

Perlite

SAFETY DATA SHEET

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

Version: 04

Revision date: 03/02/2022

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

1.1. Identification of the substance or preparation

Name : Naturally occurring Perlite
REACH Registration N°: Exempted according to Article 2 § (7)
CAS N° : 93763-70-3
Trade Name : Perlite
Synonym : -

1.2. Use of the substance or preparation

Crude perlite is normally heat expanded prior to use.

1.2.1. Agra-perlite 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-perlite is used in Holland as a bulb twin scaling medium.

1.2.4. Perlite is also used, mainly expanded, as a construction material for ceiling tiles, gypsum boards, lightweight concrete, plasters and mortars or as a loose fill product.

1.2.5. As a filter aid in food industry or for insulation, heat resistance and high temperature applications.

1.3. Company identification

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

1.4. Emergency telephone number

Emergency telephone number: +31 318 471001

Available outside office hours?

Yes

No

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The product does not meet the criteria for classification as hazardous according to EC Regulation 1272/2008 and EU Directive 67/548/EC as amended.

Depending on the handling and use (grinding, drying, bagging), airborne respirable dust may be generated. Dust contains respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are coughing and breathlessness. Occupational exposure to respirable dust should be monitored and controlled.

The product should be handled using methods and techniques that minimize or eliminate dust formation.

The product contains less than <0.7 % RCS (respirable crystalline silica) and does not need to be classified and labelled.

Classification EU 67/548/EC No classification.

Classification EU Reg. 1272/2008 No classification.

2.2 Label elements

Not applicable according to Regulation(EC) 1272/2008 and Directive 67/548/EEC.

2.3 Other hazards

This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH regulation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical nature:

Amorphous, hydrated glassy volcanic rock of rhyolitic composition. Main components are silicon oxide, aluminium oxide and alkali oxides (>90 wt%).

Composition

The product contains:

- Perlite, [CAS No. 93763-70-3] and other similar hydrated volcanic ashes ("pumicites")
- Crystalline silica (less than 0.7 % on average) in the form of quartz only, [CAS No. 14808-60-7], [EINECS No. 238-878-4].
- Traces of feldspar and mica/illite.

Typical Chemical Composition	
(on dry sample)	% wgt
SiO ₂	76.0±2.0
Al ₂ O ₃	12.5±1.5
Fe ₂ O ₃	1.2±0.3
MgO	0.25±0.15
CaO	1.4±0.4
Na ₂ O	4.5±1.0
K ₂ O	3.5±1.5
L.O.I. (due to combined water)	1.5±0.8

4. FIRST AID MEASURES

Eye contact:	If substance has gotten into the eyes, immediately wash out with plenty of water. See medical doctor if particles are still lodged in eye, no need for immediate medical attention.
Skin contact:	Harmless & non-irritant.
Ingestion:	Do not induce vomiting. Wash out mouth with water and give plenty of water to drink. Obtain medical attention.
Inhalation:	Induce coughing.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

It does not pose any restrictions on the extinguishing media to be used in cases of fire in its vicinity. Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

The material is not flammable and it does not support fire. No hazardous thermal decomposition products.

5.3. Advice for firefighters

Fire fighters should bear the PPEs designated for the area.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. In case of exposure to high level of airborne dust, wear a personal respirator and safety goggles in compliance with national legislation.

6.2 Environmental precautions

No special requirement. Wastes generated during application and spillage are not considered hazardous; dispose according to local legislation.

6.3 Methods and material for containment and cleaning up

Avoid dry sweeping and use vacuum cleaning system to prevent airborne dust formation. Wear breathing masks and safety goggles during cleaning up in compliance with national legislation.

6.4 Reference to other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

7.1. Handling

Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting.

If you require advice on safe handling techniques, please contact your supplier or check the Good Practice Guide referred to in section 16.

Advice on general occupational hygiene.

Avoid airborne dust generation and keep dust levels to minimum. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

7.2. Storage

Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

7.3 Specific end use(s)

If you require advice on specific uses, please contact your supplier or check the Good Practice Guide referred to in section 16.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Maintain personal exposure below occupational exposure limit for inhalable and respirable dust as dictated in the national legislation.

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures e.g. by isolating personnel from dusty areas. Remove and wash contaminated clothing.

8.2.2. Individual protection measures, such as personal protective equipment:

Respiratory protection: in case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European and national legislation.

Hand protection: appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

Eye protection : wear safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries.

Skin protection : normal work clothes. For hands see above.

8.2.3. Environmental Exposure Controls

Avoid wind dispersal.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White, graded material less than 7 mm depending on specifications
Odour	Odourless
pH-value	6.5 - 7.5 (10% solids in water suspension)
Boiling point/boiling range	Not applicable.
Melting point/melting range	1250-1350°C.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability	Not flammable.
Explosive limits	Non explosive (void of any chemical structures commonly associated with explosive properties).
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Specific density	2.2-2.4 g/cm ³
Bulk density	50 ± 200 kg/m ³
Solubility in water	Negligible.
Partition coefficient n-octanol/water	Not applicable.
Auto ignition temperature	Does not burn.
Decomposition temperature	Not applicable.
Below explosion limits	Not applicable.
Viscosity	Not applicable.
Oxidizing properties	No oxidizing properties (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material).

10. STABILITY AND REACTIVITY

10.1 Reactivity

Inert, not reactive.

10.2 Chemical stability

Chemically stable.

10.3 Possibility of hazardous reactions

No hazardous reactions.

10.4 Conditions to avoid

None in designated use.

10.5 Incompatible materials

Avoid storing together with materials that may be affected by dust.

10.6 Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

11.1. Acute toxicity

The product does not meet the criteria for classification as hazardous according to EC Regulation 1272/2008 and Directive 67/548/EC as amended.

The product contains less than , 0.7% w/w RCS (respirable crystalline silica)

Acute toxicity	Based on available data, the classification criteria are not met. Classification for acute toxicity is not warranted.
Skin corrosion/irritation	Not irritant to skin. Based on available data, the classification criteria are not met. Classification for corrosion/irritation is not warranted.
Serious eye damage/irritation	Mild irritant to eyes. Based on available data, the classification criteria are not met. Classification for serious eye damage/irritation is not warranted.
Respiratory or skin sensitisation	Based on experience in handling, Perlite may cause a mild irritation of the upper respiratory part and is not considered to be a skin sensitizer. Classification for respiration and sensitization is not warranted.
STOT-single exposure	Based on available data, the classification criteria are not met and classification for STOT-single exposure is not warranted.
STOT - repeated exposure	Based on available data, the classification criteria are not met and classification for STOT - repeated exposure is not warranted.
Germ cell mutagenicity	Based on available data, classification genotoxicity is not warranted.
Carcinogenicity	Based on available data, classification for carcinogenicity is not warranted.

Reproductive toxicity

Aspiration hazard

Based on available data, classification for reproductive toxicity is not warranted.

Based on experience in handling perlite, classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1. Eco toxicity

Based 96h bioassays the product is not toxic for *Vibrio fischery*, *Artemia franciscana* and *Sparus Aurata*. Based on field studies the product is not toxic for *Patella sp.* and *Monodonta sp.*

12.2 Persistence and degradability

Not relevant for inorganic substances.

12.3 Bioaccumulative potential

Not relevant for inorganic substances.

12.4 Mobility in soil

Negligible.

12.5 Results of PBT and vPvB assessment

Not relevant for inorganic substances.

12.6 Other adverse effects

No specific adverse effects are known.

13. DISPOSAL CONSIDERATIONS

The residues/unused product can be disposed in landfills following National and local regulations. Dispose in such a way to avoid dust generation. Where possible, recycling should be preferred to disposal.

Packaging: no specific requirements. In all cases dust formation from residues in the packaging should be avoided and suitable protection be assured.

14. TRANSPORT INFORMATION

The material is not classified as a dangerous substance and no restrictions apply for land/sea/air transportation. Avoid dust spreading.

Not regulated.

Hazard Symbols None required.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorisations None required.

Restrictions on use None.

Other EU regulations

Perlite is not a SEVESO substance, not an ozone depleting substance and not a persistent organic pollutant.

National legislation requirements

Refer to the regulatory exposure limits for workforce enforced in each country (see Annex 1 and link in section 8).

The product and any of the by-minerals contained have not been classified at the EU level, under the dangerous substances and preparations regulation.

International legislation requirements

The product (perlite) is not separately classified by the Occupational Health and Safety Administration (OSHA). The product has not been classified as a human carcinogen by OSHA, the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).

Table 1: Occupational exposure limits for perlite and crystalline silica

	OSHA, PEL - TWA, mg/m³	ACGIH, TLV - TWA, mg/m³	NIOSH, REL - TWA, mg/m³
Perlite			
Respirable dust	5	3	
Total dust	15		
Inhalable dust		10	
Quartz			
Respirable dust	10/(2+% SiO₂)	0,05	0,05
Total dust	30/(2+% SiO₂)		

Exempted from REACH Regulation in accordance with Annex V.7.

16. OTHER INFORMATION

Hazard statements	Not relevant
Precautionary statements	Not relevant
Risk phrases	Not relevant
Safety phrases	Not relevant
Abbreviations	-
Key literature references	-
Revision	The formatting of the SDS has been changed to introduce requirements of Regulation (EC) 1272/2008 and Regulation 453/2010. New data are given in Sections 9-16 and phrasing is different in all Sections. This version supersedes all previous versions.

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.