protect

CI/SfB (47) Ln6
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November 2019

THERMO EXTREME

LOW EMISSIVITY INSULATING BREATHER MEMBRANE

Protect Thermo Extreme is a waterproof, low emissivity, highly reflective insulating breather membrane which enhances the thermal performance of timber frame walls, Structural Insulated Panels (SIPs), Cross Laminated Timber (CLT) panels and steel frame construction. Designed for use externally on buildings which are sited in very severe, exposed locations, the product is aligned to STA Advice Note 18, where it is recommended that membranes with Class W1 water penetration resistance are used.

Protect Thermo Extreme has been developed from the tried and tested Protect TF200 Thermo range and additionally utilises microporous film and microperforation technology. Protect Thermo Extreme is CE marked and independently BM TRADA certified, meeting the requirements of BS EN 13859-2, TRADA and NHBC.

Aged thermal resistance 0.77m²K/W

Produced in the UK of five ply construction, Protect Thermo Extreme's innovative design provides a highly reflective yet vapour permeable surface which protects the outer sheathing from moisture and ensures the water vapour passes into the external wall cavity. When installed with the foil facing into an unventilated airspace, this provides enhanced thermal performance by effectively blocking infra-red radiation, helping to deliver a low overall U-value of the wall.

BENEFITS

- Aligned with STA Advice Note 18, with aged thermal resistance of 0.77m²K/W, incorporating printing and using typical 600mm stud centres.
- Achieves Class W1 water resistance to BS EN 1928.
- Class 1 surface spread of flame to BS 476-7.
- Low emissivity reflective surface enhances the thermal performance of the wall.
- Resists the passage of water, wind blown snow and dust into the interior of the building.
- Easy to cut and handle with high nail tear resistance.
- Helps to meet overall U-value requirements set down in Building Regulations Part L1A & Notional Dwelling Specifications.
- UV and heat stabilised.
- Meets the permeability requirements recommended by TRADA and NHBC.
- Corrosion and damage resistant reflective surface.
- High burst strength, tough and durable.

Product Certification bmtrada Q-MARK CERTIFICATION

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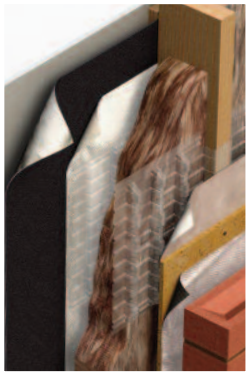
Dimensions
Roll size: 3.0m x 100m.
Roll weight: 45.90kg.

Appearance
High purity aluminium micro perforated upper surface and embossed lower surface.

Compatibility
As with all nonwoven spunbond materials, do not lay in direct contact with undried timber preservatives (whether water or solvent based).

For more information visit
www.protectmembranes.com/thermoextreme

Top tip
Use the membrane solution of Protect Thermo Extreme, TF InterFoil and VC Foil Ultra within a timber frame panel to optimise thermal efficiency and potential insulation cost savings.



Related products
Protect VC Foil Ultra membrane:
www.protectmembranes.com/vcfoilultra
Protect TF InterFoil breather membrane:
www.protectmembranes.com/tfinterfoil

Specification clause:
Timber frame breather membrane to be Protect Thermo Extreme supplied by Protect Membranes, 2 Brooklands Road, Sale, Cheshire M33 3SS. Tel: 0161 905 5700 Fax: 0161 905 2085. Email: info@protectmembranes.com Breather membrane to be five ply construction to include a microporous film between two layers of spunbond, with a permeable, high purity aluminium foil layer on the upper surface that is micro perforated and a white/grey under surface. Product to provide a thermal resistance of 0.77m²K/W to BS EN ISO 8990 & BS EN 15976 (aged – incorporates printing), a vapour resistance of 0.47 MNs/g / 0.093 S_d(m) to BS EN ISO 12572 and a Class W1 resistance to water penetration in alignment with STA Advice Note 18. Breather membrane to be fitted into wall on the cold side of the insulation in accordance with TRADA recommendations and manufacturer's instructions.

Improvement in thermal resistance values using Protect Thermo Extreme with reflective technology

Wall heat flow	Airspace (mm)	Unventilated airspace: With no special treatment (m²K/W)	With Protect Thermo Extreme facing into airspace (m²K/W)	Improvement with Protect Thermo Extreme
Horizontal	>20	0.18	0.77	328%

PERFORMANCE

	MD (along roll)	CD (across roll)
Nail tear strength (N) to EN 12310-1 with mods	177	191
Tensile strength (N/50mm) to EN 12311-1 with mods	245	135
Water vapour resistance to BS EN ISO 12572	0.47 (MNs/g) & 0.093 S_d(m)	
Total thermal resistance (m²K/W) to BS EN ISO 8990 (incorporates printing)	0.77* (aged)	
Emissivity of the surface (ε) unaged to BS EN 15976	0.02**	
Emissivity of the surface (ε) aged to BS EN 15976	0.03**	
Weight (g/m²)	145	
Resistance to water penetration to BS EN 1928 with mods	Pass	Class W1

*Independently tested by National Physical Laboratory (NPL) in a typical UK house timber frame wall cavity.
**Independently tested by a European notified laboratory
MD = Machine Direction (along roll). CD = Cross Direction (across roll).

Stockist's stamp

STRUCTURAL TIMBER ASSOCIATION Member
STA ASSUREGOLD
MPBA THE MODULAR & PORTABLE BUILDING ASSOCIATION

PROTECT MEMBRANES
2 Brooklands Road, Sale, Cheshire M33 3SS
Tel: 0161 905 5700 Fax: 0161 905 2085
Email: info@protectmembranes.com Web: www.protectmembranes.com

BPD
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