SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:

Exfoliated Vermiculite

CAS No. 1318-00-9

1.2 Relevant uses of the substance or mixture and uses advised against:

- Animal Feeds
- Back Fill For Fire backs
- Acoustic Insulation
- Chimney Lining
- Pipe and Duct Insulation
- Fireproofing
- Plasters and Mortars
- High Temperature Insulation
- Friction Linings
- Lightweight concretes and screeds
- Packaging
- Liquid Wastes Absorbent: Oils, Acids, Alkalis, Nuclear Residues & Toxic Chemicals
- Horticulture
- Refractory Applications
- Loose Fill Insulation

1.3 Details of the supplier of the safety data sheet:

Westland Horticulture Ltd
Alconbury
Huntingdon
PE28 4HY

Sinclair Pro is a subsidiary of Westland Horticulture

Contact: The Safety Officer
Phone number: +44 (0)1480 443789
Website: http://www.gardenhealth.com/about-westland/contact

1.4 Emergency phone number

Phone number: 01480 443789

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (EU-GHS/CLP)
This mixture is not classified as dangerous to humans or the environment

Classification according to 67/548/EEC (EU-DSD)
This mixture is not classified as dangerous to humans or the environment

Primary Hazard
None

2.2 Label Elements

There are no statutory labelling requirements under Directive 1999/45/EC, regulation 1272/2008 and regulation 453/2012.

2.3 Other Hazards

Mixture not classed as PBT or vPvB

3. COMPOSITION/INFORMATION ON INGREDIENTS

The material is a complex magnesium aluminium iron silicate. A heat processed inorganic, inert material that does not
Exfoliated Vermiculite

constitute any known health hazard and is non-combustible.

3.2 Mixtures
There are no ingredients present within the current knowledge of the supplier at applicable concentrations that are classified as hazardous to health or the environment.

4. FIRST AID MEASURES
4.1 Description of first aid measures

4.1.1 Inhalation
If symptoms arise remove from source of exposure to fresh air; seek medical attention if symptoms persist or develop

4.1.2 Skin & Eye exposure
Skin: Drench immediately with water. Remove any contaminated clothing and launder before re-use. Obtain medical attention if symptoms develop or persist.
Eyes: Immediately rinse with clean water for 15 minutes. Obtain medical attention if symptoms develop or persist.

4.1.3 Ingestion
Not harmful. Exfoliated Vermiculite is used as a carrier in Animal Feedstuffs. Wash out mouth with water and give water to drink. Obtain medical attention if symptoms develop or persist.

4.2 Most important symptoms and effects, both acute and delayed
Information not available

4.3 Indication of any immediate medical attention and special treatment needed.
Information not available

5. FIRE-FIGHTING MEASURES
5.1 Extinguishing media
Exfoliated Vermiculite is a non-combustible material, use an extinguishing agent suitable for the surrounding fire

5.2 Special Hazards arising from the substance or mixture
Vermiculite is classified for reaction to fire as Class A1 in Decision 96/603/EC as amended by Decision 2000/605/EN. Will not give off noxious fumes. Fusion point 1330deg C. However, when used as an absorbent with flammable liquids, Exfoliated Vermiculite will not render the fluids non-flammable and saturated absorbent containing flammable spillage should be removed and disposed of promptly.

5.3 Advice for fire-fighters
Isolate the scene by removing all persons from the fire location. Fire fighters should wear appropriate self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode. Clothing for firefighters conforming to EN 469 should be worn

6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures
The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.
- Ensure adequate ventilation
Use personal protective equipment,
- Gloves
- Eye protection
- Suitable respirator if dust is generated during handling

6.2 Environmental Precautions
Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) in large quantities contact local water authority and inform the Environment Agency

6.3 Methods and material for containment and cleaning up
Sweep spilled substances into covered containers for disposal or re-use: if appropriate moisten first to prevent dusting (extra personal protection P1 filter respirator for inert particles). Dispose of by a licenced waste disposal contractor.

6.4 Reference to other sections
See also section 8

7. HANDLING AND STORAGE

7.1 Precaution for safe handling
Exfoliated Vermiculite

Use suitable handling procedures to minimise dust nuisance. If dust level is excessive, wear goggles and dust masks (to BS4275). Depending on application, can be dampened in bag before use to minimise dust. Waste material should be suitably contained for disposal to avoid wind-borne nuisance dust.

Wash Hands thoroughly after handling. Avoid breathing dust
Do not eat, drink or smoke when using this product

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials and strong oxidising agents.

7.3 Specific end use(s)
No Information available

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
Occupational Exposure Limit - LTEL: 10 mg/M3 (Inh), 1 mg/M3 (Resp). 8 hr TWA. (Inh = Inhalable Dust. Resp = Respirable dust)
Biological Exposure Limited: - Not applicable.

8.2 Exposure controls
The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.

Primary Hazard is considered to be dust. Use in a well-ventilated area and wear a dust mask if visible dust is being generated.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Typical Chemical Analysis:

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>SILICA</td>
<td>(as Si02)</td>
<td>37-40%</td>
</tr>
<tr>
<td>MAGNESIUM</td>
<td>(as MgO)</td>
<td>21-29%</td>
</tr>
<tr>
<td>ALUMINIUM</td>
<td>(as Al2O3)</td>
<td>6-10%</td>
</tr>
<tr>
<td>FERRIC OXIDE</td>
<td>(as Fe2O3)</td>
<td>4-8%</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>(as K2O)</td>
<td>3-6%</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>(as CaO)</td>
<td>1-4%</td>
</tr>
<tr>
<td>CARBON</td>
<td>(as C02)</td>
<td>0-2%</td>
</tr>
</tbody>
</table>

Physical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Golden Brown</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>pH</td>
<td>7-10</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point Range</td>
<td>1330 deg C</td>
</tr>
<tr>
<td>Flammability</td>
<td>Non Combustible</td>
</tr>
<tr>
<td>Auton Flammability</td>
<td>Non Flammable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Oxidising Properties</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Relative Density 2.5</td>
<td>(Typical Bulk Density loose 50 - 110 (kg/M3)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water Insoluble</td>
</tr>
<tr>
<td>Partition co-efficient</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Miscibility</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

9.2 Other Information
No other relevant information available

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10. STABILITY AND REACTIVITY

10.1 Reactivity
No specific information available

10.2 Chemical Stability
Stable under normal conditions
Exfoliated Vermiculite

10.3 Possibility of hazardous reactions
No specific hazardous reactions known.

10.4 Conditions to avoid
'Material to avoid is quoted as being acids. It has been shown that prolonged contact with acids particularly at elevated temperatures does affect exfoliated Vermiculite, so this statement is technically correct. However for many years Vermiculite has been used without problem as a safe and effective material for the packaging of a wide range of acids and other hazardous chemicals. Spillages of acids into the Vermiculite packaging material are quickly and safely contained with only minor degradation of the Vermiculite, no hazardous reaction products are released from the Vermiculite during this process. Appropriate precautions however should be taken when handling all packaging material that have been contaminated with any in transit seepage of hazardous materials. Also, direct contact with ammonium Bifluoride and hydrofluoric acids must be avoided.

10.5 Incompatible materials
Acids* (see 10.4)

10.6 Hazardous decomposition products
Under normal conditions of storage and use hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards if any are given in section 3

Chronic Effects: None Known.

No toxic effect known including sensitisation, narcosis or carcinogenicity.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Mixture not classified as harmful to aquatic life.

12.2 Persistence and degradability
No specific information available

12.3 Bio accumulative potential
No specific information available

12.4 Mobility in soil
No specific information available

12.5 Results of PBT and vPvB
Not classified

12.6 Other adverse effects
No specific information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods
Disposal method in accordance with all applicable national environment laws and regulations.

14. TRANSPORT INFORMATION

14.1 UN number: Product is unclassified for transport

14.2 UN proper shipping name: Product is unclassified for transport

14.3 Transport hazard Product is unclassified for transport

14.4 Packing group: Product is unclassified for transport

14.5 Environmental hazards: Product is unclassified for transport

14.6 Special precautions for user: No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
Applicable for Maritime bulk transport only. Check with carrier.
Exfoliated Vermiculite

15. Regulatory Information

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

15.2 Chemical Safety Assessment
CSA not undertaken for this mixture

16. Other Information

SDS information:

THE INFORMATION GIVEN HEREIN IS, TO THE BEST OF OUR KNOWLEDGE, CORRECT AND IS PRESENTED IN GOOD FAITH BUT NO WARRANTY, EXPRESSED OR IMPLIED IS GIVEN.

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