



Building Solutions

CoreLite

Silicone-coated loose perlite cavity fill insulation



Product Description

CoreLite 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.

Benefits

CoreLite 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/m³

Conductivity (W/m·K)

0.04136

R-value at 50mm

1.21 m².K/W

Product colour

White

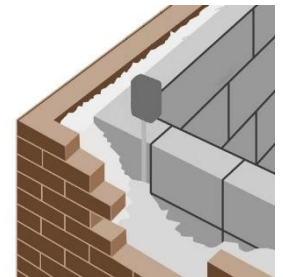
Description of bag

White Polypropylene bag – stitched

Composition

Chemical Analysis

SiO ₂	72 – 74%
Al ₂ O ₃	12 – 14%
Fe ₂ O ₃	0.6 - 0.8%
K ₂ O	4 – 5%
Na ₂ O	1.5 – 3%



Physical Properties

Loose Bulk Density (kg/m ³)	70 - 80
Compacted Bulk Density (kg/m ³)	80 - 100
pH	6.5 - 7.5
Moisture Content ^{a)}	0.05%
LOI ^{b)}	1.74%
Thermal Conductivity (W/m· K)	0.04 - 0.05

a) Dried at 110°C for 1.5 hours

b) Tested at 1100 °C for 1.5 hours



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

CoreLite 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

CoreLite 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

CoreLite 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 Setting

CoreLite 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. CoreLite is free flowing and fills all voids without bridging. CoreLite 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. CoreLite loose fill insulation may, however, generate 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 or call +27-11-473-0440 for a copy of the MSDS.


Environment

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

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Disclaimer

For satisfactory results, these instructions need to be followed carefully. CemteQ has no control over how this product will be stored, handled or used and therefore will not be held responsible for its performance.