

TF200 THERMO

INSULATING BREATHER MEMBRANE

**Improved
Thermal
Performance**



TF200 THERMO INSULATING BREATHER MEMBRANE



Specification clause:

Timber frame breather membrane to be Protect TF200 Thermo supplied by Glidevale Ltd, 2 Brooklands Road, Sale, Cheshire M33 3SS Telephone: 0161 905 5700 Fax: 0161 905 2085. Email: info@glidevale.com. Breather membrane to be non-woven PP core, with a permeable high purity aluminium foil layer with a thermal resistance of 0.77 W/m²K and a vapour resistance of 0.55MNs/g. Breather membrane to be fitted into wall in accordance with TRADA recommendations and manufacturers instructions.

Additional clause for further thermal performance:

In addition, vapour control layer to be Protect VC Foil supplied by Glidevale Ltd as above. Vapour control layer to be of triple ply construction with polywoven core and solid corrosion resistant aluminium layer with a hemispherical emissivity of 0.05. Vapour control layer to be fitted into wall in accordance with BS5250:2002 recommendations and manufacturers instructions.

Protect TF200 Thermo is a high performance timber frame membrane with high tear strength, weather resistance and vapour permeability. Protect TF200 Thermo has all the features and benefits of the tried and tested Protect TF200 membrane, but with the addition of a highly reflective surface enhancing the thermal performance of the final wall construction.

- Resists the passage of water, wind blown snow and dust into the interior of the building
- Low emissivity reflective surface enhances the thermal performance of the wall
- Helps to meet the requirements of Approved Document Part L and Scotland Part J
- Corrosion and damage resistant reflective surface
- UV and heat stabilised
- Good nail tear resistance compared with alternative membranes
- High burst strength, tough and durable
- Unaffected by conditions found in timber frame walls
- Meets the permeability requirements recommended by TRADA and NHBC
- Independently certified

Composition

Protect TF200 Thermo includes a tough non-woven PP core with a durable bright high purity permeable aluminium layer, bonded to the substrate.

Size

Roll sizes 2.7 and 3.0m x 100m (270 and 300m²) branded as Protect TF200 Thermo.

Protect TF200 Thermo low emissivity technology

Protect TF200 Thermo provides a highly reflective yet permeable low emissivity layer. When installed facing into an unventilated airspace this effectively blocks infra red radiation and enhances the thermal performance of the airspace, and hence the overall U-value of the wall construction. Normal high emissivity airspaces are compared with low "e" spaces in the table below.

Thermal resistance has been tested in accordance with BS EN ISO 8990:1996.

The Ultimate Protect Solution

Further thermal performance can be obtained by using Protect TF200 Thermo in combination with Protect VC Foil, see Table 2 opposite.

inner lining of
plasterboard

vapour control layer

thermal insulation

OSB sheathing

**Protect TF200 Thermo
Breather Membrane**

drained and vented
50mm cavity

outer leaf of masonry

Improvement in thermal resistance values using Protect TF200 Thermo

Wall	Airspace (mm)	Unventilated airspace: No special treatment (m ² K/W)	Protect TF200 Thermo facing into airspace (m ² K/W)	Improvement with Protect TF200 Thermo
Heat flow horizontal	>20	0.18	0.77*	272%

inner lining of
plasterboard

low emissivity
service cavity

Protect VC Foil
(reflective surface facing void)

thermal insulation

OSB sheathing

**Protect TF200 Thermo
Breather Membrane**

drained and vented
50mm cavity

outer leaf of masonry

Performance

	MD	CD
Nail Tear Strength (N) to EN 12310-1 with modifications	160	160
Tensile Strength (N/50mm) to EN 12311-1 with modifications	229	226
Elongation (%) to EN 12311-1 with modifications	65	65
Water vapour resistance (MNs/g) to BS EN ISO 12572		0.55
Thermal Resistance (W/m ² K)		0.77
Weight (g/m ²)		140

*Independently tested by National Physical Laboratories (NPL) in a typical UK house timber frame wall construction



Timber frame construction incorporating Protect TF200 Thermo

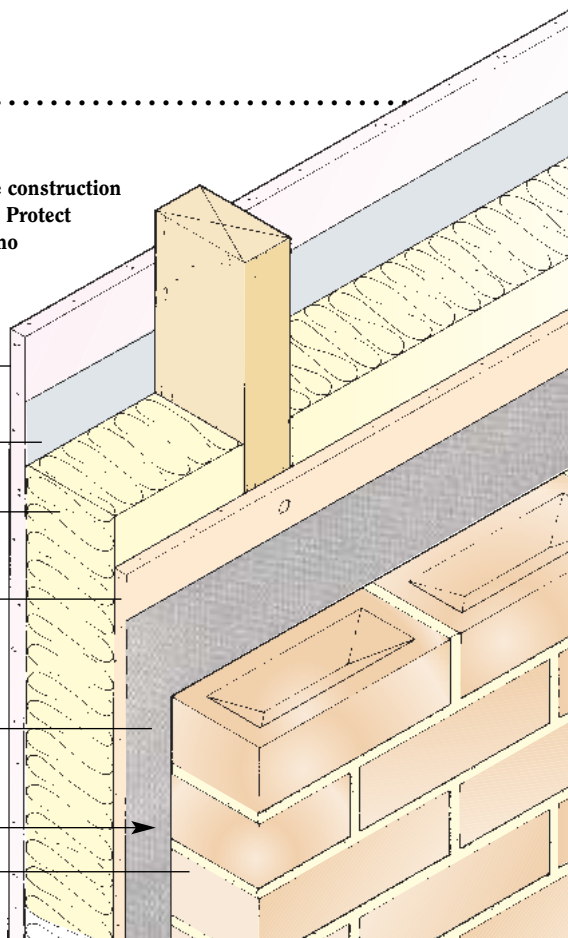


Table 1

89mm stud in timber frame

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.060	0.060	0.060
Vapour control layer	-	-	-	-
Timber frame (Insulation between studs)	89.0mm	2.781	2.543	2.225
OSB sheathing	9.0mm	0.069	0.069	0.069
TF200 Thermo Breather Membrane				
Low emissivity cavity	50.0mm	0.770	0.770	0.770
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
Total	263.0mm	3.171	3.066	2.913
U-value W/m ² K (rounded)		0.30	0.31	0.33

140mm stud in timber frame

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.060	0.060	0.060
Vapour control layer	-	-	-	-
Timber frame (Insulation between studs)	140.0mm	4.375	4.000	3.500
OSB sheathing	9.0mm	0.069	0.069	0.069
TF200 Thermo Breather Membrane				
Low emissivity cavity	50mm	0.770	0.770	0.770
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
Total	314.0mm	4.299	4.134	3.894
U-value W/m ² K (rounded)		0.22	0.23	0.25

Timber frame construction incorporating Protect TF200 Thermo and Protect VC Foil

This form of construction provides the added benefit of a service cavity on the warm side of the insulation. Services such as electrics and plumbing can use this space without compromising the integrity of the vapour control layer.

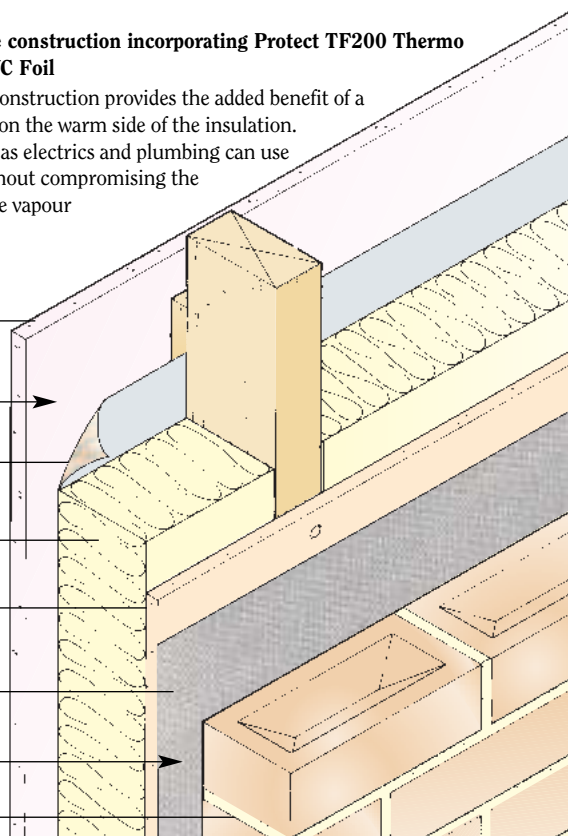


Table 2

89mm stud in timber frame

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.060	0.060	0.060
Low emissivity service cavity	20.0mm	0.780	0.780	0.780
Protect VC Foil				
Timber frame (Insulation between studs)	89.0mm	2.781	2.543	2.225
OSB sheathing	9.0mm	0.069	0.069	0.069
TF200 Thermo Breather Membrane				
Low emissivity cavity	50.0mm	0.770	0.770	0.770
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
Total	283.0mm	3.773	3.668	3.516
U-value W/m ² K (rounded)		0.25	0.26	0.27

140mm stud in timber frame

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.060	0.060	0.060
Low emissivity service cavity	20.0mm	0.780	0.780	0.780
Protect VC Foil				
Timber frame (Insulation between studs)	140.0mm	4.375	4.000	3.500
OSB sheathing	9.0mm	0.069	0.069	0.069
TF200 Thermo Breather Membrane				
Low emissivity cavity	50.0mm	0.770	0.770	0.770
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
Total	334.0mm	4.902	4.736	4.497
U-value W/m ² K (rounded)		0.19	0.20	0.21

OTHER PRODUCTS



Other products in the Protect range of high performance roofing underlays and membranes include:

Protect TF200 Breather Membrane for timber frame construction, available in anthracite, blue, red and green in 2.7m and 3.0m wide rolls.

Protect VC Foil insulating vapour control layer to enhance the thermal performance of walls, ceilings and floors.

Protect A1 and Wunderlay high performance impermeable roofing underlays, the modern alternative to Bitumen 1F felt.

Protect VP400 and Zytec high performance vapour permeable roofing underlays for use in warm or cold pitched roof applications.

Protect BarriAir high performance coated non-woven membranes which provides a highly effective air leakage barrier along with vapour control qualities.

Protect 200 Façade high performance, heavy duty and durable non-woven vapour permeable membrane, specifically designed for use in open cladding applications.

Glidevale also market a wide range of other building products including:

Roof ventilation and accessory products

Sunscoop Tubular Rooflights

Metro Modular Rooflights

Loft Access Traps

Underfloor and Cavity Wall Vents



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Glidevale Limited maintains a policy of continuous development and reserves the right to amend product specifications without notice.

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