



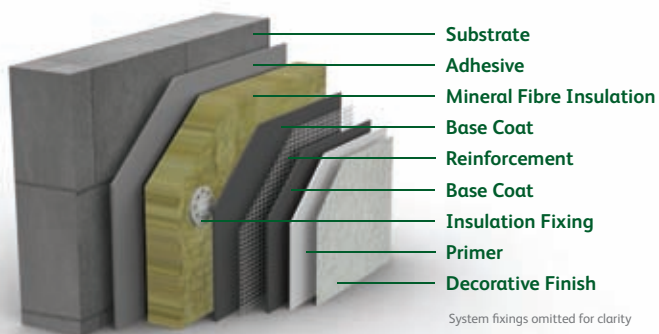
PermaRock Mineral Fibre External Wall Insulation System

Overview

The PermaRock Mineral Fibre external wall insulation (EWI) system is a fire-safe, high performance thermal insulation system that is extremely versatile and is 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 system is also recommended for multi-storey high-rise buildings.

Typical Mineral Fibre EWI system incorporating through-coloured render finish



System fixings omitted for clarity

Key Features

- Excellent Fire Performance: non-combustible insulant (Class A1)
- Fire-breaks not required within the system
- Class O fire rating (surfaces)
- Fire tested in accordance with BS 8414-1: 2002
- Meets the requirements of BR 135: Fire performance of external thermal insulation for walls of multi-storey buildings
- Ecopoints Score of 0.10 (m²) - Excellent Rating
- Acoustic benefit over other insulant types
- Thermodynamically stable

Quick Check

| | |
|--|---|
| UKAS Accreditation | BRE Accredited (Cert No. 158/12) |
| Market Sectors | Residential, Education, Healthcare, Public Buildings, Commercial |
| Substrate Types | Brickwork, Dense + No-Fines Concrete, Blockwork, Metal Frame, Timber Frame, SIPS, CLT |
| Low-Rise/High-Rise: | Low-Rise + High-Rise |
| Decorative Render/Finishes: | All |
| Insulation Thermal Conductivity (W/mK): | 0.036 - 0.039* |
| Insulation Thicknesses: | 30 - 250 mm* |

*Dependant on density of board



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 (m²) – 0.10: Excellent Rating
- 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
- Extremely airtight façades can be achieved

Finishes Available



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

| Insulation | Base Coat | Pre-Coat / Primer | Finish Coat | Consumption |
|--|--|--|--|---|
| Adhesive (approx 3.5 - 4.5 kg/m ²) Mineral Fibre 1200 mm x 600 mm (0.72 m ²) | PermaRock Base Coat + Reinforcing Mesh (approx. 4 kg/m ²) 3 mm** | Sponge Floated Base Coat (approx. 4 kg/m ²) + K & R Primer 3 mm** (approx. 250 g - 350 g/m ²) | Brick Effect Render 6 mm** + Brick Effect Render 3 mm** | Base Coat - Approx. 10.8 kg/m ² Top Coat - Approx. 17 kg/m ² |
| | | | Acrylic K & R Finish ⁽¹⁾ 1.5 mm - 3 mm | Approx. 2.7 - 4.3 kg/m ² * |
| | | | Silicone K & R Finish ⁽¹⁾ 1.5 mm - 3 mm | Approx. 2.5 - 4.1 kg/m ² * |
| | | | Silicone ^{Ultra} K & R Finish ⁽¹⁾ 1.5 mm - 3 mm | Approx. 1.7 - 3.1 kg/m ² * |
| | | | Mineral K & R Finish ⁽²⁾ 2 mm - 5 mm | Approx. 2.3 - 4.5 kg/m ² * |
| | | | Metallic Render 1.5 mm - 2.0 mm | Approx. 2.0 - 3.0 kg/m ² * |
| | | | Stone Chip Render 2 mm | Approx. 5 kg/m ² |
| | Brick Slip Adhesive 3 mm** Brick Slips 4 - 6 mm | Approx. 4 kg/m ² Approx. 58 slips per m ² | | |
| | Scratch Render Base Coat + Reinforcing Mesh (approx. 1.8 kg/mm/m ²) 5 mm** | | Dashing Base Coat 6 - 8 mm + Dry Dash 3 - 8 mm | Approx. 7 - 8kg/m ² (Base Coat) Dry Dash – subject to stone size |
| | | | Scratch Render 12 - 14 mm | Approx. 21 - 25 kg/m ² |

*Dependant upon particle size / **Approximately / ⁽¹⁾ R Finish 2 mm + 3 mm / ⁽²⁾ R Finish 3 mm + 5 mm

Technical Overview

For further information on the decorative finishes detailed above please consult the relevant information sheet, website or contact PermaRock.

| System Properties | |
|---------------------------|--|
| Accreditation | UKAS Accredited – BRE Certificate 158/12 (Acrylic Finish, Brick Effect Render, Brick Slips, Dry Dash, Scratch Render, Silicone Finish) |
| Durability | Assessed lifetime of the system is in excess of 30 years (BRE Certificate No 158/12) |
| Fire Performance | MF Insulation classified A1 under BS EN 1350 – 1: 2002 when tested in accordance with BS EN ISO 1182:2002. The system and finishes are Class O surfaces when tested to BS 476 part 6 and 7. |
| Impact Resistance | Complies with the recommendations of BRE publication BRE 6/81: System can achieve levels of hard body impact resistance ranging from approx 4J to in excess of 40J* |
| Water Resistance | Classified as Type 4 insulating cladding for permeability to water, as defined in UEAtc MOAT No. 45. The system is suitable for geographical areas including those classified as having very severe exposure to wind driven rain (BS 5628: Part 3 and BS 8104) |
| Water Vapour Permeability | MF system with 50 mm insulation and dry dash aggregate finish has a measured vapour resistance (BS7374) of <6MN/g |
| Wind Resistance | In tests conducted at the BRE, PermaRock system tested at a design load of –4 kPa showed no visible damage after being subject to wind suction load representing 50 years exposure. The system has also been successfully tested at loads of up to –9 kPa.** |

*Dependant on specification / **Data quoted is based upon a PermaRock Mineral Fibre insulation board with an average density of 115 kg/m³

All suggestions and application instructions should be used for guidance only - please consult product Technical Datasheet for further information.