlite

**Concentrate %** 100%

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

## 4. First Aid Measures

<b>Ingestion</b>	<p>Swallowing this product may cause immediate or delayed abdominal discomfort and potentially increase the risk of gastro-intestinal infections.</p> <p>The patient should be given water to drink and medical attention should be sought if any abdominal symptoms occur. Vomiting should not be induced, but if vomiting occurs, the patient should be leant forward or placed on their left hand side to maintain an open airway.</p>
<b>Eye Contact</b>	<p>In the event that this material or the dust comes into contact with the eyes it may have an immediate or delayed irritating effect resulting in redness, watering, and/or infection.</p> <p>Eyes should be immediately and thoroughly flushed with lukewarm water for as long as necessary to alleviate the problem (or for at least 15 minutes). Ensure complete irrigation of the eye by keeping the eyelids apart and away from the eye and moving the eyelids by occasionally lifting the upper and lower lids. Removal of contact lenses after an eye injury should only be conducted skilled personnel. Professional medical assistance should be sought if symptoms persist.</p>
<b>Skin Contact</b>	<p>Skin contact with this product and/or their dusts may lead to immediate or delayed skin irritations and in susceptible people skin sensitisation, dermatitis and/or skin infection.</p> <p>The affected area should be washed thoroughly with mild soap and lukewarm water as quickly as possible.</p>
<b>Inhalation</b>	<p>Inhalation of dust from this product may have immediate or delayed effect to irritate, inflame or sensitise the nose, throat, and lungs, and exacerbate pre-existing conditions such as asthma and bronchitis. The repeated inhalation of dust from these products may lead to asthma, bronchitis, pneumonia or pneumonia-like illnesses (eg legionnaires disease). Children, pregnant women, the elderly, people with pre-existing conditions or the immuno-compromised, may be at a particular risk from these illnesses if exposed to this product.</p> <p>If an irritation occurs, the affected parties should be moved (or move themselves) away from the product or its dusts into a source of fresh air. The patient should be laid down, kept warm and be rested. Protheses such as false teeth, whichh may block the airways, should be removed where possible prior to intiating first aid procedures. Professional medical attention should be sought if symptoms persist.</p>
<b>Special Medical Attention and Treatment</b>	<p>There are no special treatments for mycorrhizal fungi. Conditions should be treated symptomatically. All people who came into contact with this product should safeguard themselves adequately from tetanus.</p>

## 5. Fire Fighting Measures

**Suitable Extinguishing Media**

Water or Class A extinguishers

**Hazards From Combustible Products**

The product may combust or spontaneously self combust in large stockpiles with internal temperatures around 75+ degrees celsius. Temperatures should be monitored by your organisation and sufficient water should be soaked into the pile.

**Precautions**

No special precautions.

## 6. Accidental Release Measures

**Emergency Procedures**

In the event of a spill or release of product from a transport vehicle or storage area in a sensitive environmental includeing near water bodies.

1. Advise the Roads and Triffic Authority if a spill occurs from a transport vehicle. Ph 131 782
2. Advise the Department of Environment and Conservation on the pollution landline and complete the necessary reports. Ph 131 555
3. Advise the supplier emergency contact. Ph 0418 654 231

**Methods and Materials for Containment & Clean Up**

In the vent of a spill or release of the product from a transport vehicle or storage area where bunding does not exist in order to contain and clean up.

1. Secure the site by covering the material with a sheet/tarpaulin secured to the ground in order to protect against dust emissions and gravitational flows into waterways. Bund the area and cover drains to protect gainst run-off in waterways, surrounding land and drainage systems.
2. Clean up the spill immediately once the site is secured. Avoid generating dust.
3. Collect the material, load, transport, and store all material released for use as planned or dispose of safely.
4. Check the surrounding area to ensure all material has been captured. Collect all material is possible.

## 7. Handling and Storage

**Precautions for Safe Handling**

When handling this material ensure that workers stay away from equipment that is moving and/or processing exposed material and avoid coming into contact with the product by wearing

1. A suitable respiratory protective device conforming with AS/NZS 1715: 1994 – Selection, use and maintenance of respiratory protective devices. A Class P1 particulate respirator is typically most appropriate.
2. Suitable gloves conforming with AS/NZS 2161: 2000 – Occupational protective gloves. Standard duty leather/pigskin, rubber, or neoprene gloves are typically most appropriate.
3. Full length protective trousers and shirt (or overalls).
4. Suitable boots for the site.
5. Suitable eye protection conforming with AS/NZS 1336: 1997 – Recommended practices for occupational eye protection. Low impact goggles with indirect ventilation (HT or CT with C, D optional) are typically most appropriate.

Additional handling procedures should include:

1. Limit exposure to the product.
2. Wash any areas of the body that the product may have come into contact after exposure.
3. Launder protective work clothes prior to re-use.
4. Check the atmosphere regularly against the relevant exposure standards.
5. Regularly vacuum enclosed areas where the product is used or install a dust extraction system.
6. Apply the material using a suitable garden or horticultural instrument.

#### Conditions for Safe Storage

When storing this material

1. Protect stockpiles from wind and other adverse weather with a sheet/tarp or wind break secured to the ground.
2. Bund the storage area.

## 8. Exposure Controls and Personal Protection

**National Exposure Standards** No specific standards have been allocated for mycorrhizal fungi. However due to the dust of the product, concentrations for monitoring exposure are provided by a number of standards as listed below

1. Total inhalable dust. 10 mg/m<sup>3</sup>
2. Total respirable dust. 2 mg/m<sup>3</sup>

#### Biological Limit Values

No biological limit allocated.

#### Engineering Controls

Use only in well ventilated areas.

#### Personal Protection

Breathing masks, gloves, full length overalls, boots, safety glasses

#### Equipment

## 9. Physical and Chemical Properties

#### Appearance

Light brown material

#### Odour

Earthy odour

#### pH in Water

6-8

<b>Vapour Pressure</b>	Not relevant
<b>Vapour Density</b>	Not relevant
<b>Boiling Point</b>	Not relevant
<b>Freezing/Melting Point</b>	Not relevant
<b>Solubility</b>	Not soluble
<b>SG</b>	Not relevant
<b>Flashpoint</b>	Not relevant

## 10. Stability and Reactivity

<b>Chemical Stability</b>	Product is stable.
<b>Conditions to Avoid</b>	None
<b>Incompatible Material</b>	None
<b>Hazardous Decomposition Products</b>	None
<b>Hazardous Reactions</b>	None

## 11. Toxicological Information

<b>Ingestion</b>	<p>Ingestion is unlikely through normal use. However swallowing any amount of this product may cause immediate or delayed abdominal discomfort and potentially increase the risk of gastro-intestinal infections.</p> <p>It is not recommended to repeatedly swallow this material.</p>
<b>Eye</b>	<p>In the event that any dose of this material or the dust comes into contact with the eyes it may have an immediate or delayed irritating effect resulting in redness and watering or an infection.</p> <p>It is not recommended to repeatedly allow this material to come into contact with the eyes.</p>
<b>Skin</b>	<p>Any level of skin contact with this product and/or their dusts may lead to immediate or delayed skin irritations and in susceptible people skin sensitisation, dermatitis or skin infection.</p> <p>It is not recommended for people susceptible to skin irritations to repeatedly allow this material to come into contact with their skin.</p>
<b>Inhalation</b>	<p>Inhalation of any amount of dust from this product may have an immediate or delayed effect to irritate, inflame or sensitise the nose, throat, and lungs and exacerbate pre-existing conditions such as asthma and bronchitis.</p> <p>It is not recommended for people to repeatedly inhale this material.</p>
<b>Chronic Health Effects</b>	<p>The repeated inhalation of dust from these products may lead to respiratory irritation, inflammation or sensitisation and illnesses such as asthma, bronchitis, pneumonia or</p>

other pneumonia-like illnesses. Children, pregnant women, the elderly, people with pre-existing conditions or the immuno-compromised, may be at a particular risk for these illnesses if exposed to the product.

It is not recommended to repeatedly swallow this material or repeatedly allow it to come into contact with the eyes. All people who come into contact with this product should safeguard themselves from tetanus.

## 12. Ecological Information

<b>Ecotoxicity</b>	R53. May cause long term adverse effects in the aquatic environment.
<b>Persistence/Degradability</b>	Not harmfully persistent, no harmful degrading.
<b>Mobility</b>	Only mobile in significant water or wind.

## 13. Disposal Considerations

<b>Disposal Methods</b>	Putrescible waste suitable landfill.
<b>Special Precautions</b>	Not relevant

**Always dispose of in accordance with local, state, and federal regulations.**

## 14. Transport Information

Transport of dangerous goods by land

<b>UN Number</b>	Non-applicable
<b>Proper shipping name or Technical name</b>	Non-applicable
<b>Transport hazard class</b>	Non-applicable
<b>Packing group</b>	Non-applicable
<b>Environmental hazards for transport purposes</b>	No
<b>Special precautions for user</b>	See section 9



## 15. Regulatory Information

Not relevant

## 16. Other Information

<b>SDS Creation Date</b>	4/08/2021
<b>Issue Number</b>	001. This issue number replaces all previous issues.
<b>Customer Service</b>	1300 064 020
<b>Australian Poisons Info Centre</b>	13 11 26

The product should not be used for purposes other than shown in Section 1 without first referring to the supplier and obtaining written instructions. As specific conditions of use of the product are outside of the suppliers' control, the user is responsible for ensuring that the requirements of the relevant legislation are complied with. The information in this Safety Data Sheet is based on the present knowledge and current national legislation. It provides guidance on health, safety, and environmental aspects of the product and should not be construed as a guarantee of technical performance or suitability for particular applications. This SDS will be revised and updated as requirements occur. Should further information and relevant advice be required, contact BioHub Solutions Pty Ltd.