

# Reflectashield TF 0.81

## REFLECTIVE BREATHER MEMBRANE

Reflectashield TF 0.81 is a vapour permeable low emissivity membrane specifically designed to enhance the thermal performance of timber and steel frame structures. Reflectashield TF 0.81 is a non-woven polypropylene film laminate, providing excellent breathability, as well as secondary protection to the building during construction. The product is installed on the external face of the timber frame, foil side face out, similar to that of a traditional breather membrane but with added thermal benefits.

The A. Proctor Group are constantly reviewing their product portfolio to keep up with current legislation. The A. Proctor Group have re-tested Reflectashield TF at the National Physics Laboratory (NPL) resulting in an increase of the claimed thermal performance to 0.81 m<sup>2</sup>K/W R-value.

The resulting increase in thermal performance does not affect any of the high performance characteristics afforded by the use of Reflectashield TF 0.81.

Reflectashield TF 0.81 complies with the vapour resistance requirements set out by BS 4016, TRADA and the NHBC. The existing legislation requires a breather membrane to have a vapour resistance not greater than 0.60 MNs/g. Reflectashield TF 0.81 has a vapour resistance of 0.41 MNs/g.

The A. Proctor Group can provide a range of solutions, with U-values, down to as low as 0.17W/m<sup>2</sup>K in standard timber frame walling applications.

To maximise the thermal efficiency of the Reflectashield TF 0.81, the time of exposure should be kept to a minimum. However the membrane will maintain the function of a breather membrane in terms of water hold out for up to three months exposure.

Reflectashield TF 0.81 must be covered as soon as practically possible on completion of installation. Any damaged areas should be repaired or replaced before completion.

### PHYSICAL PROPERTIES

Property	Test Method	Mean Results	
Roll Sizes	n/a	1.45m x 50m 2.7m x 100m	
Mass per unit area	EN 1849-2	134g/m <sup>2</sup> (+/- 13 g/m <sup>2</sup> )	
Reaction to Fire	EN 13501-1	Class D*	
Water vapour resistance Sd	EN 1931	0.083 m (+/-0.011)	
Water penetration	EN 1928	Class W2 (Before and After ageing)	
Tensile strength	Before ageing: After ageing:	EN 12311-1	MD 230N MD 190N CD 150N CD 130N
Elongation	Before ageing: After ageing:	EN 12311-1	MD 60% (+/-20%) MD 45% (+/-20%) CD 80% (+/-20%) CD 50% (+/-20%)
Nail Tear resistance	EN 12310-1	MD 160N	CD 160N
Flexibility at low temperature	EN 1109	No cracking at minus 40°C	
Air Permeability	EN 12114	11.4 m <sup>3</sup> /m <sup>2</sup> /hr (at 50 Pa)	

\*When tested to EN 11925-2



### KEY BENEFITS

- > **R value 0.81** as tested by NPL.
- > Competitively priced.
- > Enhanced foil surface.
- > Unique patented three layer composition.
- > Low vapour resistance - complies with BS4016, TRADA and NHBC requirement.
- > Water resistant.
- > High strength to weight ratio.
- > Improved thermal resistance.
- > 1.45 & 2.7 metre wide rolls.
- > UK manufactured ensuring consistent supply.
- > Custom printed material available on request.

# Reflectatherm Plus

## REFLECTIVE VAPOUR CONTROL LAYER

Reflectatherm Plus is a reflective, high resistance vapour barrier for internal walls, ceilings and floors, specifically designed to enhance the thermal performance when placed on the warm side of the insulation.

The membrane should be installed with the foil side facing the cavity. In ceilings the product is placed between the underside of the rafters and the ceiling lining. In floors the product is placed on top of the structural decking or insulation (where present) and below any screed or sensitive floor coverings. Adjacent sheets should be lapped by at least 50mm and sealed with a suitable tape. Minimise penetrations caused by services and seal all joints.

### Key Benefits

- R value of 0.78 m<sup>2</sup>K/W when used with a minimum 19mm service cavity.
- High vapour resistance.
- Improved airtightness.
- Creates service void.
- Creates an unbroken vapour control layer.
- Sd Value of 150m.
- Vapour Resistance 750 MNs/g.
- Help meets the requirements of the Part L in England and Wales, Section 6 in Scotland.



### PHYSICAL PROPERTIES

Property	Test Method	Mean Results	
Roll Size - Standard Roll Size - with integrated tape	n/a	1.5m x 50m, 2.7m x 100m & 3m x 100m 1.5m x 50m	
<b>Base Membrane</b>			
Mass per unit area	EN 1849-2	150g/m <sup>2</sup>	
Reaction to Fire	EN 11925-2	Class E*	
Water vapour resistance Sd	EN 1931	150m	
Vapour resistance	EN 1931	750 MN/sg	
Water penetration	EN 1928	Class W1 (Before and After ageing)	
Tensile strength	EN 12311-2	MD 255N/50mm (-60N)	CD 200N/50mm (-50N)
Elongation	EN 12311-1	MD 59% (-20%)	CD 70% (-20%)
Tear resistance	EN 12310-1	MD 164N (-55N)	CD 157N (-55N)
Flexibility at low temperature	EN 1109	No cracking at temperature minus 40°C	
Emissivity	BS EN 15976:2011	0.04	

\*When tested to EN 11925-2 over a rock wool substrate

### U Value - Performance Ready Reckoner

Stud	89mm					95mm					115mm					140mm					145mm				
	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*
Insulation kValue	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*	0.040	0.037	0.035	0.032	0.022*
Reflectashield TF	0.31	0.30	0.30	0.29	0.24	0.30	0.29	0.29	0.28	0.24	0.27	0.26	0.26	0.25	0.21	0.24	0.23	0.23	0.22	0.19	0.24	0.23	0.22	0.21	0.18
Reflectatherm Plus	0.33	0.32	0.31	0.30	0.25	0.32	0.31	0.30	0.29	0.24	0.28	0.27	0.27	0.23	0.21	0.25	0.24	0.23	0.22	0.19	0.24	0.23	0.23	0.22	0.18
Reflectashield TF & Reflectatherm Plus	0.27	0.26	0.26	0.25	0.22	0.26	0.26	0.24	0.24	0.21	0.24	0.23	0.23	0.22	0.19	0.21	0.21	0.20	0.19	0.16	0.21	0.20	0.20	0.19	0.16

■ 0.30 or above   
 ■ 0.23 - 0.29   
 ■ 0.22 or less

\*When utilising rigid insulation boards between studs, accommodation for services should be considered. The above calculations are based on fully filling the stud with insulation and the provision of a service cavity.

