

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Name:

Symbio Mycorrhizal Seed Coat

1.2 Relevant identified uses and uses advised against:

A preparation to improve mycorrhizal fungi colonisation of plant roots. Not for oral consumption or direct contact with food or beverages

1.3 Details of Supplier of Safety Data Sheet:

Company name:

Origin Amenity Solutions Ltd

1-3 Freeman Court,

Jarman Way,

Orchard Road,

Royston,

Hertfordshire,

SG8 5HW

Tel: 0800 138 7222

Email: sales.symbio@originamenity.com

1.4 Emergency phone number

Emergency phone No. 0800 138 7222 (09.00 – 17.00 GMT Monday – Friday)

National emergency telephone number 111

2. Hazards Identification

2.1 Classification of the mixture:

This product has no classification under CLP

2.2 Label elements:

This product has no label elements

Signal Word: None required

Hazard statement: None required

Precautionary statement: None required

Not a hazardous mixture according to Regulation (EC) No. 1272/2008

2.3 Other hazards

The mixture does not fulfil the screening criteria for PBT or vPvB substance

The bacteria and fungi in this mixture are considered to belong to hazard group 1 as defined by the Advisory Committee on Dangerous Pathogens (ACDP) as “a biological agent unlikely to cause human disease”. It should NOT be assumed. However, that this organism will be innocuous in all situations or that infections can never occur. The mixture should therefore not be used by, or in the presence of immunocompromised persons.

Mixture may form dust in the air. Fine dust clouds may form explosive mixtures in the presence of ignition sources.

Crystalline silica inhaled in the form of quartz is carcinogenic to humans (Group 1). This product contains less than 0.1% respirable crystalline silica, well below exposure limits, and under normal conditions of use and storage, is not expected to cause cancer.

3. Composition/Information on ingredients

3.2 Mixtures

A mixture containing Mycorrhizal fungi, Trichoderma sp. and Bacillus sp. on a clinoptilolite base.

The mycorrhizal fungi in this mixture are considered to belong to hazard group 1 as defined by the Advisory Committee on Dangerous Pathogens (ACDP) as “a biological agent unlikely to cause human disease”. It should NOT be assumed however, that this organism will be innocuous in all situations or that infections can never occur. The mixture should therefore not be used by, or in the presence of, immunocompromised persons.

Crystalline silica inhaled in the form of quartz is carcinogenic to humans (Group 1). This product contains less than 0.1% respirable crystalline silica, well below exposure limits, and under normal conditions of use and storage, is not expected to cause cancer.

Name	CAS no.	Concentration (w/w %)	PBT / WEL	CLP Classification
Clinoptilolite (dust)	12173-10-3	50-70%	Substances with community workplace exposure limits	Not classified
Silica Hydrated	7631-86-9	10-30%		Not classified
Quartz (Respirable <0.1%)	14808-60-7	0-1%		Not classified

4. FIRST AID MEASURES

4.1 Description of first aid measures:

Inhalation: Move affected person to fresh air, keep person quiet and warm, in case of respiratory failure administer artificial respiration, seek medical attention. If unconscious place in recovery position and seek medical advice.

Skin contact: Wash immediately with plenty of soap and water. May cause mild irritation.

Eye contact: Rinse eyes with water for at least 15 minutes while holding eyelids apart. Seek medical attention if symptoms persist or develop.

Ingestion: Rinse mouth with water. Seek medical attention if symptoms persist or develop.

4.2 Most important symptoms and effects,

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest

Skin contact: There may be mild irritation at the site of contact

Eye Contact: There may be irritation and redness

Ingestion: There may be irritation of the throat

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically

5. Fire Fighting Measures

5.1 Extinguishing media:

Suitable extinguishing media: Use foam, dry chemical, carbon dioxide, or water fog.

Unsuitable extinguishing media: Do not use direct water jet if dust can be dispersed into the air. Dust dispersed by a water stream in the presence of an ignition source could explode.

5.2 Special hazards arising from the mixture:

Avoid dust formation

Fire hazard: Not flammable

Explosion hazard: Not explosive

Reactivity: Hazardous reactions will not occur under normal conditions

5.3 Advice for fire fighters:

Firefighters should be equipped with breathing apparatus appropriate to environmental conditions. Wear protective clothing to prevent contact with skin and eyes

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid airborne dust generation, do not breathe dust

Ensure adequate ventilation.

Avoid contact with eyes and skin

Wash hands thoroughly after handling.

6.2 Environmental Precautions:

No special precautions.

Do not discharge into drains or rivers

6.3 Methods and material for containment and cleaning up:

Scoop up spillages and place in a container. Avoid creating dusts, preferably vacuum clean and collect in suitable labelled containers for waste. Wear appropriate respiratory protection, safety glasses and overalls as a precaution. Rinse the contaminated area with plenty of water

6.4 Reference to other sections:

Personal protective measures are given in section 8. Disposal advice is given in section 13.

7. Handling and Storage

7.1 Precautions for safe handling:

Read the label before use. Avoid dust formation, do not breathe dust. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment.

Wash hands after working with product.

Do not smoke, eat or drink when handling product.

Employees should wear protective work clothing, shoes and gloves.

Handle packaged products carefully to prevent accidental bursting; remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store in original containers in a cool dry place. Prolonged storage should be in a fridge or deep freeze. Protect from light, raised temperatures and humidity.

7.3 Specific End Use:

The mixture is designed to be added directly to plant roots, to fertilisers, or biostimulants to enhance plant growth prior to use. See label for specific instructions

8. Exposure Controls

8.1 Control Parameters:

Ingredients with limits that require monitoring

Name	Product Identifier	Limit value – 8 hours TWA (UK) ¹
Silica Hydrated (Amorphous Opaline Silica)	CAS no: 7631-86-9	6 mg/m ³ (inhalable aerosol) 2.4 mg/m ³ (respirable aerosol)
Quartz (Respirable <0.1%)	CAS no: 14808-60-7	0.1 mg/m ³ (respirable aerosol)
Clinoptilolite (dust)	CAS no: 12173-10-3	10 mg/m ³ (inhalable dust) 4 mg/m ³ (respirable dust)

¹For equivalent limits in other countries, please consult the local regulatory authority

8.2 Exposure controls:

Engineering Measures For normal use apply outdoors or in a well ventilated area. Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

Respiratory Equipment None required for normal use. In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective device with particle filter that complies with the requirements of European or national legislation.

Hand Protection For prolonged or repeated skin contact use suitable protective gloves. PVC or rubber gloves are recommended.

Eye Protection Safety glasses. Ensure eyebath is to hand

Skin Protection Protective clothing

Hygiene Measures When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

9. Physical and Chemical Properties

9.1 On basic physical and chemical properties

- | | |
|--|-------------------------|
| a) State | Powder |
| b) Colour: | light brown/orange |
| c) Odour: | Slight earth-like odour |
| d) Odour threshold: | No data available |
| e) pH: | 7.0-8.0 |
| f) Relative evaporation rate (Butylacetate = 1): | Not applicable |
| g) Melting point | No data available |
| h) Freezing point: | No data available |
| i) Boiling point: | No data available |
| j) Flash point: | No data available |
| k) Auto-ignition temperature: | No data available |

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l) Decomposition temperature:	No data available
m) Flammability:	No data available
n) vapour pressure:	Not applicable
o) relative vapour density at 20°:	No data available
p) Relative density:	0.7-0.8 g/cm ³
q) solubility in water:	insoluble
r) partition coefficient n-octanol/water (logPow):	No data available
s) viscosity kinematic:	Not applicable
t) viscosity dynamic:	Not applicable
u) explosive properties:	No data available
v) oxidising properties:	No data available
w) explosive limits:	No data available

9.2 Other Information:

Explosive properties: not classified as explosive
Storage temperature: 0-30°C

10. Stability and Reactivity

10.1 Reactivity:

Stable under recommended transport or storage conditions

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on conditions or materials listed below.

10.4 Conditions to avoid:

Do not expose the mixture to humidity and raised temperature

10.5 Incompatible Materials:

Materials to Avoid: Strong Oxidising Agents, Strong Acids.
Avoid contact with moisture as product may become microbially active and deteriorate.

10.6 Hazardous decomposition products

In combustion emits toxic fumes

11. Toxicological Information

11.1 Information on toxicological effects:

a) Acute toxicity (oral)	Not classified
b) Acute toxicity (dermal):	Not classified
c) Acute toxicity (inhalation):	Not classified
d) Skin corrosion/ irritation	Not classified
e) Respiratory or skin sensitisation:	Not classified
f) Repeated dose toxicity	Not classified
g) Germ cell mutagenicity	Not classified

- | | | |
|----|--|----------------|
| h) | Carcinogenicity | Not classified |
| | Does not meet the criteria for carcinogens under regulation EC1272/2008.
However, crystalline silica inhaled in the form of quartz is carcinogenic to humans (Group1).
Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. Applications and exposure data indicate that exposure to respirable quartz in this product with normal use is well below exposure limits. The manufacturer is not aware of any scientific or medical data available indicating that exposure to respirable crystalline silica from this product under conditions of normal use will cause silicosis or cancer. Adverse effects would not be expected from normal use of this product | |
| i) | Reproductive toxicity | Not classified |
| j) | STOT – single exposure | Not classified |
| k) | STOT-repeated exposure | Not classified |
| l) | Aspiration hazard | Not classified |

Symptoms / Routes of exposure:

Inhalation: Inhalation of excessive concentrations of dust may cause irritation of mucus membranes and upper respiratory tract, with a feeling of tightness in the chest.

Skin Contact: not absorbed through skin. There may be mild irritation at the site of contact. Prolonged contact may cause dryness of the skin

Eye contact: dust may cause irritation and redness.

Ingestion: unlikely to be harmful if swallowed. There may be irritation of the throat

Absence of data:

If information is not listed in section 11 it is due to non-availability of data or not appropriate.

Other Information:

Not applicable

12. Ecological Information

Ecotoxicity

This product is classified as environmentally non-hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1 Toxicity:

Acute Toxicity – Fish: No data available

Acute Toxicity – Aquatic Invertebrates: No data available

Acute Toxicity – Aquatic Plants: No data available

12.2 Persistence and degradability

The mycorrhizal fungi are naturally present in the environment.

12.3 Bioaccumulative potential

Not expected to accumulate

12.4 Mobility in soil

Not determined

12.5 Result of PBT and vPvB assessment

This product is not classified as a PBT or vPvB substance

12.6 Other adverse effects:

Not determined

13. Disposal Considerations

General information

This mineral can be disposed of as a non-toxic/inactive material in approved landfill sites in accordance with local regulations.

13.1 Waste treatment methods Product:

Use licensed waste disposal company

Contaminated packaging: Dispose of as unused product.

14. Transport Information

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

14.6. Special precautions for user

Not regulated for transport

14.7 Transport in bulk according to Annex II MARPOL 73/78 and the IBC code

Not regulated

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the mixture

Health and Safety at Work Act 1974.

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Safety Data Sheets for Substances and Preparations.

Classification and Labelling of Substances and Preparations Dangerous for Supply.

REACH – Exempted in accordance with Annex V.7

Workplace Exposure Limits 2005 (EH40)

15.2 Chemical Safety Assessment

No data available

16. Other Information

This safety data sheet has been prepared in accordance with Regulations (EC) of the European Parliament Council No 1272/2008 and Commission Regulation (EU) No 453/2010.

The above information is based on present knowledge of the product at the time of publication. It is given in good faith and no warranty is implied with respect to the specification of quality of the product. The user must satisfy himself that the product is entirely suitable for the purpose.

Revisions: This version supersedes all previous versions

Section 2.2 Label Elements – product is not classified as hazardous, no pictogram is required

Section 3 composition – product contains ingredients with work place exposure limits

Section 8.1 control parameters – work place exposure limits included

Minor editorial changes throughout

Legend to abbreviations used:

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC-No.	European Community number
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
TWA	Time Weighted Average
vPvB	Very Persistent and Very Bioaccumulative

Disclaimer

The information in this SDS was obtained from sources which we believe to be reliable. Origin Amenity Solutions provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate handling of the product by properly trained and qualified personnel. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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