

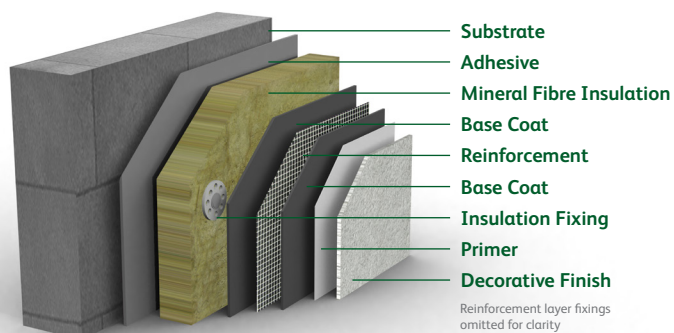


PermaRock Mineral Fibre External Wall Insulation Systems

Overview

PermaRock Mineral Fibre external wall insulation (EWI) systems are fire-safe, high performance thermal insulation systems that are extremely versatile and particularly suited for application to residential buildings, hospitals, schools, and public buildings where the highest levels of fire resistance and non-combustibility are required. The systems are recommended for multi-storey, high-rise buildings and any building that is less than 1m from a boundary.

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



Key Features

- BRE Global Certification
- BIM Level 2 compliant (NBS BIM Library)
- Fire tested in accordance with BS 8414 - compliant with BR 135; can be used on buildings over 18m*
- Excellent Fire Performance: non-combustible insulant (Class A1)
- Fire breaks not required
- Class O fire rating*
- Ecopoints Score of 0.10 (m²) - Excellent Rating
- Acoustic benefit over other insulant types

Quick Check

Approvals	BRE Global Certification
Market Sectors	Residential, Education, Healthcare, Public Buildings, Commercial
Substrate Types	Brickwork, Dense + No-Fines Concrete, Blockwork, Metal Frame, Timber Frame
Building Height (limitations)	No limit*
Decorative Render / Finishes	See table overleaf
Insulation Thermal Conductivity (W/mK)	0.036 - 0.039**
Insulation Thicknesses	30 - 250 mm**

*Dependent on decorative finish type and detail design

**Dependent on density of board

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Environmental & Quality Standards

- The system is manufactured and supplied in accordance with BS EN ISO 9001 (Quality Management)
- The system is manufactured and supplied in accordance with BS EN ISO 14001 (Environmental Management)
- Mineral Fibre insulation is manufactured to EN 13162 and is CFC and HCFC free
- The insulation 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 $m^2 - 0.10$: Excellent
- Low U-Values are achievable in order to meet or exceed Code for Sustainable Homes, BREEAM and Passivhaus 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 Buildings and Existing Buildings brochures.

System Options

Insulation	Fixing	Reinforcement Layer ⁽¹⁾	Intermediate Coat(s)		Top (Finish) Coat	Notes
PermaRock Mineral Fibre DD (50 mm - 250 mm) Thermal conductivity 0.036 W/mK or PermaRock Mineral Fibre HD (30 mm - 160 mm) Thermal conductivity 0.039 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/R Finish	1.0 mm ⁽²⁾ , 1.5 mm, 2.0 mm & 3.0 mm grain size top coats available
					PermaRock Silicone K/R Finish	
					PermaRock Silicone ^{Ultra} K/R 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	2.0 mm, 3.0 mm & 5.0 mm grain size top coats available
		PermaRock Brick Effect Render Base Layer		PermaRock Brick Effect Render Face Layer		
		PermaRock Dashing Mortar ⁽³⁾		PermaRock-approved Dashing Aggregates		
		PermaRock Scratch Render Basecoat & PermaRock Reinforcing Mesh or PermaRock Scratch Render Basecoat & PermaRock Armoured Mesh			PermaRock Silicone Scratch Render or PermaRock Silicone Scratch Render FT ⁽⁴⁾	

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

⁽²⁾ 1 mm grain size only available in Silicone K Finish - consult PermaRock for limitations prior to use

⁽³⁾ PermaRock Dashing Mortar is available in a range of colours ⁽⁴⁾ FT = Fine Texture

Technical Overview

System Properties	
Approvals	BRE Global Certification: 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 (BS EN 13501-1:2007 + A1:2009). Class O surfaces as defined in the Building Regulations when tested to BS 476 parts 6 and 7 can be achieved. Fire tested in accordance with BS 8414-1: 2002 - compliant with BR 135 Annex A; 2003 (Acrylic 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.

Version 2

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