

YBS Insulation

HIGH QUALITY PRODUCTS FOR THE BUILDING INDUSTRY

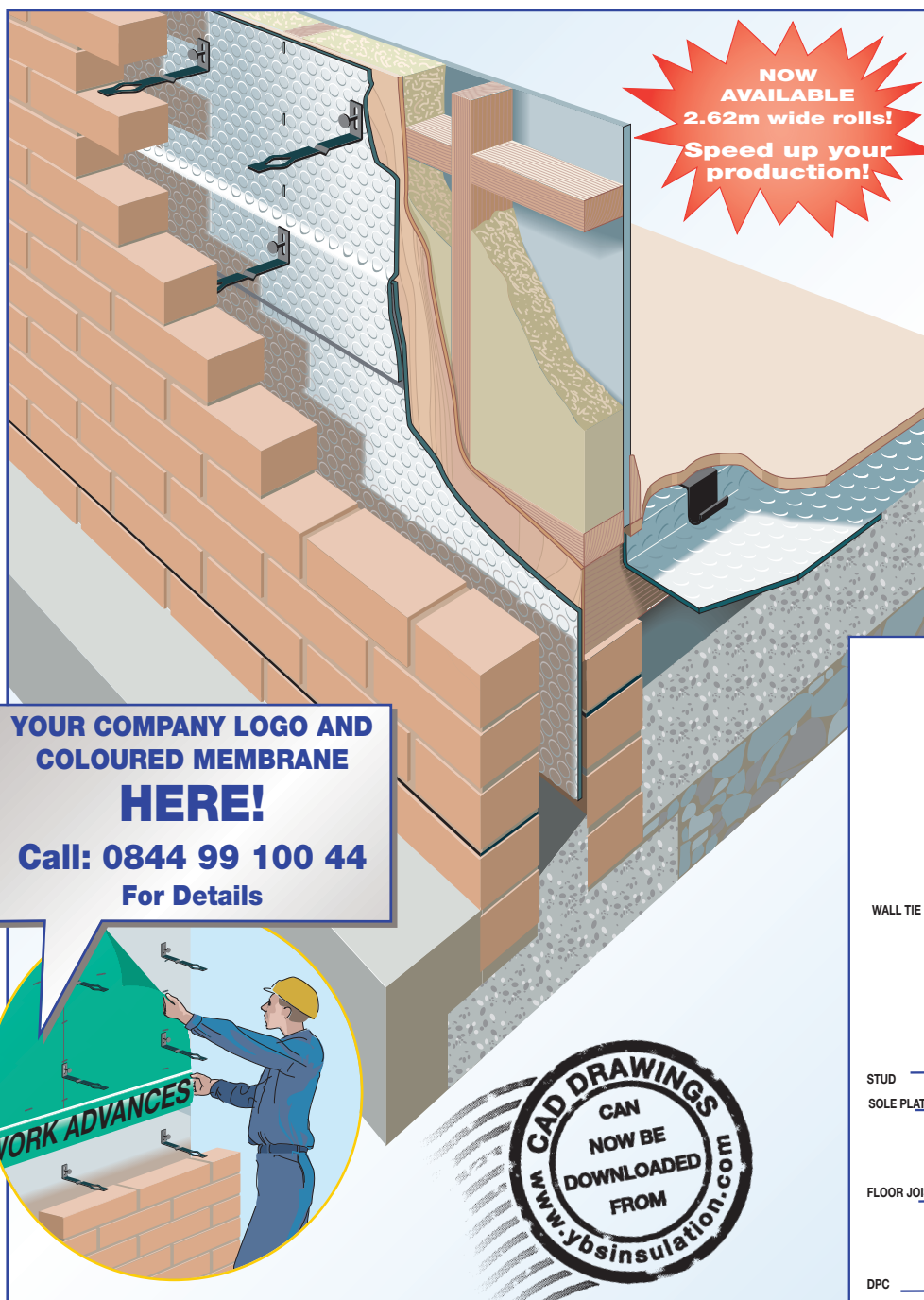


BDA Agrément No. BAKQW 10-01



Breather-Foil^{FR} INSULATING FIRE RETARDANT Breather Membrane

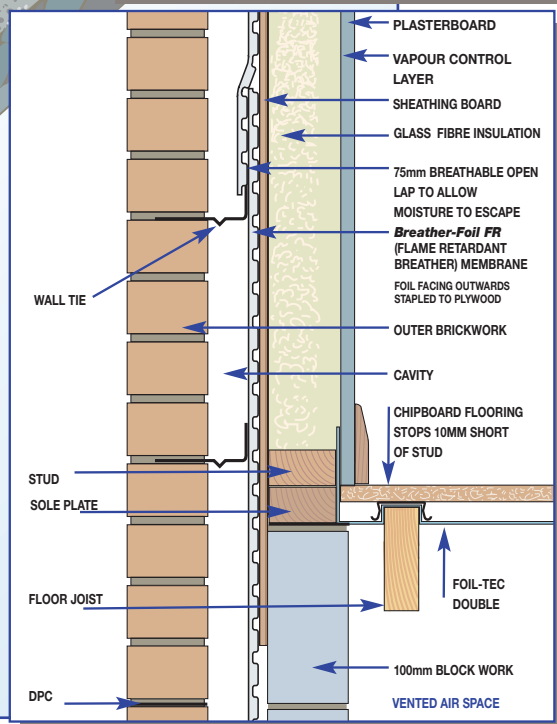
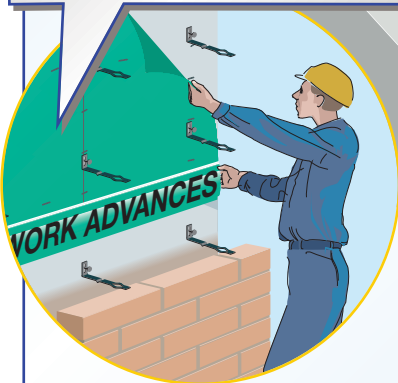
FOR TIMBER FRAME/ MODULAR HOUSING APPLICATIONS



NOW AVAILABLE
2.62m wide rolls!
Speed up your production!

- Meets 2010 Building Regulations
- NHBC Acceptance
- Out-performs Traditional Breather Membrane
- Independently Tested for Breathability
- Fully Waterproof
- Can Improve U-VALUE To 0.20 W/m²K! (See back page)
- FIRE RETARDANT**
- CFC/HCFC Free

YOUR COMPANY LOGO AND COLOURED MEMBRANE HERE!
Call: 0844 99 100 44
For Details



Specially developed for use in timber-frame and modular building construction, **Breather-Foil FR** can greatly increase the U-value of the timber-frame wall. Whether pre-fabricated or assembled on site, **Breather-Foil FR** can afford the designer and contractor maximum flexibility when detailing timber-frame walls, without the expense of thicker timber frames or higher priced materials.

The **Breather-Foil FR** timber-framed wall system creates a wind-tight, draught-free, weather-sealed, yet vapour-permeable enclosure, when used in conjunction with external cladding, such as tile-hanging, masonry or weather-boarding.

Breather-Foil FR is available with or without a removable coloured membrane (which can carry your company logo!).

Breather-Foil^{FR}

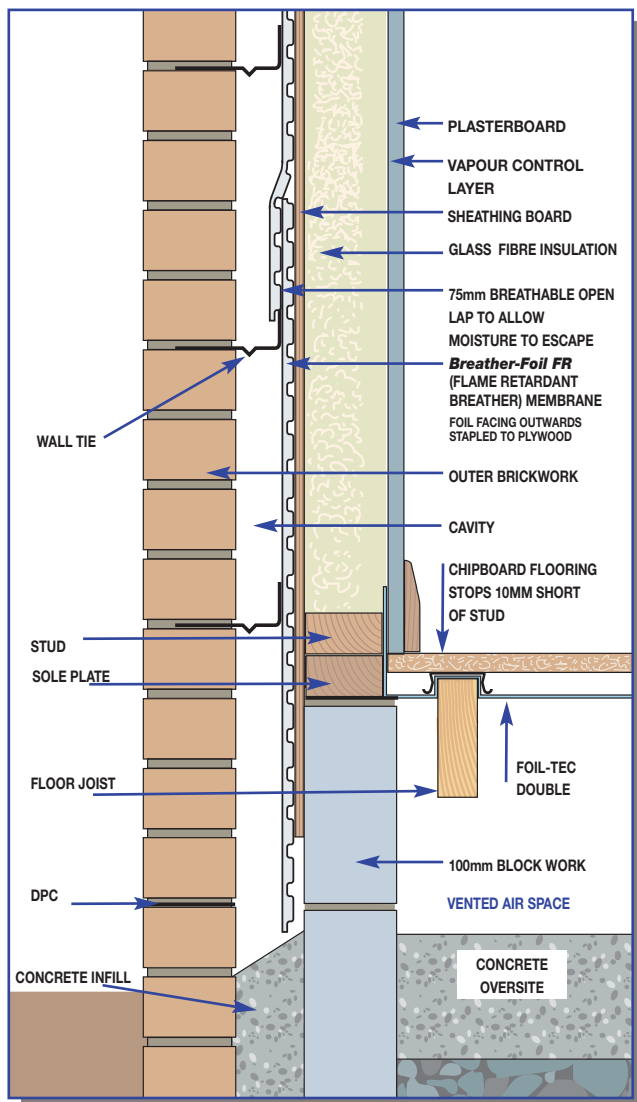
INSULATING FIRE RETARDANT Breather Membrane

FOR TIMBER FRAME/ MODULAR HOUSING APPLICATIONS

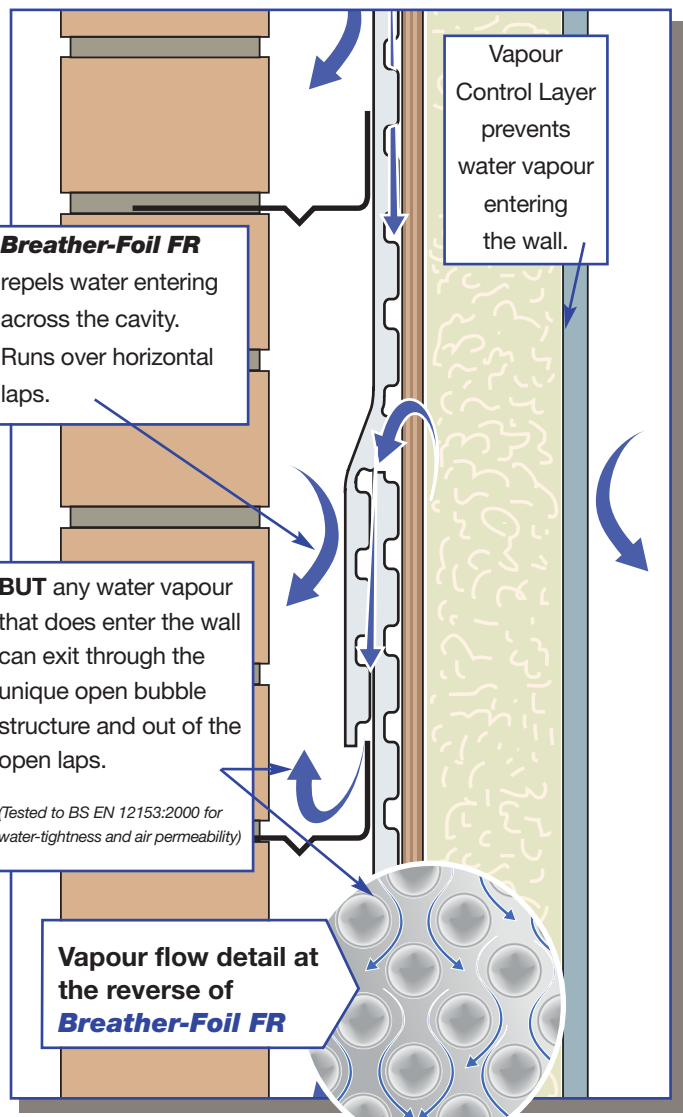
The **Breather-Foil FR** timber-frame wall system also offers the following installation benefits:

- **Breather-Foil FR** protects the timber frame components during construction
- **Breather-Foil FR** details and installation procedures apply regardless of cladding type
- **Breather-Foil FR** will protect the timber and insulation components from the elements

Breather-Foil FR - timber frame build up



Breather-Foil FR protects the timber frame



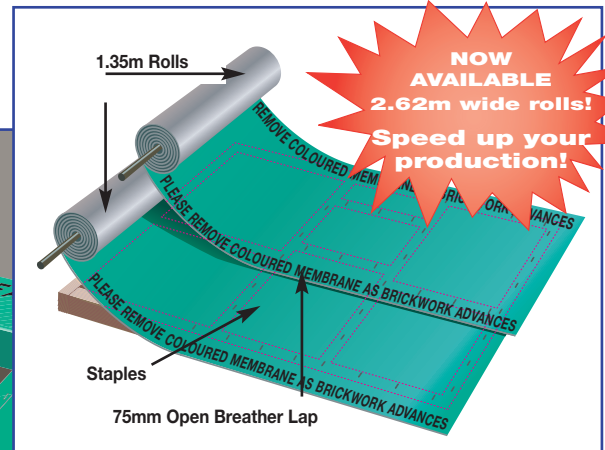
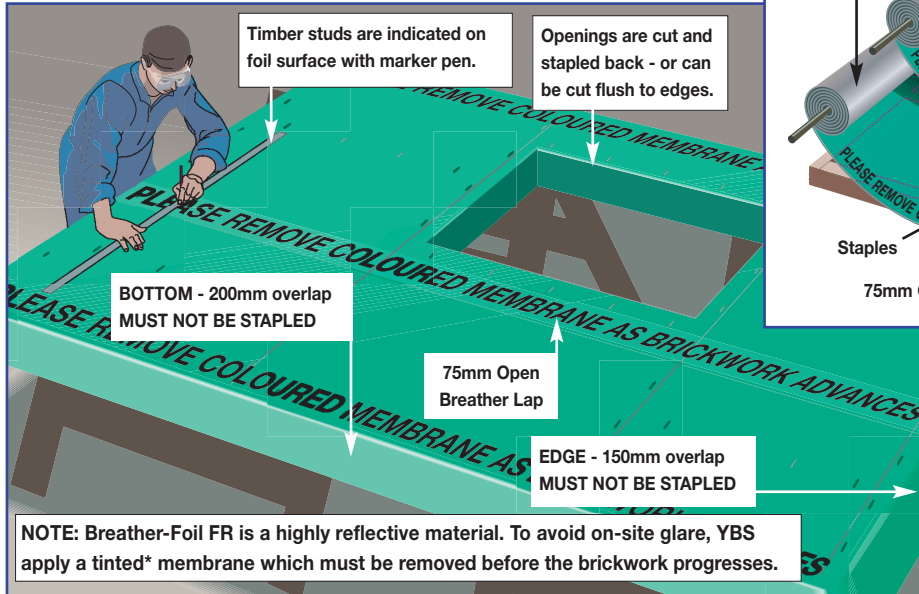
COMPREHENSIVE FIXING DETAILS ARE AVAILABLE UPON REQUEST

Breather-Foil FR INSTALLATION DETAILS

FACTORY ASSEMBLY

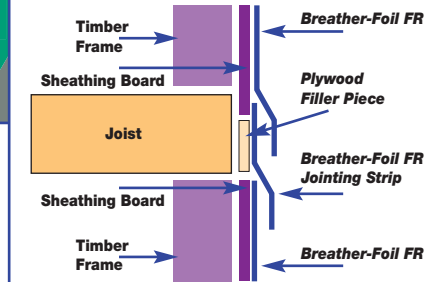
The timber framework is to be constructed with the sheathing board in position. **Breather-Foil FR** is rolled out into position and then stapled to the sheathing board. An overlap of 200mm must be allowed at the lower edge of the panel. This is to allow for coverage of the lower sole plate or upper floor joists. An overlap of 150mm must be allowed at the right hand edge of the panel. This is to allow for coverage and sealing of the vertical joint on assembled panels. The end overlap and the bottom overlap should not be stapled, but left loose for site fixing.

All mid panel horizontal joints have an overlap of 75mm. The upper layer must overlap the lower layer to allow any penetrating water to be dispersed to a safe outlet. These horizontal laps are to be left open to allow the panels to breathe. The location of the timber studs should now be highlighted with indelible ink to allow for future accurate positioning of the wall ties.



Floor Jointing

Where the floor joists are greater than 150mm, a **Breather-Foil FR** jointing strip of 270mm or 337mm is to be used. When stapling, ensure that the overlaps are **face downwards**.



Any window and door openings are to be cut out with the Breather-Foil FR and can now be turned inside the opening and fixed to the studwork or cut flush to the edges of the opening.

SITE WORK

Panels are erected in to position with the overlaps to the bottom and to the right (looking from outside). After fixing the panels, the vertical overlaps are stapled.

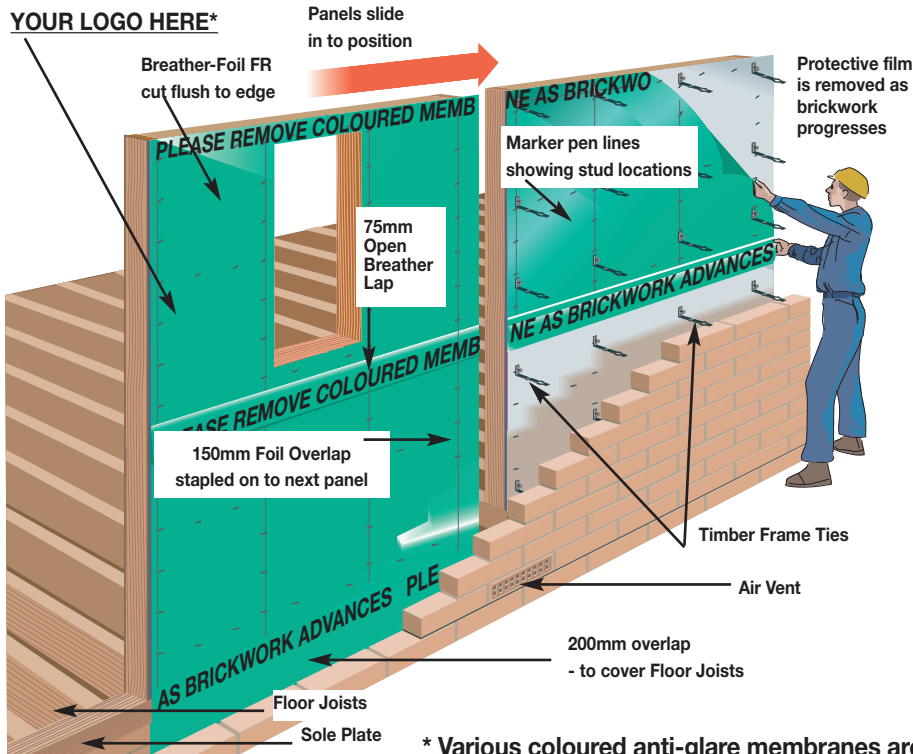
YBS Breather-Foil FR wall ties are fixed along the 'marked' vertical stud line as the external brick wall is built. The anti-glare membrane should be peeled off over the ties as the brick work progresses.

SITE WORK EXTERIOR

If left exposed use edge battens fixed all around the perimeter to help prevent wind lifting and damaging the **Breather-Foil FR** in extreme conditions.

STACKING/TRANSPORT

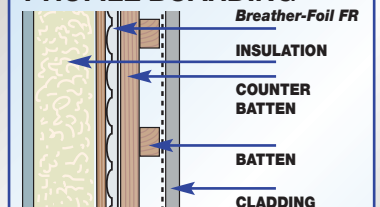
Stack and strap the panels, for transport, as normal. The bubbles compress slightly under load but **DO NOT** burst. They will reform once the panel is erected. The smooth surface of BF-FR means the timber panels slide off each other resulting in less damage.



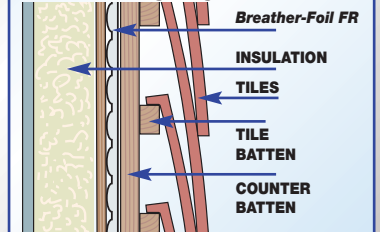
CLADDINGS FOR TIMBER-FRAMED WALL SYSTEMS

Breather-Foil FR can be used in conjunction with most external claddings, such as tile-hanging, masonry or weather-boarding, as shown below.

PROFILE BOARDING



TILE HANGING



* Various coloured anti-glare membranes are available - call: 0844 99 100 44

Technical Data - Breather-Foil FR U-Values

With Mineral Wool				A			B			C					
				U-Value to 0.25			U-Value C to 0.23			U-Value B to 0.22					
				140mm stud - standard glass fibre			140mm stud - rock fibre			140mm stud - high performance glass fibre					
	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)			
Outside surface resistance	-	-	0.060	-	-	0.060	-	-	0.060	-	-	0.060			
Brick, External	102.50	0.770	0.133	102.50	0.770	0.133	102.50	0.770	0.133	102.50	0.770	0.133			
	bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)					
BF-FR Cavity	50.00	-	0.649	50.00	-	0.649	50.00	-	0.649	50.00	-	0.649			
BF-FR Bubble	4.00	-	0.121	4.00	-	0.121	4.00	-	0.121	4.00	-	0.121			
Sheath board	9.00	0.130	0.069	9.00	0.130	0.069	9.00	0.130	0.069	9.00	0.130	0.069			
Mineral fibre	140.00	0.040	3.500	140.00	0.035	4.000	140.00	0.032	4.375	140.00	0.032	4.375			
	bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)					
Vapour control layer	-	-	-	-	-	-	-	-	-	-	-	-			
Plasterboard	12.50	0.190	0.066	12.50	0.190	0.066	12.50	0.190	0.066	12.50	0.190	0.066			
Inside surface resistance	-	-	0.120	-	-	0.120	-	-	0.120	-	-	0.120			
U-value, Combined Method:				0.25W/m²K			U-value, Combined Method:			0.23W/m²K			U-value, Combined Method:		
										0.22W/m²K					

With PIR				D			E			F					
				U-Value of 0.25			U-Value of 0.21			U-Value of 0.20					
				140mm stud - 80mm PIR			140mm stud - 100mm PIR			140mm stud - 110mm PIR+ Foiltec VCL					
	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)			
Outside surface resistance	-	-	0.060	-	-	0.060	-	-	0.060	-	-	0.060			
Brick, External	102.50	0.770	0.133	102.50	0.770	0.133	102.50	0.770	0.133	102.50	0.770	0.133			
	bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)			bridged by 17.2% Mortar (102.5mm)					
BF-FR Cavity	50.00	-	0.649	50.00	-	0.649	50.00	-	0.649	50.00	-	0.649			
BF-FR Bubble	4.00	-	0.121	4.00	-	0.121	4.00	-	0.121	4.00	-	0.121			
Sheathing board	9.00	0.130	0.069	9.00	0.130	0.069	9.00	0.130	0.069	9.00	0.130	0.069			
PIR	80.00	0.023	3.478	100.00	0.023	4.348	110.00	0.023	4.783	110.00	0.023	4.783			
Stud Cavity	60.00	-	0.340	40.00	-	0.340	30.00	-	0.665	30.00	-	0.665			
	bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)			bridged by 15% Timber (140.0mm)					
Vapour control layer	-	-	-	-	-	-	-	-	-	-	-	-			
Plasterboard	12.50	0.190	0.066	12.50	0.190	0.066	12.50	0.190	0.066	12.50	0.190	0.066			
Inside surface resistance	-	-	0.120	-	-	0.120	-	-	0.120	-	-	0.120			
U-value, Combined Method:				0.25W/m²K			U-value, Combined Method:			0.22W/m²K			U-value, Combined Method:		
										0.20W/m²K					

Many U-value combinations are available. All U-values using Combined Method - timber content at 15%. Other materials to BRE conventions for U-values or using manufacturers' certified data. Mineral fibre to new European CE marking.

Hygrothermal research

by the BRE and supervised by TRADA - and BDA

Breather-Foil FR

was subjected to extreme internal and external conditions and left for an extended period of time. Moisture content of the timber structure was well within acceptable limits.

Rainscreen/Watertightness

Breather-Foil FR has been successfully tested for water tightness and is an effective rainscreen.

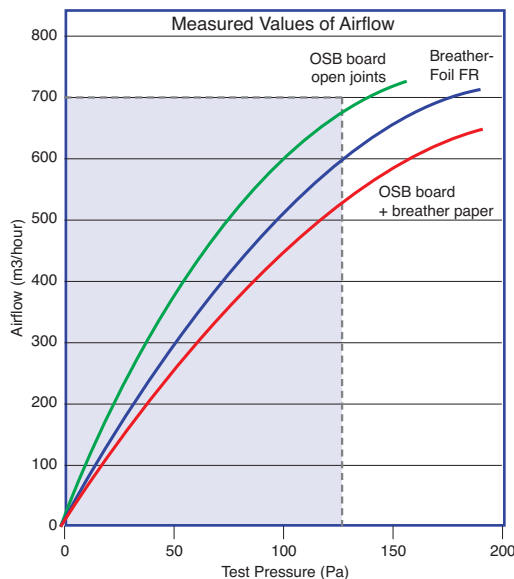
(EN 1254:1999 Class R5).

Please contact

YBS Technical on:
0871 917 0044 for more information.

Construction Type

Element:	Wall
Exposure:	Normal
Internal surface emissivity:	High
External surface emissivity:	High
Building use:	BS5250 dry/ moist occupancy



In airflow tests by the BRE, Breather-Foil FR allowed more air out than a standard breather membrane.

Breather-Foil FR - Technical Specification

The investigation on thermal performance has been performed according to EN 12667: 'Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Product of high and medium thermal resistance (2001-02)'. This meets all requirements of BR443 for use as a thermal insulation

Breather-Foil FR Bubble	0.121 m ² K/W
Breather-Foil FR Cavity	0.649 m ² K/W
Breather-Foil FR - Total Thermal Resistance	0.770 m ² K/W
Vapour Resistance	0.40 MNs/g
Installed air permeability at 50Pa BS EN 12153:	54m ³ / m ² (24hr)
Nail Tear Resistance BS4016 (wet & dry)	0 min 70N
Environmental	CFC & HCFC Free
Dimensions	
Thickness	4mm
Width	1350mm/2620mm
Length	50m/25m
Jointing Strip (to suit truss depth)	270, 337, 450mm x 50m
Foil Tape	50m x 75mm (24 rolls/box)

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