

## PerlFill 100 – Silicone-coated loose Perlite cavity fill insulation

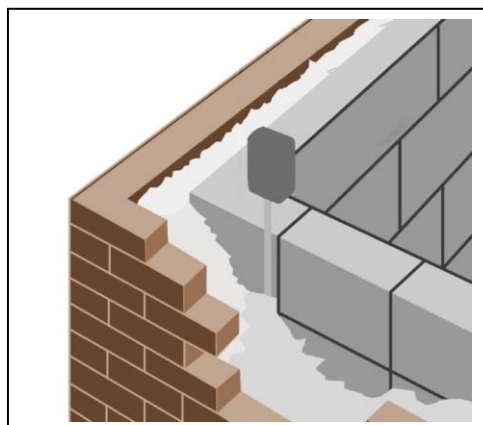
**Product description** PerlFill loose-fill perlite is an inert volcanic glass which is expanded by a special heat process and then surface treated with a non-flammable water-repellent coating.

**Advantages** PerlFill provides a quick, inexpensive and permanent method to insulate cavity walls. It pours easily into all cracks, voids and cavities, providing a very effective insulation blanket. It is an inorganic, siliceous mineral of volcanic origin, is chemically inert, pH neutral, non-toxic and sterile. It is also vermin-resistant, does not rot, decay or settle and offers excellent fire protection. Placement requires no particular skills or experience, making it an exceptionally construction-friendly and cost-effective solution.

**Mass per bag** Typically 7-8kg  
**Volume per bag** 100 litres  
**Bulk Density** Typically 70-80kg/m<sup>3</sup>  
**Conductivity (W/m·K)** 0.04136  
**R-value at 50mm** 1.21 m<sup>2</sup>.K/W  
**Product colour** White  
**Description of bag** White Polypropylene bag – stitched

### Composition

CHEMICAL ANALYSIS	
SiO <sub>2</sub>	72 – 74%
Al <sub>2</sub> O <sub>3</sub>	12 – 14%
Fe <sub>2</sub> O <sub>3</sub>	0.6 - 0.8%
K <sub>2</sub> O	4 – 5%
Na <sub>2</sub> O	1.5 – 3%



PHYSICAL PROPERTIES	
Loose Bulk Density (kg/m <sup>3</sup> )	70 - 80
Compacted Bulk Density (kg/m <sup>3</sup> )	80 - 100
pH	6.5 – 7.5
Moisture Content <sup>a)</sup>	0.05%
LOI <sup>b)</sup>	1.74%
Thermal Conductivity (W/m· K)	0.04 – 0.05
<i>a) Dried at 110°C for 1.5 hours</i>	
<i>b) Tested at 1100°C for 1.5 hours</i>	

TYPICAL PARTICLE SIZE ANALYSIS	
Particle size (µm)	Mass Retained %
4750	0.2
3000	4.7
2000	26.9
1000	44.1
850	3.4
355	11.3
250	2.5
150	2.9
<150	4

**Applicable Standards**

PerlFill silicone-treated Perlite conforms to ASTM specification C549, Perlite Loose Fill Insulation; SANS 8301:2010, Thermal Insulation.

**Fire Rating**

Underwriters Laboratories Design No. U905 shows that a 2-hour rated 20cm concrete block wall is improved to 4 hours when cores are filled with Silicone Treated Perlite.

**Water Repellency**

Silicone treated perlite minimizes water transmission - Laboratory tests on water transmission show a cavity wall filled with Silicone Treated Perlite will not transmit water to the interior wythe even under the most severe conditions. It should be noted that silicone treated perlite insulation will not waterproof a poorly constructed masonry wall.

**Permanency**

Silicone Treated Perlite is inorganic and therefore rot, vermin and termite resistant and non-combustible with a fusion point of approximately 1260°C. It is as permanent as the walls which contain it.

**Non-Settling**

PerlFill cavity fill supports its own weight in the wall without settling.

**Shelf Life**

Indefinite. Handle with care as Perlite particles are fragile and are may be crushed under any weight resulting in a loss of performance.

**Storage instructions**

Keep in a dry place. Place on a raised wooden platform or on plastic sheeting to prevent rising damp.

**Installation**

It is advised that all holes and openings are sealed prior to installation to prevent material loss. PerlFill is free flowing and fills all voids without bridging. PerlFill should be poured directly

into the spaces and cavities to be insulated at convenient intervals in a manner that minimises free-fall and impact. This will minimize crushing and breakdown of insulation particles and unnecessary formation of dust. Mesh weephole covers are required to prevent material loss.

### **Health and Safety**

Exfoliated Perlite is non-toxic. PerlFill loose fill insulation may, however, generate airborne nuisance dust generate a buildup of airborne nuisance dust when installed in confined, poorly ventilated areas. It is always advisable to wear suitable protective clothing including mask, boots, gloves and safety glasses. If contact with skin or eyes occurs, wash with water immediately. If irritation continues, seek medical advice. Please refer to the Material Safety Data Sheet (MSDS) prior to the use of this product. E-mail [info@cemteq.com](mailto:info@cemteq.com) or call +27-11-824-4600 for a copy of the MSDS.

### **Environment**

SunPerl IM100 is inorganic, non-toxic and environment-friendly. Please dispose of excess material responsibly and recycle the bags.

### **Disclaimer**

CemteQ has no control over how this product will be stored, handled or used and therefore will not be held responsible for its performance.

**CemteQ Building Solutions (Pty) Ltd**, Reg. No. 2017/437927/07

97 Tedstone Road, Wadeville, Gauteng. P.O. Box 10090, Dalview 1544, South Africa

Tel: (+27-11) 824-4600, email: [info@cemteq.com](mailto:info@cemteq.com), [www.cemteq.com](http://www.cemteq.com)

Directors: V.M. Botha, V.P. Bouguenon, G.F. Haasbroek