



Fine grade expanded perlite. Natural, non-toxic, inert, lightweight, thermoinsulating, non combustible product based on siliceous volcanic rock subjected to a particular thermal expansion and screening process, for cryogenic insulation.

The use of particular raw materials selected at the origin and the thermal expansion process with methane burners allow to get an inorganic product, stable and chemically inert. After expansion Perodic is placed in bags/big bags or sent to silos for bulk delivery. Perodic can withstand biological attacks and will not deteriorate or rot, even after long storage periods.

Special treatments

On request, Perodic can be heat treated with polymers in an aqueous solution, that provide excellent water repellency performance and strongly reduce water absorption capacity and moisture retention.

Chemical-physical characteristics

<p>Aspect</p> <p>Particle size</p> <p>Loose bulk density</p> <p>Compacted bulk density</p> <p>Color</p> <p>Thermal conductivity λ mean</p> <p>Thermal conductivity</p> <p>Reaction to fire</p> <p>Specific heat</p> <p>Melting point</p> <p>pH</p> <p>Solubility</p> <p>Moisture content after production</p>	<p>granular solid</p> <p>0,1 ÷ 1 mm</p> <p>50 ÷ 60 kg/m³ ± 15 %</p> <p>60 ÷ 70 kg/m³ ± 15 %</p> <p>white</p> <p>0,040 W/mK - Certificate of Conformity 0497/673/06 - Lab. Istituto di Certificazione CSI-Bollate</p> <p>at +4°C 0,035 W/mK</p> <p>at -82°C 0,032 W/mK</p> <p>at -129°C 0,025 W/mK</p> <p>at -184°C 0,018 W/mK</p> <p>Class A1 – non combustible</p> <p>837 J/kg°K</p> <p>1.200°C</p> <p>6,5 ÷ 7,5</p> <ul style="list-style-type: none"> • insoluble - in water, organic and mineral acids at low an high temperature • soluble - in strong alkali, according to the temperature and time of contact and in hydrofluoric acid <p><0,3% in weight</p>
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Perodic siliconato (waterproof)

<p>Thermal conductivity λ mean</p> <p>Water repellency</p>	<p>0,040 W/mK - Certificate of Conformity 0497/677/06 - Lab. Istituto di Certificazione CSI-Bollate</p> <p>WR 175 ml (UNI EN 14316-1 – App. E)</p>
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Raw material chemical composition

Silicon Oxide	SiO ₂	74 ÷ 78%
Aluminum Oxide	Al ₂ O ₃	11 ÷ 14%
Iron Oxide	Fe ₂ O ₃	0,5 ÷ 1,5%
Sodium Oxide	Na ₂ O	3 ÷ 6%
Potassium Oxide	K ₂ O	2 ÷ 4%
Calcium Oxide	CaO	1 ÷ 2%
Magnesium Oxide	MgO	0 ÷ 0,5%

Particle size distribution

1,0 mm sieve	0 ÷ 5%
0,5 mm sieve	5 ÷ 60%
0,25 mm sieve	20 ÷ 50%
0,125 mm sieve	15 ÷ 35%
0,063 mm sieve	5 ÷ 20%
Sieve residue < 0,063 mm	1 ÷ 20%

Packaging and storage

Packaging

- 80 liters paper bags, measured in loose bulk (uncompacted)
- 3 m³ big cloth bags (1 m³ on request)
- in bulk, loaded on tank trucks

Storage

Perodic has no expiration date and has a very good storage stability.

CE marking

Perodic and Perodic siliconato (Waterproof) are CE marked according to UNI EN 13055-1 normative "Lightweight aggregates for concrete and plasters" and UNI EN 14316-1:2005 "In-situ thermal insulation formed from expanded perlite (EP) products" as indicated in the European Construction Products Regulation 305/2011 CEE.

Quality

Perodic is produced following the specifications of a quality system and all the activities, which have a bearing upon quality, are set out in written procedures, according to EN ISO 9001. Test equipments and all materials are subjected to systematic and regular checks.

This sheet is intended to provide information on the characteristics and methods of application of the described material.

The technical data shown relate to average production values and are therefore subject to periodic revision. Perlite Italiana reserves the right to make any changes and variations it deems appropriate at any time; it is therefore in the user's interest to check he has got the updated version of the sheet.



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