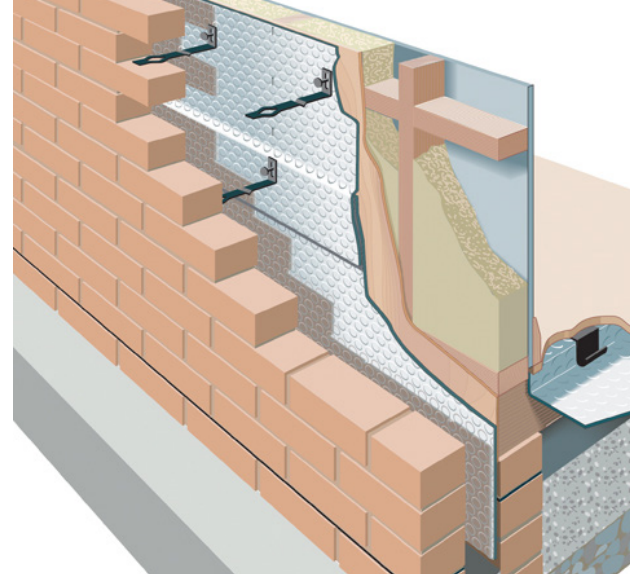# Breather-Foil^{FR}

INSULATING ALUMINIUM FOIL REFLECTIVE VENTING MEMBRANE.

Specifically designed for timber frame and modular building applications.

- Dual purpose 2-in-1 insulating and breathable venting membrane.
- Effectively reflects heat back out of the room, whilst allowing moisture to pass through.
- Quick and easy to install.
- Excellent tensile and tear resistance strength.
- 2 layer build-up & only 4mm thick.

- Equivalent to 30mm of polystyrene.
- Can reduce the depth of a timber frame from 140mm to 89mm.
- Zero fibres removes the need for PPE.
- Fully certified to industry standards.
- UV stable and weather resistant.

Breather-Foil^{FR}

The worlds first alternative breathable venting membrane, replacing traditional non woven breathable membranes. Our patented design has been specially developed for use in timber-frame and modular building constructions.

When installed into an unventilated cavity BreatherFoil FR effectivly blocks infra red radiation, enhancing the thermal performance of timber frame wall and increasing the overall U-value.

Whether pre-fabricated or assembled on site, BreatherFoil 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.

No Condensation
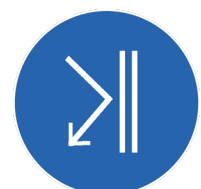Eliminates condensation, allowing moisture to pass through the membrane.

High Thermal Value
R-Value of (0.786 m^{2}K/W) Equivalent to 30mm of EPS Polystyrene.

Quick & Easy
Flexible and easy to install, saving you time.

Reduces Cold Bridging
Air rated bubble core, reduces the transmission of cold bridging.

Breather-Foil FR

Fully tested and accredited to industry standards, giving peace of mind to specifiers and installers alike.

Our certification includes:

How Breather-Foil FR Works

Breather-Foil FR is only 4mm thick and comprises of 2 layers, manufactured at our UK factory, using high quality performing raw materials.

The core of the product is a bubble structure, formed using LDPE which contains an FR additive Each pocket of air offers high thermal performance and reduces the risk of cold bridging.

The external layer is manufactured using highly reflective insulation grade aluminium foil, the surface of which is coated with a protective lacquer, preventing corrosion and loss of performance.

Our patented design effectively allows timber frame constructions to breathe through the unique overlaping and venting method. Breather-Foil FR gives you a breathable and a high thermal efficient product with an over all thermal resistance value of 0.786 (m^2 K/W), equivalent to approximately 30mm EPS (expanded polystyrene) insulation.

It has been proven in use for many years within the timber frame construction industry, providing weather protection and high thermal performance.

Performance attributes.

MECHANICAL PROPERTIES

Thermal Performance	Value	Standard
Core	0.121m²K/W	BS EN 16012
Core + 1 Airspaces	0.786m²K/W	BS EN 6946
Flammability	Class E	BS EN 13501-1
Water Vapour Resistance	0.40 MNs/g	BS EN 12572
Emission Coefficients of surfaces	0.05	BS EN 16012
Nail Tear Resistance	70N	BS EN 12310-1

PRODUCT DETAILS

Layers	2
Thickness (mm)	4
Weight (g/m²)	183
Roll Width (mm)	1350
Roll Length (m)	25 / 50
Roll Area (m²)	33.75/ 67.5
Roll Weight (Kg)	6.5 / 12.5

Breather-Föil^{FR}

Breather-Foil FR, 2 in 1 insulating venting membrane.

The worlds first alternative insulating and breathable venting membrane, replacing traditional non-woven breathable membranes.

General Installation:

Start installing BreatherFoil-FR from the bottom of the wall, it should be rolled out (horizontally) into position directly to the external timber boarding and then stapled (using 14mm staples) at minimum intervals of 300mm.

Vertical joints are to be over lapped by 100mm, then taped and sealed using YBS Aluminium Foil Tape.

Start the next layer of Breather-Foil FR, horizontal joints are to be over lapped by 75mm (these over laps are to be left untapped to allow for breathability/venting).

Seal the vertical perimeter of Breather-Foil FR using YBS Aluminium Foil Tape, leaving the top and bottom perimeter untaped (to allow for breathability/venting).
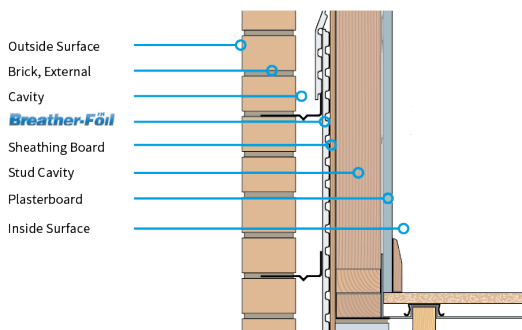
Timber cladding and tiled external finishes:

Apply a layer of timber battens (minimum 25mm) at a minimum of 400mm centres.

Brick and block external finishes:

Maintain a minimum cavity of 50mm, ensuring the outer brick or block is secured to the timber boarding using the correct ties.
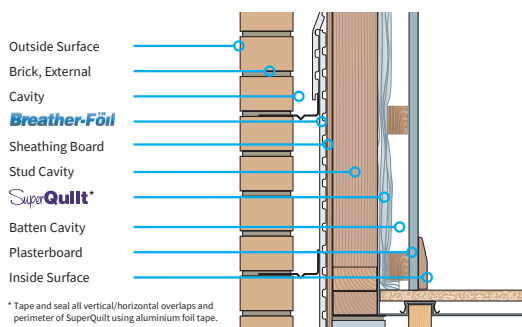
Finally apply the external finish in accordance with the manufacturers certification, fixing instructions and good building practice.

Example application:

- Outside Surface
- Brick, External
- Cavity
- Breather-Föil
- Sheathing Board
- Stud Cavity
- Plasterboard
- Inside Surface

Description (required insulation)	Min Timber Frame Depth	U-Value (W/m²K) (25mm Batten)
Standard Breather Membrane	89mm	1.10
BreatherFoil	89mm	0.68
BreatherFoil & 50mm Mineral Wool (0.035W/mk)	89mm	0.39
BreatherFoil & 60mm PIR (0.022W/mk)	89mm	0.28
BreatherFoil & 100mm Mineral Wool (0.035W/mk)	100mm	0.29
BreatherFoil & 100mm PIR (0.022W/mk)	100mm	0.24
BreatherFoil & 140mm Mineral Wool (0.032W/mk)	140mm	0.23

Example application:

- Outside Surface
- Brick, External
- Cavity
- Breather-Föil
- Sheathing Board
- Stud Cavity
- SuperQuilt *
- Batten Cavity
- Plasterboard
- Inside Surface

* Tape and seal all vertical/horizontal overlaps and perimeter of SuperQuilt using aluminium foil tape.

Description (required insulation)	Min Timber Frame Depth	U-Value (W/m²K) (25mm Batten)	(38mm Batten)
SuperQuilt & BreatherFoil	89mm	0.26	0.24
SuperQuilt (recessed), SuperQuilt (internal) & BreatherFoil	100mm	0.20	0.19
SuperQuilt, 50mm Mineral Wool (0.035W/mk) & BreatherFoil	89mm	0.21	0.20
SuperQuilt, 50mm Mineral Wool (0.035W/mk) & BreatherFoil	100mm	0.20	0.19
SuperQuilt, 50mm PIR (0.022W/mk) & BreatherFoil	89mm	0.19	0.18
SuperQuilt, 70mm PIR (0.022W/mk) & BreatherFoil	100mm	0.17	0.16

For more information on installation or the required amounts of insulation needed to meet your target U-Value, visit our website www.ybsinsulation.com or contact our technical team on 01909 726 025.