



Silicone^{ULTRA} K1.5 mm Render

PermaRock Mineral Fibre External Wall Insulation Systems

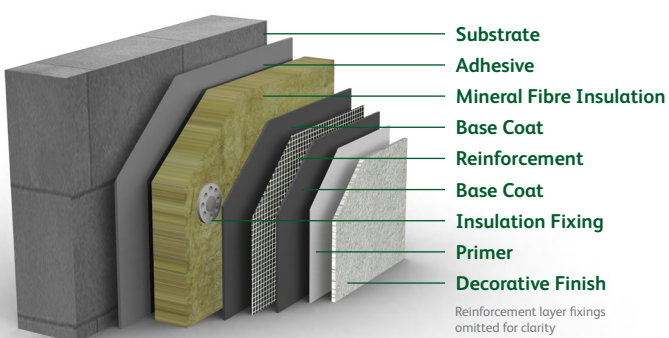


Overview

PermaRock Mineral Fibre external wall insulation systems provide excellent reaction to fire performance, and systems with an A2-s1,d0 classification in accordance with EN 13501-1:2007 +A1:2009 are also suited for use on high rise buildings, including those with floor levels above 18 metres above ground level.

Mineral Fibre systems with PermaRock Silicone^{ULTRA} K 1.5mm, Mineral K 2.0mm, Brick Slip, Brick Effect Render and Dry Dash Finishes are class A2-s1,d0 to EN 13501-1:2007 + A1:2009.

Typical Mineral Fibre EWI system incorporating through-coloured K or R Finish



Key Features

- Building Regulations compliant - can be used on buildings of any height*
- A2-s1,d0 reaction to fire classification (EN 13501-1:2007 + A1:2009)
- Incorporates non-combustible mineral fibre (stonewool) insulation (Euroclass A1)
- SWIGA approved high-rise system
- Adhesively bonded + mechanically anchored for enhanced resistance to wind loading
- Wide selection of decorative renders / finishes / effects

Quick Check

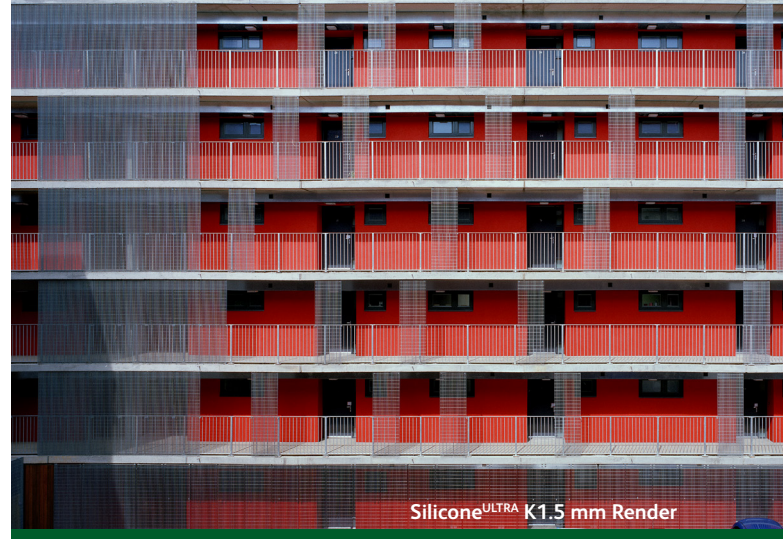
Approvals / Accreditation	BRE Global Certificate 158/12
Substrate Types	Brickwork, Dense Concrete, No-Fines Concrete, Blockwork, Suitably Sheathed Metal Frame or Timber Frame
Building Height (limitations)	No limit *
Decorative Render / Finishes	See table overleaf
Insulation Thermal Conductivity (W/mK)	0.036
Insulation Thicknesses	50 - 250 mm **

* Dependent on decorative finish type and detail design
 ** 30mm board available (0.038 W/mK)



Environmental & Quality Standards

- The system is manufactured and supplied in accordance with BS EN ISO 9001 (Quality Management) and BS EN ISO 14001 (Environmental Management)
- Mineral Fibre insulation is manufactured to EN 13162 and is CFC and HCFC free, has zero Ozone Depletion Potential (zero-ODP) and zero global warming potential (GWP)
- Recycling facility for uncontaminated insulation boards is available for site waste
- Ecopoint Rating /m² – 0.10: Excellent
- Low U-Values are achievable in order to meet or exceed BREEAM, Passivhaus, EnerPHit and similar performance standards, etc
- Green Guide to Specification A Rating achievable



U-values: Insulation thickness requirements to achieve a range of U-values for typical wall constructions can be found in our New / Existing Buildings brochures and on our website.

System Options

Insulation	Fixing	Reinforcement Layer ⁽¹⁾	Intermediate Coat(s)		Top (Finish) Coat	Notes
PermaRock Mineral Fibre (50 mm - 250 mm) Thermal conductivity 0.036 W/mK	PermaRock Adhesive & PermaRock Mechanical Fixings (e.g Masonry, Dense and No-Fines Concrete) or PermaRock Lamella Adhesive & PermaRock Mechanical Fixings (e.g Sheathed frame constructions - Metal / Timber Frame)	PermaRock Bedding Mortar & PermaRock Reinforcing Mesh or PermaRock Bedding Mortar & PermaRock Armoured Mesh (for areas where high levels impact resistance are required)	PermaRock Bedding Mortar	PermaRock K&R Primer	PermaRock Acrylic K Finish	K Finish: 1.5 mm, 2.0 mm & 3.0 mm grain size top coats available R Finish (Silicone only) 2.0 mm & 3.0 mm grain size top coats available
					PermaRock Silicone K/R Finish	
			PermaRock Silicone ^{ULTRA} K Finish			
				PermaRock Stone Chip Render		Approx. 2 mm grain size
				PermaRock Brick Slip Adhesive & PermaRock Brick Slips		Metric and imperial / non-standard brick slip sizes available
				PermaRock Bedding Mortar		PermaRock Mineral K/R Finish
			PermaRock Brick Effect Render Base Layer		PermaRock Brick Effect Render Face Layer	
			PermaRock Dashing Mortar ⁽²⁾		PermaRock Dashing Aggregates	
		PermaRock Scratch Render Basecoat & PermaRock Reinforcing Mesh			PermaRock Silicone Scratch Render	

⁽¹⁾ Additional reinforcement layer fixings are required for buildings over 2 storeys in height and/or for buildings in high exposure locations

⁽²⁾ PermaRock Dashing Mortar is available in a range of colours

Technical Overview

System Properties	
Approvals	BRE Global BRE Certificate No. 158/12.
Thermal Performance	Systems can be designed to achieve U-values which satisfy or exceed current UK Building Regulation requirements.
Weather Resistance	Provides a weather resistant cladding to new and existing backing walls of brick and block masonry, dense and no-fines concrete and sheathed light gauge steel frame and timber frame constructions. Can be designed buildings in locations where the wind driven rain exposure classification is very severe.
Wind Loads	Using a combination of adhesive bonding and mechanical fixing, these systems can be designed to withstand all anticipated wind load (suction) scenarios in the UK.
Impact Resistance	Systems can achieve levels of hard body impact resistance in excess of 40J and can be designed for the zones associated with Categories I, II and III as defined in ETAG004.
Fire Performance	Class A1 insulation (EN 13501). PermaRock Mineral Fibre systems with PermaRock Silicone ^{ULTRA} K 1.5mm Finish, PermaRock Mineral K 2.0mm Finish, PermaRock Brick Slips, PermaRock Brick Effect Render and PermaRock Dry Dash Finish are assessed to EN 13501-1:2007 + A1:2009 and are classed A2-s1,d0 (50mm - 250mm). Fire tested in accordance with BS 8414-1: 2002 - compliant with BR 135 Annex A; 2003 (Acrylic K Finish).
Water Vapour Permeability	The systems are water vapour permeable. The rate of permeability depends on the system (thickness and decorative finish type) selected.
Design Life	Systems can be considered to have a design working life of at least 30 years. Lifetimes significantly in excess of 30 years can be achieved with proper maintenance and repair if damaged.

For further information on the decorative finishes above please consult the relevant information sheet, website or contact PermaRock. All information stated is correct at time of printing and subject to change without notice.

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