

**Material Trade Name** Vermiculite (Exfoliated Vermiculite)

**Issue / Revision Date** April 2004

**Revision number** 9

## **1 IDENTIFICATION OF SUBSTANCE AND COMPANY**

### **Substance Identification**

Exfoliated Vermiculite  
Cas. no. 1318-00-9

### **Substance Use**

Acoustic insulation.  
Pipe and duct insulation.  
Plasters and fireproofing.  
Friction Linings.  
Packaging  
Horticulture.  
Refractory Applications.

Lightweight concretes and screeds.  
High Temperature Insulation.  
Chimney Lining.  
Back fill for Firebacks.  
Loose fill insulation.  
Liquid wastes absorbent :- Oils, Acids, Alkalis,  
Nuclear Residues & Toxic chemicals .

### **Company Identification**

Silvaperl Ltd Albion Works Ropery Road Gainsborough Lincs DN21 2QB  
01427 610160

## **2 COMPOSITION**

The material is a complex magnesium aluminium iron silicate. A heat processed inorganic, inert material that does not constitute any known health hazard and is non-combustible.

## **3 HAZARD IDENTIFICATION**

Not classified as hazardous under The CHIP regulations 1994.  
Hazard symbols - none required.

#### **4 FIRST AID MEASURE**

Inhalation: Move to fresh air and rest, if recovery is not rapid obtain prompt medical attention.  
Skin Contact: Rinse contaminated area with water (non irritant).  
Eye Contact: Rinse with soft water for at least 15 minutes.  
Ingestion: Rinse mouth and drink water, not harmful.  
Exfoliated Vermiculite is used as a carrier in Animal Feedstuffs.

#### **5 FIRE FIGHTING**

Non-combustible: 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.  
Suitable Extinguishers: Exfoliated Vermiculite is a non-combustible material.  
Unsuitable Extinguishers: Not applicable.  
Hazardous Decomposition: Not applicable  
Special Procedures: Not applicable.

#### **6 ACCIDENTAL RELEASE MEASURES (Spillage)**

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

#### **7 HANDLING AND STORAGE**

Handling Use suitable handling procedures to minimise nuisance dust. If dust levels become excessive wear goggles and dust masks to BS4275. When wet exfoliated Vermiculite becomes slippery.  
Storage Under cover in a dry area.

#### **8 EXPOSURE CONTROLS / PERSONNEL PROTECTION**

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.  
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**

### **Typical Chemical Analysis**

#### PHYSICAL PROPERTIES

SILICA	(as SiO <sub>2</sub> )	37-40%
MAGNESIUM	(as MgO)	21-29%
ALUMINUM	(as Al <sub>2</sub> O <sub>3</sub> )	6-10%
FERRIC OXIDE	(as Fe <sub>2</sub> O <sub>3</sub> )	4-8%
POTASSIUM	(as K <sub>2</sub> O)	3-6%
CALCIUM	(as CaO)	1-4%
CARBON	(as CO <sub>2</sub> )	0-2%
Appearance	Golden Brown	
Odour	Odourless	
pH	7-10	
Boiling Point	Not applicable	
Flash Point	Not applicable	
Melting Point Range	1330 deg C	
Flammability	Non Combustible	
Auton Flammability	Non Flammable	
Explosive Properties	Not Applicable	
Oxidising Properties	Not Applicable	
Vapour Pressure	Not Applicable	
Relative Density	2.5 (Typical Bulk Density loose 50 - 110 (kg/M <sup>3</sup> ))	
Solubility	Water Insoluble	
Partition co-efficient	Not Applicable	
Miscibility	Not Applicable	
Vapour Density	Not Applicable	
Evaporation Rate	Not Applicable	
Viscosity	Not Applicable	

## **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  
Ozone Layer - No implication known.

## **13 DISPOSAL CONSIDERATIONS**

Dispose of in Accordance with Local Authority Requirements, Landfill.

## **14 TRANSPORT INFORMATION**

UN/SI Number	n/a
IMO	n/a
IATA/ICAO	n/a
ADR/RID	n/a
Packing Group	n/a
Item	n/a
Hazchem / Kemler Code	n/a
Marine Pollutant	No
Transport Name	UK Road: Non-Hazardous

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

## **15 REGULATORY INFORMATION**

UK Health and Safety At Work Act 1974  
UK Environmental Protection Act 1990  
HSE Guidance Note EH26(Occupational Skin Diseases - Health and Safety Precautions)  
HSE Guidance Note EH40 - occupational exposure limits.  
UK Control of Substances Hazardous to Health Regulations 1988  
ILO data sheet ICSC 1141  
Construction Industry Advisory Committee Hazard Information Sheet One

## **16 OTHER INFORMATION**

Compiled According to the CHIP Regulations 2002. (Directive 2001/158/EC).

\* 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 effect 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.

Spillage's 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

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.