Material Safety Data Sheet

ISSUED: 1 June 2017

IDENTIFICATION

Product Name: Vero Vermiculite
Applications: In construction, In horticulture, Liquid spillage absorbent, Packaging void fill
Grades: Exfoliated vermiculite in Large, Medium, Fine, Super fine, Micron grades
Appearance: Bronze-brown granules

COMPOSITION

Vero vermiculite is the exfoliated product obtain by heating local vermiculite ore. The major constituent (85 – 95%) of the ore is a hydrous aluminium-magnesium-iron silicate of the Mica mineral family, with composition:

\[ \text{Mg,Fe}^{2+},\text{Al})_3(\text{Al,Si})\text{O}_{10}(\text{OH})_2 \cdot 4\text{H}_2\text{O}. \]

Minor constituents (< 5% respectively) of the vermiculite ore are:
- Apatite \( \text{Ca}_5(\text{F,Cl})(\text{PO}_4)_3 \)
- Mica Phlogopite \( \text{K}_2(\text{Mg,Fe}^{2+})_6(\text{Si}_6\text{Al}_2)\text{O}_{20}(\text{OH,F})_4 \)
- Diopside \( \text{Ca}(\text{Mg,Fe}^{2+})\text{Si}_2\text{O}_6 \)
- Alpha Quartz \( \text{SiO}_2 \) (0.01 – 0.05%)

HAZARD IDENTIFICATION

Symptoms for potential route of exposure:
Ingestion: N/A
Inhalation: Dust may result in respiratory irritation
Eye: May cause discomfort due to particulate nature
Skin: Not expected to be a skin irritant

Health effects or risks from exposure:
Acute: None
Chronic: Excessive inhalation over long period may cause harmful irritation
Hazard id: Vermiculite CAS number 1318-00-9
Quartz CAS number 14808-60-7
FIRST AID

Inhalation:  Induced coughing
Eye:         Irrigate with copious quantities of running water for 10 minutes. See medical doctor if particles are still lodged in eyes.
Skin:        Harmless
Advice to doctor:  Treat symptomatically

FIRE FIGHTING MEASURES

Exfoliated vermiculite is inorganic, fully oxidized, non-flammable and non-combustible.

ACCIDENTAL RELEASE

Exit area of release and, if possible, prevent flakes from entering the eyes and do not inhale dust. Minimum required personal protective equipment when re-entering area – Use eye protection to prevent particles from entering eyes. If dust levels are high – use an appropriate dust mask. Spill response – Vacuum clean or sweep material, use dust mask and eye protection.

HANDLING AND STORAGE

Not defined as a Dangerous Good. Store in a dry place.

EXPOSURE CONTROL/PERSONNEL PROTECTION

Ventilation:    Ventilate enclosed areas to minimise air-borne dust concentration.
Respiratory:    Avoid dust creation and wear dust mask in the event of dust.
Eyes:          Wear eye protection in windy or other conditions that lead to particles or dust becoming air-borne.

PHYSICAL AND CHEMICAL PROPERTIES

Odourless, non-abrasive, non-irritant, lightweight when dry, bronze-brown spongy flakes. Insoluble in water and organic solvents. Insoluble in most acidic solutions, slightly soluble in strong mineral acids, soluble in Hydrofluoric acid.

pH of water suspension: 8 to 9. (30g/l @ 20 - 25 ºC)
Flakes further delaminate at 1350 ºC and start binding together at sintering temperatures of between 1 500 ºC and 1 600 ºC. The decomposition temperature has not been determined.
Loose bulk densities range between 80 kg/m³ for large grade and 130 kg/m³ for micron grade. Non-flammable and non-smoke emitting, from ambient to sintering temperatures.

Vero Vermiculite (Pty) Ltd

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STABILITY AND REACTIVITY

Chemically stable.
Compatible with all substances except Hydrofluoric acid.
No conditions to avoid.

TOXICOLOGICAL INFORMATION

No determined acute toxic effects.

ECOLOGICAL INFORMATION

Non-toxic to aquatic- or land based life, including plants, fungi, animals, insects and soil organisms.

DISPOSAL CONSIDERATIONS

Can be disposed, without any special treatment, as non-toxic and inactive materials at approved landfill sites. Dispose of all wastes in accordance with national and local regulations.

TRANSPORT INFORMATION

Not regulated.

REGULATORY

Exfoliated vermiculite is not classified, by the EU CLP Regulation, as dangerous for supply and does not require labelling for information on safety and risk.
The EU regulation is aligned to the Globally Harmonised System.

OTHER INFORMATION

The information contained in this Material Safety Data Sheet does not constitute an assessment of workplace risks.
All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequences thereof. It is the user's obligation to determine the conditions of safe use of the material, all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product.

In the case of an emergency: contact Fonnie Marais on +27 (0) 82 897 5183 or fonnie@vermiculite.co.za

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