

PERLITE

MATERIAL SAFETY DATA SHEET

In compliance with Reg (EC)N° 1907 /2006 Tile IV / Annex II

L928A

Issue / Revision Date April 2011 Revision number 16

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY

Material Trade Name	Expanded Perlite
Reach Registration N°	Excepted according to article 2 §(7)
Substance Identification	
Product Name	Expanded Perlite
Product Trivia Name	PERLITE
CAS Number	93763-70-3
Company	William Sinclair Horticulture Ltd, Silvaperl Division,
Address	Albion Works Ropery Road Gainsborough Lincs DN21 2QB
Tel No	01427 610160
Responsible person for SDS in EU	Lesley.joy@william-sinclair.co.uk
Emergency telephone No	Direct dial +44 (0) 1427 675092

Substance Use

Animal Feeds	Lightweight Concretes and Screeds Fireproofing
Back Fill For Firebacks.	Liquid Wastes Adsorbent :- Oils, Acids, Alkalis,
Chimney Lining.	Nuclear Residues & Toxic Chemicals
Cryogenic Insulation	Loose Fill Insulation.
Filtration	Pipe and Duct Insulation.
Fireplace Manufacture	Plasters and Mortars
High & Low Temperature Insulation.	Refractory Applications.
Horticulture.	

2. HAZARD IDENTIFICATION

As Perlite is a naturally occurring rock, small variable amount of crystalline silica may be present. The proportion of quartz in the respirable fraction is very low. Crystalline Silica (quartz) is harmful by inhalation over a prolonged period of time. However, the proportion on quartz is so low that this product does not present a significant hazard to health or the environment provided that the standards of industrial hygiene outlined in this data sheet are followed.

3. COMPOSITION

Amorphous mineral rock comprising of sodium potassium aluminium silicates of variable composition – chemically inert. A heat processed inorganic, inert material that does not constitute any known health hazard and is non-combustible.

Components

SILICA (as SiO ₂)	71 – 75 %
ALUMINUM (as Al ₂ O ₃)	12 – 18 %
POTASSIUM (as K ₂ O)	2 – 5 %
SODIUM (as Na ₂ O)	2 – 5 %
CALCIUM (as CaO)	0.5 – 2 %
IRON (as Fe ₂ O ₃)	0.2 – 1.5 %
MAGNESIUM (as MgO)	0.03 – 0.5%
SULPHUR (as S ₂ O ₃)	0 – 0.2%
FERROUS (as FeO)	0 – 0.1%
CHROMIUM (as Cr ₂ O ₃)	0 – 0.1%

BARIUM (as BaO)	0 – 0.05%
TOTAL CHLORIDES	trace – 0.2 %
TOTAL SULPHATES	NIL
ORGANIC MATTER	NIL

4. FIRST AID MEASURE

Inhalation	Non- toxic No evidence of causing pneumoconiosis or silicosis. Can cause irritation of throat if contact prolonged – more to fresh air and rest, if recovery not prompt obtain prompt medical attention.
Prevention	Avoid inhalation of fine dust and must wear a mask.
Skin Contact	Non-toxic, but in some operations may cause skin dryness or abrasion. In these cases wear protective gloves. For all operations, normal hygiene rules apply, wash hands before meals.
Eye Contact	Rinse with soft water for at least 15 minutes. If continues to be sore seek medical treatment.
Ingestion	Non-toxic and non-hazardous low oral toxicity. Rinse mouth and drink water.

5. FIRE FIGHTING

Non-combustible	Will not give off noxious fumes. Fusion point 1280-1350Deg C. However when used as an absorbent with flammable liquids, Perlite will not render the fluids non-flammable and therefore saturated absorbent Perlite containing flammable spillage should be removed and disposed of promptly.
Suitable Extinguishers	Expanded Perlite is a non-combustible material
Unsuitable extinguishers	Not applicable.
Hazardous Decomposition	Not applicable.
Special Procedures	In case of fire in the surroundings all Extinguisher agents allowed Not applicable.
Reaction to Fire	Perlite is classified for reaction to fire as Class A1 in decision 96/603/EC as amended by Decision 2000/605/EN

6. ACCIDENTAL RELEASE MEASURES (Spillage)

Sweep spilled substances into covered containers: if appropriate moisten first to prevent dusting (extra personal protection FFP2 filter respirator for inert particles)

7. HANDLING AND STORAGE

Handling	Use suitable handling procedures to minimise dust nuisance. If dust level is excessive, wear goggles and dust masks (to BS4275) store under cover in dry area. 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.
Storage	Under cover in a dry area.

8. EXPOSURE CONTROLS / PERSONNEL PROTECTION

Workplace Exposure Limit - LTEL: 10 mg/M3 (Inh), 4 mg/M3 (Resp). 8 hr TWA. (Inh = Inhalable Dust. Resp = Respirable dust)

Biological Exposure Limited:- Not applicable.

Personnel Protective Equipment - use a nuisance Dust Mask when OEL is likely to be exceeded.

Use in well ventilated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical properties

COLOUR	White (when expanded)
REFRACTIVE INDEX	1.5
FREE MOISTURE (MAX)	0.5%
pH OF WATER SLURRY	6.7 – 7.5
BULK DENSITY (raw ore graded)	1000 – 1500kg/m3
BULK DENSITY (loose weight) Expanded	35 – 120kg/m3
PARTICLE SIZES EXPANDED	75MICRON – 6MM
SOFTENING POINT	890 – 1100 C
FUSION POINT	1280 – 1350 C
FIRE RESISTANCE	NON COMBUSTIBLE

SPECIFIC HEAT	0.2 CAL/G C (837J/KGK)
THERMAL CONDUCTIVITY (AVE)	0.05W/M C
SPECIFIC GRAVITY	2.2 – 2.4
LOSS OF IGNITION	1.5 – 3.0 %
REFRACTIVE INDEX	1.47

10. STABILITY & REACTIVITY

Stability	Stable
Hazardous Polymerisation	Will not Occur
Material to Avoid	Acids (*See Footnote)
Hazardous Decomposition Products	None known

11. TOXICOLOGICAL INFORMATION

Chronic Effects	None Known
No toxic effect known including sensitisation, narcosis or carcinogenicity	

12. ECOLOGICAL INFORMATION

No Adverse Environmental Effects Foreseen
 Not Readily Biodegradable
 Not expected to Bioaccumulate
 Aquatic Environment - Not Expected to be Toxic, essentially insoluble in water
 Ozone Layer - No implication known.

13. DISPOSAL CONSIDERATIONS

Dispose of in Accordance with Local Authority Requirements, Landfill.

14. TRANSPORT INFORMATION

UN Number - Not applicable
 IMDG - Not dangerous goods
 IATA - Not dangerous goods
 ADR/RID - Not dangerous goods
 Group:- n/a Item:- n/a

No special precautions are required as Perlite is not classified as dangerous.

15. REGULATORY INFORMATION

UK Health and Safety At Work Act 1974
 UK Environmental Protection Act 1990
 The Control of Substances Hazardous to Health Regulations 2002 (as amended)
 ILO data sheet ICSC 1141

16. OTHER INFORMATION

Compiled According to the REACH and Classification, Labelling and Packaging (CLP) Regulations.

Re Stability & Reactivity. Material to avoid is quoted as being acids. It has been shown that prolonged contact with acids particularly at elevated temperatures does affect expanded Perlite, also direct contact with Ammonium Bifluoride and Hydrofluoric acids must be avoided, so this statement is technically correct. However for many years Perlite has been used without problem as an absorbent carrier for sucking up a wide range of dilute acids and other hazardous chemicals.

This data sheet is compiled to be of assistance but without guarantee and is, to the best of the company's knowledge and belief, correct. Users are responsible for safe working.