BIOCULT SEED APPLICATION 4HA

ACCORDING TO GHS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 GHS Product Identifier

Product Name	Biocult Seed Application 4Ha

1.2 Recommended use of the chemical and restrictions on use

Identified Use(s)	For the use to treat seed prior to planting. When used as directed, Biocult increases the root colonisation area and potentially increases the yield of wheat crops.
Uses Advised Against	Use only as directed

1.3 Supplier's details

Manufacturer

Company Identification	Biocult Pty Ltd
Address of Manufacturer	Becquelin Farms, Erf 918 Mondeor Rd Somerset West South-Africa
Postal code	7129
Telephone:	+27 21 858 1140
E-mail	planthealth@aeciworld.com
Website	www.aeciph.com
Office hours	08:00 - 17:00

Supplier

Company Identification	AECI Plant Health, a division of AECI Ltd.
Address of Supplier	14 Field Road, Lilianton Boksburg South-Africa
Postal code	1459
Telephone:	+27 11 823 8000
E-mail	planthealth@aeciworld.com
Website	www.aeciph.com
Office hours	08:00 - 17:00

1.4 Emergency telephone number

Biocult (Pty) Ltd:	+27 (21) 8581140 (o/h)
AECI Plant Health	+27 (11) 823 8000 (o/h)
Spill Tech:	086 100 0366 (a/h)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification	Not classified as dangerous for supply/use.

2.2 GHS label elements, including precautionary statements

GHS

Product Name	Biocult Seed Application 4Ha
Hazard Pictogram(s)	None.
Signal Word(s)	None.
Hazard Statement(s)	None.
Precautionary Statement(s)	None.

2.3 Other hazards which do not result in classification

None known.

2.4 Additional Information

None.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Ingredients:	Classification: non-hazardous. Contains Perlite CAS 130885-09-5 not classified as hazardous. A mineral composed of sodium potassium aluminium silicate of variable composition. Perlite is considered a nuisance dust only.
Product description:	The product contains an inert perlite powder carrier/base with Vascular Arbuscular *Mycorrhizae* propagules and *Trichoderma* spores (common beneficial micro-organisms – never shown to be a causal agent in human illness) *Mycorrhizae*: Mixture of three (3) *Glomus* species: Minimum 1600 propagules/g (Active) and 533 propagules/g (final concentration) *Trichoderma*: Mixture of six (6) *Trichoderma asperellum* strains: Minimum 5 x 10^7 CFU/g (Active) and 3.3 x10^7 CFU/g (final concentration) There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.
For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin Contact	In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if discomfort occurs.
Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if discomfort or irritation occurs.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

4.2 Most important symptoms/effects, acute and delayed

Inhalation:	May cause respiratory irritation.
Ingestion:	None.
Skin contact:	None.
Eye contact:	None.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Unlikely to be required but if necessary treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	Use an extinguishing agent suitable for the surrounding fire: use water spray, alcohol-resistant foam, powder or carbon dioxide. For large fires, apply water or alcohol resistant foam.
Unsuitable extinguishing media	Water jets or high-pressure water jets.

5.2 Special hazards arising from the chemical

None anticipated. Heating may cause decomposition.

5.3 Special protective actions for fire-fighters

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Wear masks and suitable gloves if prolonged skin contact is likely.

6.2 Environmental precautions

Will not harm the environment. Will encourage plant growth.

6.3 Methods and material for containment and cleaning up

Sweep or vacuum without creating dust, into a suitable container for disposal and wash area with water.

6.4 Reference to other sections

See Also Sections 7, 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep container dry.
Protective measures: Observe directions on label and instructions for use.
Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature	Store product in original packaging under dry conditions, preferable room temperature or colder and a void direct sunlight and excess heat. Store product in a segregated and approved area. Keep container tightly closed and sealed until ready for use.
Storage life	12 months
Incompatible materials	Fungicides and toxic compounds.

7.3 Specific end use(s)

Use as directed. Use original container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits: No Occupational Exposure Limit assigned.

8.2 Exposure controls

8.2.1. Appropriate engineering controls: Ensure adequate ventilation.

8.2.2. Individual protection measures, such as personal protective equipment



Eye Protection: Wear eye protection with side protection (EN166).



Skin protection: Not normally required.



Respiratory protection: Normally no personal respiratory protection is necessary.



Thermal hazards: None known.

8.2.3. Environmental Exposure Controls: Do not release large quantities into the surface water or into drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Solid.

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Colour :	Light pearl grey
Odour	Not known.
Odour threshold	Not known.
pH	Not known.
Melting point/freezing point	Not known.
Initial boiling point and boiling range	Not known.
Flash Point	Not applicable.
Evaporation rate	Not known.
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.
Vapour density	Not known.
Density (g/ml)	0.22 kg/l
Relative density	Not known.
Solubility(ies)	Solubility (Water) : Slightly soluble Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	Not known.
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not explosive
Oxidising properties	Not known.

9.2 Other information

None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None anticipated. The product is stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid

None anticipated.

10.5 Incompatible materials

Fungicides and toxic compounds.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Non-toxic
Acute toxicity - Skin Contact	Not a skin irritant
Acute toxicity - Inhalation	Harmful concentrations of dust are unlikely to occur through normal use of this product.
Skin corrosion/irritation	Non-irritant
Serious eye damage/irritation	Non-irritant
Skin sensitization data	Not classified
Respiratory sensitization data	Not classified
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Not classified
Lactation	Not classified
STOT - single exposure	Not classified
STOT - repeated exposure	Not classified
Aspiration hazard	Not classified

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11.2 Other information

Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

12.2 Persistence and degradability

The bacterial as well as fungal spores are biodegradable. The base and carrier is an inert substrate.

12.3 Bioaccumulative potential

Not known.

12.4 Mobility in soil

NONE

12.5 Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal Method

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

13.2 Additional Information

No special precautions are required for this product.

SECTION 14: TRANSPORT INFORMATION

Not classified as hazardous for transport.

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group, if applicable

Not applicable

14.5 Environmental hazards

Not classified as a Marine Pollutant.

14.6 Special precautions for user

Not known

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not known

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

OSPAR List of Chemicals for Priority Action	Not listed
NTP (National Toxicology Program)	Not listed
IARC (International Agency for Research on Cancer)	Not listed
Relevant information regarding authorization:	Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances.
ACGIH:	American Conference of Governmental Industrial Hygienists (ACGIH)

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Relevant information regarding restrictions:

EU regulations:	Regulation EC 1272/2008 [EU-GHS/CLP] National Road Traffic Act, 1996 (ACT NO. 93 of 1996).
Other National regulations:	SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management: Waste Act 59 of 2008. Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947).

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Hazard Pictogram(s)	None.
Hazard Statement(s)	None.
Precautionary Statement(s)	None.
Acronyms	ATE : Acute Toxicity Estimate CAS : Chemical Abstracts Service GHS : Globally Harmonised System of Classification and Labelling of Chemicals LTEL : Long term exposure limit PNEC : Predicted No Effect Concentration STEL : Short term exposure limit STOT : Specific Target Organ Toxicity
Key literature references and sources for data used to compile the SDS	GHS Classification
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