SAFETY DATA SHEET
In compliance with REACH Regulation (EC) N° 1907/2006 Title IV / Annex II, and ISO 11014 format.

Agra-vermiculite

Version: 01
Revision date: 27/01/2011

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

1. 1. Identification of the substance or preparation

Name : Naturally occurring Vermiculite
REACH Registration N°: Exempted according to Article 2 § (7)
Trade Name : Agra-vermiculite
Chemical name : Vermiculite
Synonym : Jefferisite or Vaalite

1.2. Use of the substance or preparation

Crude vermiculite is normally heat expanded prior to use.

1.2.1. Agra-vermiculite is widely used as an additive in growing media and as a soil improver.
1.2.2. Usage as a seed cover or as a seed medium.
1.2.3. Agra-vermiculite is used as a bulb twin scaling medium.
1.2.4. Binder or anticaking material, additive for animal feeding.

1.3. Company/undertaking identification

Name : Isoleermaterialenindustrie Pull B.V.
Address : Utrechtsestraatweg 222, 3911 TX Rhenen, The Netherlands
Phone N° : +31 318 471001
Fax N° : +31 318 472088
E-mail : info@pullrhenen.nl

1.4. Emergency telephone

Emergency telephone number: +31 318 471001

Available outside office hours?
☐ Yes ☑ No

2. HAZARDS IDENTIFICATION

Agra-vermiculite does not meet the criteria for classification as dangerous as defined in Directive 67/548 EEC and its amendments.

Symptoms of overexposure for each potential route of exposure:

- Inhalation: Coughing. Excessive inhalation over long period may cause irritation; use mask suitable for nuisance dust.
- Contact with skin or eyes: Possible eye irritation from dust particles; wear eye protection
- Absorbed through skin: N/A
- Swallowed: N/A
- Not acute health effects or risks from exposure
- No chronic health effect

3. COMPOSITION / INFORMATION ON INGREDIENTS

(Agra-)vermiculite is the mineralogical name given to hydrated laminar magnesium-aluminum-iron silicates, which resemble mica in appearance. When subject to heat, crude vermiculite has the unusual property of exfoliating or expanding into worm-like particles (the name vermiculite is derived from the Latin 'vermiculare', meaning to breed worms.)

Chemical Class: PHYLLOSILICATES

Components

Name	Chemical formula	Amount	CAS No	EINECS N°	EU Classification
Agra-Vermiculite	$(Mg,Fe^{2+}, Al)_3$ $(Al,Si))O_{10}$ $(OH)_2$ 4H2O	85 -95%	1318-00-09	310-127-6	No Classification
Apatite	$Ca_5(F,Cl)$ $(PO_4)_3$	<5%	---	N-A	---
Mica phlogopite	$K2(Mg,Fe2^+)_6$ $(Si_6Al_2)O_{20}$ $(OH, F)_4$	<5%	12001-26-2	310-127-6	---
Diopside	$Ca(Mg, Fe^{2+})Si_2O_6$	<5%	14483-19-3	N-A	---
Alpha cristobalite & Tridymite	SiO_2	<0.1%	14464-46-1	238-455-4	EHS Hazard XN:R48/20 If respirable
Alpha Quartz	SiO_2	0.01 – 0.05%	14808-60-7	238-878-4	EHS Hazard XN:R48/20 If respirable

4. FIRST AID MEASURES

Eye contact:	If substance has got into the eyes, immediately wash out with plenty of water. See medical doctor if particles are still lodged in eye.
Skin contact:	Harmelss & non-irritant.
Ingestion:	Do not induce vomitting. Wash out mouth with water and give plenty of water to drink. Obtain medical attention
Inhalation:	Induce coughing.

5. FIRE-FIGHTING MEASURES

Flash point: Agra-vermiculite is an inorganic, fully oxidized, non-flammable and non-combustible material.

6. ACCIDENTAL RELEASE MEASURES

Use: Area should be well ventilated. Prevent flakes from entering the eyes. Do not inhale dust.

Personal protective equipment (minimum required): Use eye protection to prevent particles from entering eye. If dust levels are high, use a dust mask (FFP2).

Spill response procedures: (include employee protection measures) - Vacuum clean or sweep material, use dust masks suitable for nuisance dust (FFP2) and eye protection.

7. HANDLING AND STORAGE

7.1. Handling

Ventilation and engineering controls: maintain dust level below TLV.
Respiratory protection (type): wear masks suitable for nuisance dust (FFP2).
Eye protection (type): wear protective goggles or similar.

7.2. Storage

Maintain good housekeeping to avoid transient dust.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure limit values

Respect regulatory provisions for dust (total and respirable).
ACGIH TLV for vermiculite (TD): 10 mg/m^3 - (RD): 3 mg/m^3, Other - 30 mppcf

8.2. Exposure controls

8.2.1. Occupational Exposure Controls

Provide appropriate exhaust ventilation, engineering controls and filtering at the places where dust can be generated.

Respiratory protection: In case of prolonged exposure to dust wear a personal respirator in compliance with national legislation such as respirator or mask in compliance with EN149FFP2S
Eye protection (type): wear protective goggles or similar.
Wash hands before breaks and at the end of the workday. Remove and wash soiled clothing.

8.2.2. Environmental Exposure Controls
No special requirement.

9. PHYSICAL AND CHEMICAL PROPERTIES

Golden brown flakes – pH 8.5 to 9.5.
Insoluble in water.
Slightly-abrasive, non-irritant, reflecting & rot-proof.
Melting point: 1350°C (collapse and coalescence of the individual flakes begin at this temperature).
Specific gravity: 0,06 - 0,15 g/cm^3 (Water = 1).

10. STABILITY AND REACTIVITY

Stability Stable

11. TOXICOLOGICAL INFORMATION

11.1. Acute toxicity

Inhalation : No acute toxic effect.

Ingestion : No adverse effect.

Skin irritation data : Not irritant to skin.

Eye irritation data : Mild irritant to eyes from dust particles.

11.2. Chronic effects

Not mutagenic, not carcinogenic, not toxic to the reproductive system.

- Salmonella typhimurium mutagenicity: Not mutagenic at extract concentrations below 2 000 g/l.
- Frog (Xenopus leavis) embryo teratogenicity: Not teratogenic at extract concentrations below 1 000 g/l.

12. ECOLOGICAL INFORMATION

12.1. Eco toxicity

Evaluated at 50 g/l extract:

- Daphnia pulex lethality:48 h LC0 > 50 mg/l, 48 h LC50 > 50 mg/l.
- Algal (Selenastrum capricornutum) growth inhibition: 72 h EC0 > 50 mg/l, EC50 > 50 mg/l.
- Bacterial (Pseudomonas putida) growth inhibition: 6 h EC0 > 50 mg/l, 6 h EC50 > 50 mg/l.
- Frog (Xenopus laevis) embryo lethality: 48 h EC0 > 50 mg/l, 48 h EC50 > 50 mg/l.

Not persistent, not bio-accumulative.

13. DISPOSAL CONSIDERATIONS

Dispose in bulk or containers according to local dump requirements. No special treatment required.
Dispose of all wastes in accordance with national and local regulations.

14. TRANSPORT INFORMATION

Not regulated.
Hazard Symbols: none required.

15. REGULATORY INFORMATION

National legislation: not classified as hazardous under CHIP Regulations.
Material classified as non-hazardous.

16. OTHER INFORMATION

1) Compiles according to the CHIP Regulations 1994.
(Directive 91/155/EEC)
2) N/A = not applicable < = smaller or less than CAS = Chemical Abstract Services.
3) Further H & S data is available.

Liability
Such information is the best of Isoleermaterialenindustrie Pull B.V.'s knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made 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 uses.