

**TF200 THERMO  
INSULATING BREATHABLE MEMBRANE**

**protect**  
**TF200 Thermo**

**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 962 7113 Fax: 0161 905 2085. Email: info@glidevale.com. Breather membrane to be of triple ply construction with non-woven core, a permeable aluminium foil layer and a further LDPE corrosion resistant layer, with a hemispherical emissivity of 0.05 and 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

### Composition

Protect TF200 Thermo includes a tough non-woven PP core with a durable bright high purity aluminium foil and a further LDPE layer which are thermally bonded together.

### Size

Roll sizes 2.7 and 3.0m x 100m (270 and 300m<sup>2</sup>) 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 is calculated to BS EN ISO 6946:1997 "Thermal resistance and thermal transmittance - calculation method".

### 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 <sup>2</sup> K/W)	Protect TF200 Thermo facing into airspace (m <sup>2</sup> K/W)	Improvement with Protect TF200 Thermo
Heat flow horizontal	>20	0.18	0.67	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

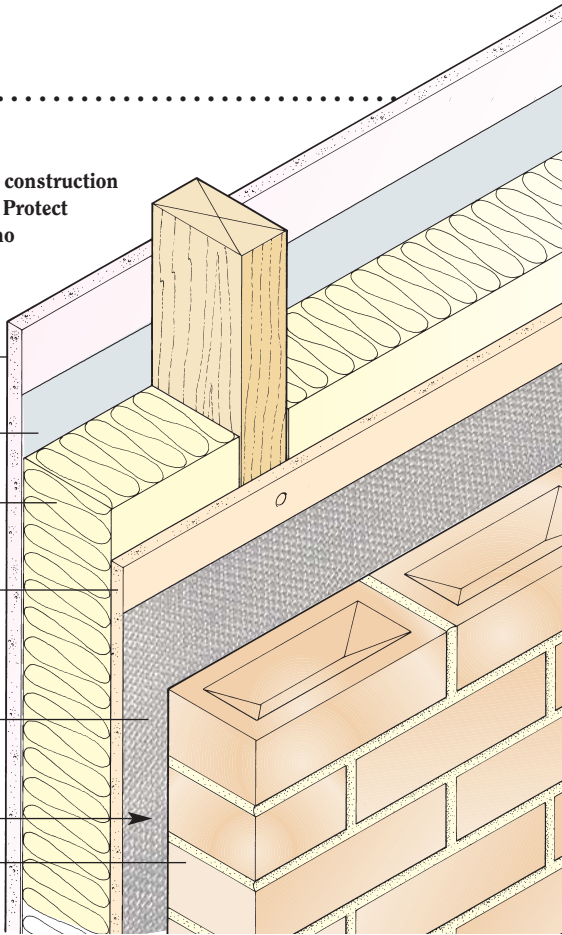
outer leaf of masonry

### Performance

	MD	CD
Nail Tear Strength (N) to EN 12310-1 with modifications	150	150
Tensile Strength (N/50mm) to EN 12311-1 with modifications	185	170
Elongation (%) to EN 12311-1 with modifications	65	65
Water vapour resistance (MNs/g) to BS EN ISO 12572		0.55
Surface emissivity to EN 12898: 2001		0.05



**Timber frame construction incorporating Protect TF200 Thermo**

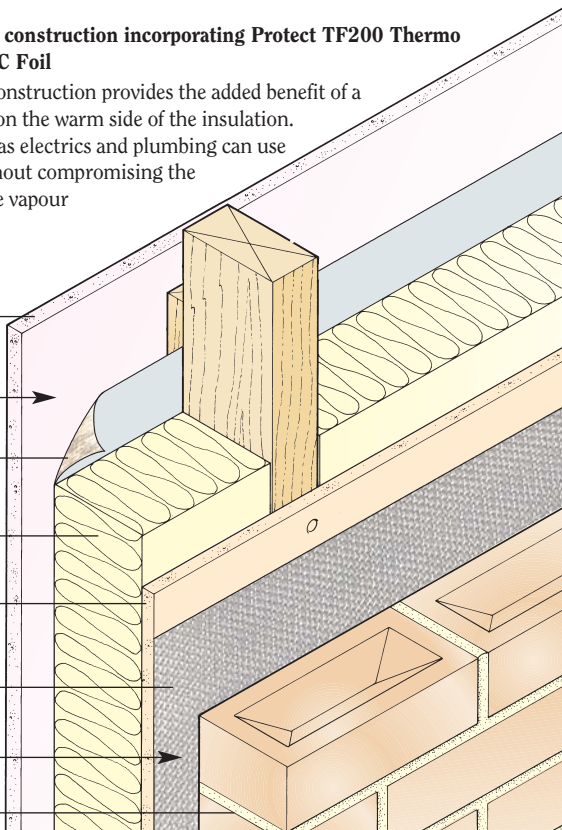


Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
<b>115mm stud in timber frame</b>				
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.068	0.068	0.068
Vapour control layer	-	-	-	-
Timber frame (Insulation between studs)	115.0mm	3.594	3.286	2.875
OSB sheathing	9.0mm	0.069	0.069	0.069
<b>TF200 Thermo Breather Membrane</b>				
Low emissivity cavity	50.0mm	0.670	0.670	0.670
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
<b>Total</b>	<b>289.0mm</b>	<b>4.704</b>	<b>4.396</b>	<b>3.985</b>
U-value W/m <sup>2</sup> K (rounded)		0.26	0.27	0.29

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
<b>140mm stud in timber frame</b>				
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.068	0.068	0.068
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
<b>TF200 Thermo Breather Membrane</b>				
Low emissivity cavity	50.0mm	0.670	0.670	0.670
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
<b>Total</b>	<b>314.0mm</b>	<b>5.485</b>	<b>5.110</b>	<b>4.610</b>
U-value W/m <sup>2</sup> K (rounded)		0.23	0.24	0.26

**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.



Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
<b>115mm stud in timber frame</b>				
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.068	0.068	0.068
Low emissivity service cavity	20.0mm	0.670	0.670	0.670
<b>Protect VC Foil</b>				
Timber frame (Insulation between studs)	115.0mm	3.594	3.286	2.875
OSB sheathing	9.0mm	0.069	0.069	0.069
<b>TF200 Thermo Breather Membrane</b>				
Low emissivity cavity	50.0mm	0.670	0.670	0.670
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
<b>Total</b>	<b>309.0mm</b>	<b>5.374</b>	<b>5.066</b>	<b>4.655</b>
U-value W/m <sup>2</sup> K (rounded)		0.23	0.24	0.25

Description	Thickness	Insulation lambda value		
		0.032	0.035	0.040
<b>140mm stud in timber frame</b>				
Rsi	-	0.130	0.130	0.130
Plasterboard	12.5mm	0.068	0.068	0.068
Low emissivity service cavity	20.0mm	0.670	0.670	0.670
<b>Protect VC Foil</b>				
Timber frame (Insulation between studs)	140.0mm	4.375	4.000	3.500
OSB sheathing	9.0mm	0.069	0.069	0.069
<b>TF200 Thermo Breather Membrane</b>				
Low emissivity cavity	50.0mm	0.670	0.670	0.670
Brick outer leaf	102.5mm	0.133	0.133	0.133
Rse	-	0.040	0.040	0.040
<b>Total</b>	<b>334.0mm</b>	<b>6.155</b>	<b>5.780</b>	<b>5.280</b>
U-value W/m <sup>2</sup> K (rounded)		0.20	0.21	0.22

## 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.

**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



### GLIDEVALE LIMITED

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

**BPD**

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