MATERIAL SAFETY DATA SHEET

Version 2 05.03.15

EXFOLIATED VERMICULITE

All Grades

This safety data sheet conforms to Regulation (EC) No. 1272/2008.

1.0 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND COMPANY

1.1 SUBSTANCE/PREPARATION

EXFOLIATED VERMICULITE (ALL GRADES)

1.2 RELEVANT IDENTIFIED USES OF SUBSTANCE

In the expanded state vermiculite is used across many industries which include but are not limited to:
insulation material in construction, insulation material in lightweight aggregates, factory made insulation, refractory mouldings and shapes, fire resistant boards, functional additive in friction linings, growing media additive and soil improver.

1.3 DETAILS OF SUPPLIER OF SAFETY DATA SHEET

Dupré Minerals Limited
Spencroft Road
Newcastle-under-Lyme
Staffordshire ST5 9JE

1.4 EMERGENCY TELEPHONE NUMBER

01782 383000

2.0 HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE / MIXTURE

2.1.1 Classification according to Regulation (EC) No 1272/2008

Not Classified

2.1.1 Classification according to directive 67/548/EEC

Not Classified

2.2 LABEL ELEMENTS

Not Classified

No Signal Word

2.3 OTHER HAZARDS

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.2 COMPOSITION OF MIXTURES

Vermiculite is the mineralogical name given to a group of hydrated laminar magnesium-aluminium-iron silicates which resemble mica in appearance. When subjected to heat vermiculite exfoliates or expands into worm like particles.

Chemical Name	EC No.	CAS No.	% Weight	REACH Registration No.	CLP classification according to Regulation (EC) 1272/	2008DAD classification according to Directive 67/548/EEC
Vermiculite	310-127-6	1318-00-09	95 – 98%		Not Classified	Not Classified
Apatite	-	-	<3%		Not Classified	Not Classified
Mica phlogopite	310-127-6	12001-26-2	<3%		Not Classified	Not Classified
Diopside	-	14483-19-3	<3%		Not Classified	Not Classified
Alpha cristobalite & tridymite	238-455-4	14464-46-1	<0.1%		STOT RE1	Xn:R48/20 if respirable
Alpha quartz	238-878-4	14808-60-7	0.01 – 0.05%		STOT RE1	Xn:R48/20 if respirable

4.0 FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Eye: Immediately flush with clean water or eye wash solution, holding the eyelids apart for at least 15 minutes. Seek medical attention if irritation persists.

Skin: Harmless and non-irritant.

Inhalation: Remove exposed person to fresh air, keep warm and at rest.

Ingestion: No first aid required as ingestion is not anticipated.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No acute and delayed symptoms and effects are observed.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEEDED

Treat symptomatically, no special antidote required.

5.0 FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Non combustible product but the packaging and surrounding materials may be combustible. No limitations on extinguishing media.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

No specific fire or explosion hazard.

5.3 ADVICE FOR FIRE FIGHTERS

No specific fire fighting equipment is required. Use an extinguishing agent suitable for the surrounding fire.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protective equipment in compliance with national legislation.

Prevent formation of dust if possible.

Respiratory equipment should be worn if dust is created.

Provide adequate ventilation.

6.2 ENVIRONMENTAL PRECAUTIONS

No special precautions.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid dry sweeping, dust creation and wind dispersal. Collect using a special vacuum cleaner with particle filter. Transfer to a suitable labelled container for disposal according to local regulations. If a vacuum system is not available only wet clean up methods should be used.

6.4 REFERENCE TO OTHER SECTIONS

Suitable equipment for eye/face, skin and respiratory protection is quoted in section 8.

Suitable methods for disposal are given in section 13.

7.0 HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Remove contaminated clothing and protective equipment before entering eating areas.

Avoid dust generation.

Do not breathe dust/fume/gas/mist/vapours/spray.

The use of engineering measures (e.g. local dust extraction) is recommended to provide effective dust control in order to ensure compliance with the current Occupational Exposure Limits.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep in original packaging, in dry conditions and store in a way to prevent any accidental damage and creation of dust. Avoid wind dispersal.

7.3 SPECIFIC END USE

This product has many uses across different industries, but is primarily used as follows:

Construction and light weight aggregates as an insulation material, factory made insulation and fire resistant boards, as a functional additive in automotive friction linings and as an additive in growing media and soil improver. Use of this product is restricted to “professional user”. Please refer to section 8 and the relevant exposure scenario.

8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

C. A.S. No.	Substance	WEL TWA – 8Hrs
1318-00-09	Vermiculite	10mg/m³ (total dust)
14808-60-7	Quartz	0.1mg/m³ (respirable)

8.2 EXPOSURE CONTROLS

Respiratory: In cases of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment that complies with European or national legislation i.e. Type FFP2. If user operations generate dust use ventilation to keep exposure to airborne particles below exposure limit. Remove and wash soiled clothing.

Hands: Protective gloves if required and wash hands at the end of each work session.

Eyes:	Goggles.
Skin:	Skin protected compounds recommended for workers who suffer from dermatitis or sensitive skin.
General:	Protective overalls. Soiled clothing must be adequately laundered to avoid becoming a dust source.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Golden brown flakes
Odour:	Odourless
pH:	8 – 9 (40g/L water @20°C)
Boiling point:	Not applicable
Melting point:	>1330°C
Flash point:	Not applicable
Flammability:	Not flammable
Explosive properties:	Not applicable
Relative density:	2.5
Solubility:	Insoluble in water and in organic solvents. Soluble in strong mineral acids.

9.2 OTHER INFORMATION

None available

10.0 STABILITY AND REACTIVITY

10.1 REACTIVITY

Inert not reactive.

10.2 CHEMICAL STABILITY

Chemically stable.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

If used as recommended no hazardous reactions are to be expected.

10.4 CONDITIONS TO AVOID

Not relevant

10.5 INCOMPATIBLE MATERIALS

No particular incompatibility.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Not relevant.

11.0 TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

11.1.1 Toxicological Data

Acute Toxicity

Classification criteria are not met.

Ingestion

No known hazards from ingestion.

Inhalation

Dust may cause minor transient respiratory irritation at high concentrations.

Skin Contact

Skin Irritation is not anticipated.

Eye Contact

Eye irritation is not anticipated.

Target Organs

With the concentrations of quartz being less than 0.05% in this product overexposure to quartz is not expected at the given concentrations present, but quartz / cristobalite is a confirmed human carcinogen. Repeated inhalation of quartz over time may cause fibrotic lung disease and respiratory cancer.

12.0 ECOLOGICAL INFORMATION

12.1 TOXICITY

No data available

12.2 PERSISTANCE AND DEGRADIBILITY

This product is not readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL

Not applicable.

12.4 MOBILITY IN SOIL

Negligible.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

This mixture is not classified as PBT or vPvB by current EU criteria.

12.6 OTHER ADVERSE EFFECTS

By intended use and observance of regulations / advices for storage and handling no adverse effects are expected.

13.0 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

This product is not classified as hazardous waste under the EC Directive 2008/98/EC or as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No.894. Dispose of according to national / regional legislation.

14.0 TRANSPORT INFORMATION

14.1 UN-NUMBER

Not applicable.

14.2 UN PROPER SHIPPING NAME

Not applicable.

14.3 TRANSPORT HAZARD CLASSES

Not classified.

14.4 PACKING GROUP

Not classified.

14.5 ENVIRONEMENTAL HAZARDS

Not classified.

14.6 SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not applicable.

15.0 REGULATORY INFORMATION

15.1 EU REGULATIONS

Regulation (EC) No. 2037/2000 (substances that deplete ozone)
Not applicable

Regulation (EC) No. 850/2004 (persistent organic pollutants)
Not applicable

Regulation (EC) No.689/2008 (concerning the export and import of dangerous chemicals)
Not applicable

Regulation (EC) No. 1272/2008 (classification, Labelling and Packaging of substances and mixtures)
Not applicable

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)
Vermiculite is a naturally occurring product that has not been chemically modified. Article 2 (7) (b) and Annex V paragraph 7, of the REACH regulations exempts this material from REACH registration.

Source of Reference for OELs

HSE EH40 for Workplace Exposure Limits

15.2 CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out by the supplier.

16.0 OTHER INFORMATION

(i) **Indication of changes**
Changes made to data sheet to comply with changes to regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.

This MSDS was last reviewed: February 2012.

(ii) **Abbreviations and acronyms**
WEL TWA 8 HRS – Workplace Exposure Limit Time Weighted Average – 8 Hours

(iii) **Key Literature References and Sources of Data**
Guidance Note EH40 Occupational Exposure Limits is published annually by the Health and Safety Executive. The latest

relevant limits should be observed.

HS(G) 37 1993 "An introduction to Local Exhaust Ventilation" and Guidance Note EH44 2013 "Dust in the Work Place" are both available from HM Stationery Office.

Advice on respiratory protective equipment is also given in BS EN 529:200.

EN166 : 2002 Personal Eye Protection.

(iv) **Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 CLP**
This material is not classified under this regulation with the respirable quartz content being <0.0001% of the product.

(v) **Relevant R-phrases and / or H-statements**
Xn: R48/20 Harmful: Danger of serious damage to health by prolonged inhalation.

(vi) **Training Advice**
All employees should be given adequate training in the proper use and handling of this product and any precautions and protective equipment required under applicable regulations

Such information given on this Material Safety Data Sheet is to the best of Dupré Minerals' knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy itself as to the suitability and completeness of such information for their own particular use.

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