



Protect Membranes
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Construction Membranes

Breather Membranes

Protect Thermo Extreme

Protect Thermo Extreme is a reflective, low emissivity, insulating breather membrane used externally on walls constructed in timber frame, Structural Insulated Panels (SIPS), Cross Laminated Timber (CLT) panels or steel, to ensure significant thermal benefits. Protect Thermo Extreme is CE marked and produced in the UK. As specified in STA Advice Note 18, this membrane is designed for use on structural timber buildings which are located in very severe, exposed sites, which are known to be open to high winds with driving and persistent rain. This includes high altitude areas and westerly coastal sites in England, Ireland, Wales and Scotland, particularly cliff or sea fronting locations.

Breather membrane to be five ply construction to include a microporous film between two layers of spunbond, with a permeable, high purity, solid corrosion resistant aluminium foil layer on the upper surface that is micro perforated and a white/grey under surface. Membrane to ensure low emissivity performance with an aged thermal resistance of $0.77\text{m}^2\text{K/W}$ to BS EN ISO 8990, achieved when facing into an unventilated airspace to block infra-red radiation and enhance thermal performance of airspace. Thermal resistance to be aged and incorporating printed logos. To be independently tested by National Physical Laboratories (NPL) in a typical house timber frame wall cavity. Water vapour transmission resistance to be 0.47MNs/g (0.093 S_d) to BS EN ISO 12572 meeting the permeability requirements recommended by TRADA and NHBC. Emissivity of the surface unaged to BS EN 15976 should be 0.02 and aged 0.03, independently tested by a European notified laboratory. In order to be suitable for very severe exposure sites as per recommendations in STA Advice Note 18, the product's resistance to water penetration to BS EN 1928 with mods should be Pass, Class W1. Nail tear strength should be 177 (MD along roll) and 191 CD (across roll) to EN 12310-1 with mods and tensile strength should be 245 (MD along roll) and 135 (CD across roll) to BS EN 12311-1 with mods. The product should have a weight of 145g/m^2 coming in a roll size of: 3.0m x 100m.





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Membrane to be printed in green ink to ensure low emissivity and to be used externally on the wall structure. To be used on the cold side of the insulation in conjunction with vapour control layer Protect VC Foil Ultra on the warm side of the insulation to further enhance the thermal performance of the wall structure, helping to achieve low U-values and meet current Building Regulations Part L in UK and Ireland. On timber frame panel construction, to be used externally, with breather membrane Protect TF InterFoil and vapour control layer Protect VC Foil Ultra both used on the warm side of the insulation to deliver thermal efficiency. Manufacturer to provide U-Value calculations and condensation risk analysis to ensure target specification is achieved using appropriate thermal bridge percentage for timber studs in accordance with BR 443:2006 Conventions for U-values (section 4.5.1 (ii)) and relevant correction level in accordance with Table F1 of BS EN ISO 6946:2017 Building components and building elements – Thermal transmittance – Calculation methods. Breather membrane to be fitted into wall in accordance with TRADA recommendations and manufacturer's instructions.

Manufacturer: Protect Membranes, a division of Building Product Design, 2 Brooklands Road, Sale, Cheshire, M33 3SS, United Kingdom. Tel: +44 (0)161 905 5700, Fax: +44 (0)161 905 2085. E-mail: info@protectmembranes.com Website: www.protectmembranes.com/thermoextreme

STA Assured Gold accredited company and associate members of the Structural Timber Association and the Modular and Portable Build Association.

Product Reference: Protect Thermo Extreme low emissivity, insulating, external breather membrane for walls, with aged thermal resistance of $0.77\text{m}^2\text{K/W}$ (incorporating printed logos) and Class W1 water penetration resistance.

Accessories:

Protect range of sealing tapes to help reduce uncontrolled air leakage in all forms of building construction.

Protect Reveal Tape:

Single-sided, high-tack, durable and woven reinforced reflective tape, for dressing into awkward details without tearing. Performs the airtightness function between internal AVCL and external membrane in and around doors and window reveals.





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Protect Reflective Reinforced Tape:

Single-sided, high-tack, reflective aluminium spun bond reinforced tape. Designed for sealing overlaps of timber frame membranes, air barriers and vapour control layers and for sealing around service penetrations. Can be used for internal or external applications.

Protect Reinforced Universal Tape:

Single-sided, high-tack, UV and heat stabilised spun bond reinforced tape. Designed as general purpose tape for sealing overlaps of timber frame membranes, air barriers and vapour control layers. Can be used for internal or external applications.

