PermaRock EPS-Premium (Grey) External Wall Insulation Systems

Overview
PermaRock EPS-Premium external wall insulation (EWI) systems are high-performance, light-weight systems based on low lambda expanded polystyrene (EPS) insulating panels that incorporate microscopic particles of graphite for enhanced thermal performance and to dissipate heat. The systems are suited for the upgrade of existing buildings and for new buildings, particularly where exemplar levels of thermal performance are required.

Typical EPS-Premium EWI system incorporating through-coloured K or R Finish

Key Features
- Graphite additive gives the insulation improved thermal performance over standard (white) EPS
- Low U-values possible – insulation thicknesses up to 300 mm
- Can assist in achieving Code for Sustainable Homes Levels 4 - 6 and Passivhaus Standards
- Suited for situations where low imposed loads are critical
- Class O fire rating can be achieved* 
- BIM Level 2 compliant (NBS BIM Library)

Quick Check

<table>
<thead>
<tr>
<th>Approvals</th>
<th>BRE Global Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Sectors</td>
<td>Residential, Education, Healthcare, Public Buildings, Commercial</td>
</tr>
<tr>
<td>Substrate Types</td>
<td>Brickwork, Dense + No-Fines Concrete, Blockwork, Metal Frame, Timber Frame</td>
</tr>
<tr>
<td>Building Height (limitations)</td>
<td>Up to 18 metres**(1)</td>
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<tr>
<td>Decorative Render / Finishes</td>
<td>See table overleaf</td>
</tr>
<tr>
<td>Insulation Thermal Conductivity (W/mK)</td>
<td>0.030 - 0.032**</td>
</tr>
<tr>
<td>Insulation Thicknesses</td>
<td>10 - 300 mm</td>
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</tbody>
</table>

*Non-combustible fire breaks should be introduced at each floor level above second floor level at compartment walls, and elsewhere as required in Building Regulations Approved Document B. **Dependent on type / strength of board. (1)Dependent on decorative finish type and detail design.

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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)
- EPS-Premium insulation is manufactured to EN 13163 and is CFC and HCFC free
- The insulation has zero Ozone Depletion Potential (zero-ODP) and low global warming potential (GWP) of less than 5
- Recycling facility for uncontaminated insulation boards is available for site waste
- 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

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

<table>
<thead>
<tr>
<th>Insulation</th>
<th>Fixing</th>
<th>Reinforcement Layer(1)</th>
<th>Intermediate Coat(s)</th>
<th>Top (Finish) Coat</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PermaRock EPS-Premium</td>
<td>PermaRock Adhesive &amp; PermaRock Mechanical Fixings (e.g. Masonry, Dense and Non-Fines Concrete)</td>
<td>PermaRock Bedding Mortar &amp; PermaRock Reinforcing Mesh or PermaRock Bedding Mortar &amp; PermaRock Armoured Mesh (for areas where high levels impact resistance are required)</td>
<td>PermaRock K&amp;R Primer</td>
<td>PermaRock Acrylic K/R Finish</td>
<td>1.0 mm(2), 1.5 mm, 2.0 mm &amp; 3.0 mm grain size top coats available</td>
</tr>
</tbody>
</table>

(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.

Technical Overview

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.