



# SuperQuilt

## TECHNICAL DATA SHEET

YBS SuperQuilt is a UK leading performer of reflective multi-foil insulation. UK manufactured with BDA Agrément approval, Superquilt provides outstanding thermal and vapour control properties.

**YBS** Insulation  
by **SOPREMA**

Yorkshire Building Services (Whitwell) Ltd,  
Craggs Industrial Park, Morven Street,  
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- ✓ **High thermal resistance of 3.0m<sup>2</sup>K/W**
- ✓ **UK manufactured**
- ✓ **2 in 1 insulation and vapour control membrane**
- ✓ **NHBC acceptance**
- ✓ **Thermally tested in accordance with EN16012**
- ✓ **Quick and easy to install**
- ✓ **Reduces waste**
- ✓ **Flexible and easy to install**
- ✓ **Building Control compliant**
- ✓ **Non degradable maintaining thermal performance and integrity**
- ✓ **Unique, patented kimble design holds layers in place to avoid separation when cutting**

PRODUCT DETAILS		
Layers	19	
Thickness (mm)	40	
Weight (g/m <sup>2</sup> )	800	
MECHANICAL PROPERTIES		
Thermal Performance	Value	Standard
Core	1.52m <sup>2</sup> K/W	BS EN 16012
Roof	2.50m <sup>2</sup> K/W	BS EN 6946
Wall	3.00m <sup>2</sup> K/W	BS EN 6946
Floor	4.45m <sup>2</sup> K/W	BS EN 6946
Flammability	Class F	BS EN 13501-1
Water Vapour Resistance	1596MNs/g	BS EN 12572
Emission Coefficients of surfaces	0.02	BS EN 16012
Tensile Strength	142KPA	BS EN 1608
PACKAGING		
Area	15m <sup>2</sup>	7.5m <sup>2</sup>
Width (m)	1.5	1.5
Length (m)	10	5
Weight (Kg)	12.5	6.25



**SuperQuilt** is a multi-purpose nineteen layer Insulation blanket suitable for roof, walls and floor applications. This versatile thermally efficient layered insulation is the ideal solution to all your insulation needs and will save valuable **time** and **cost** of your installation whilst providing energy savings and maximising living space.

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# ROOF INSULATION

## INSULATION FOR USE IN ROOFS

YBS SuperQuilt is flexible, easy to install, multi-foil insulation suitable for roofs, walls and floors. Made up of nineteen layers and only 40mm in thickness, the unique composition effectively deals with all forms of energy transfer. The unique patented technology allows the material to expand where necessary, increasing overall thermal performance.

## HOW DOES SUPERQUILT WORK?

Due to the special composition of multi-layers of insulation, SuperQuilt effectively deals with all forms of energy transfer (i.e. conduction, convection and radiation). SuperQuilt works most effectively by reflecting infra-red radiation. This means that not only is SuperQuilt effective in winter by reflecting heat back into the building and cold out, but also in summer SuperQuilt is a very effective barrier to solar overheating which reduces the need for artificial cooling systems as it prevents the accumulation of heat within the building.

## GENERAL FIXING INSTRUCTIONS

Installation of SuperQuilt for pitched roof applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt must be installed with a 50mm overlap with all joints taped with YBS 75mm foil tape.

SuperQuilt can be cut with a YBS SuperQuilt cutter, craft knife or a sharp pair of scissors.

SuperQuilt can be easily fixed with staples at regular intervals. Minimum 14mm stainless steel or galvanised staples are recommended.

SuperQuilt is most effective with a minimum 25mm air gap on either side. Battens can be used to create this gap. No protective clothing/handling required.

## BENEFITS

- **NHBC Acceptance**
- **Meets requirements of L1A and L1B 2010 addition**
- **In accordance with BR443**
- **Fully Agrément certified**
- **Thermally tested in accordance with EN16012**
- **High thermal resistance of 2.50m<sup>2</sup>K/W**
- **Effective solar over-heating barrier**
- **Effective in summer and winter**
- **Lightweight, thin & flexible**
- **Fast and simple installation**
- **High tear resistance**
- **For flat roofs and pitched roofs between 20° and 70°**



## Under Rafter Pitched Roof

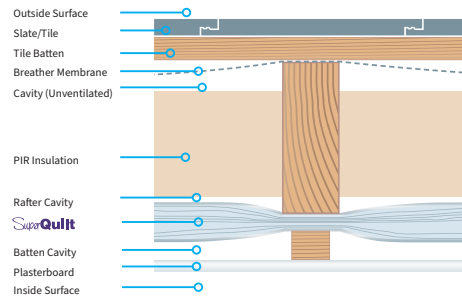
Our internal pitched roof insulation solution is a quick and efficient method of insulating your pitched roof project.

Installing a layer of SuperQuilt internally removes the need for a vapour control layer, increases the overall thermal efficiency of the pitched roof and increases the internal space available due to its ultra-thin profile.

SuperQuilt can be used on its own or with traditional insulation such as PIR or mineral wool between the rafters.

Alternatively, multiple layers of SuperQuilt can be used to achieve your desired U-Value, for more information speak to our technical support team on 01909 726 025

### Example Construction



## Fixing Instructions

Installation of SuperQuilt for under rafter applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt is applied directly from the roll either vertically or horizontally depending on the rafter height, pulled tight and stapled onto the rafters at minimum 300mm centres.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the rafters, the joints should be sealed using YBS Foil Tape.

Additionally, at the eaves SuperQuilt is cut around the rafters and sealed to the Cavity wall insulation or wall plate.

Fix 25mm by 38mm battens at right angel to rafters. Battens must always be fixed around the perimeter of windows.

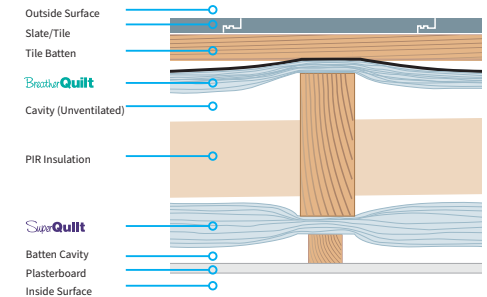
The plasterboard is fixed over the SuperQuilt and onto the battens in the usual manner. When installed below rafters SuperQuilt will perform as a vapour barrier.

### U-Value table (All calculations are based on 50mm rafters and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 75mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 130mm Glasswool (0.040 W/mK)	0.18 W/m²k
SuperQuilt and 110mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 140mm PIR (0.022 W/mK)	0.13 W/m²k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 70mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 120mm Glasswool (0.040 W/mK)	0.18 W/m²k
SuperQuilt and 95mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 125mm PIR (0.022 W/mK)	0.13 W/m²k

## Over Rafter/Under Rafter Pitched Roof

### Example Construction



## Fixing Instructions

SuperQuilt should be installed under rafter as per the instructions shown on page 05. BreatherQuilt should then be installed over rafter.

Installation of BreatherQuilt for pitched roof applications and additional insulation products should be in accordance with the manufacturer's certificate, fixing instructions and current good building practice.

Start at the bottom of the roof by rolling BreatherQuilt across the rafters and staple in to place, additional rolls should be butt jointed and sealed using waterproof tape. Tape a line of double sided tape along the top edge of the material.

Install the next layer of BreatherQuilt overlapping the material by 75mm, staple as before and then secure with the double sided tape, additional rolls should be butt jointed and sealed using waterproof tape

BreatherQuilt can be cut with craft knife or a sharp pair of scissors. Staple at regular intervals using minimum 14mm stainless steel or galvanized staples are recommended. No protective clothing/handling required.

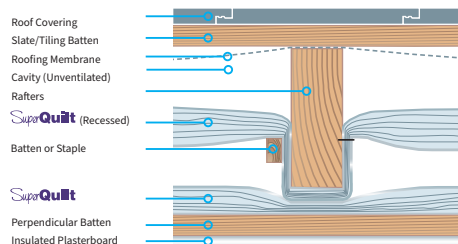
### U-Value table (All calculations are based on 50mm rafters and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt/40mm PIR (0.022 W/mk)/BreatherQuilt (Draped)	0.18 W/m²k
SuperQuilt/60mm Mineral Wool (0.035W/mk)/BreatherQuilt (Draped)	0.18 W/m²k
SuperQuilt/100mm PIR (0.022 W/mk)/BreatherQuilt (Draped)	0.13 W/m²k
SuperQuilt/150mm Mineral Wool (0.035W/mk)/BreatherQuilt (Draped)	0.13 W/m²k
Description (rafters at 600mm centres)	U-Value
SuperQuilt/40mm PIR (0.022 W/mk)/BreatherQuilt (Draped)	0.18 W/m²k
SuperQuilt/60mm Mineral Wool (0.035W/mk)/BreatherQuilt (Draped)	0.18 W/m²k
SuperQuilt/100mm PIR (0.022 W/mk)/BreatherQuilt (Draped)	0.13 W/m²k
SuperQuilt/150mm Mineral Wool (0.035W/mk)/BreatherQuilt (Draped)	0.13 W/m²k



## Two Layer Pitch Roof

### Example Construction



### Fixing Instructions

Installation of SuperQuilt for under rafter applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

For recessed installation please see page 12.  
For under rafter installation please see page 5 fixing

instructions.

When installing two layers of SuperQuilt a 38mm air space should be maintained between layers at all times.

### U-Value table (All calculations are based on 50mm rafters and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt (2 Layers) with 40mm insulated Plasterboard (XPS) (1.070 m <sup>2</sup> K/W)	0.18 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 50mm PIR (0.022 W/mK)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 57.5mm Insulated Plasterboard (PIR) (2.2 m <sup>2</sup> K/W)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 80mm PIR (0.022 W/mK)	0.13 W/m <sup>2</sup> k
Description (rafters at 600mm centres)	U-Value
SuperQuilt (2 Layers) with 40mm insulated Plasterboard (XPS) (1.070 m <sup>2</sup> K/W)	0.18 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 45mm PIR (0.022 W/mK)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 57.5mm Insulated Plasterboard (PIR) (2.2 m <sup>2</sup> K/W)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 70mm PIR (0.022 W/mK)	0.13 W/m <sup>2</sup> k

## Under Joist Flat Roof

### Fixing Instructions

Installation of SuperQuilt for under joist flat roof applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the joists, the joints should be sealed using YBS Foil Tape. When SuperQuilt is cut to fit around openings or connections, gaps must be minimized and any exposed cut edges should be sealed with YBS Foil Tape to prevent condensation.

SuperQuilt should be cut equal to the width of the roof section plus 100mm. Installation should start from the external wall with SuperQuilt being unrolled perpendicular to the joists, after which it is fixed using staples, nails or YBS saddle clips.

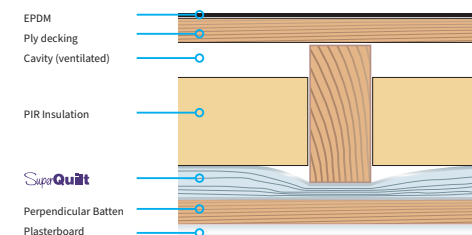
SuperQuilt should be held in place using timber battens or by other means as shown, in such a way that there is a nominal 25mm air cavity above the product (if applicable) and a nominal 25mm air cavity below. To minimize the effect of thermal bridging cross battening is advised.

When installed below joists SuperQuilt will perform as a vapour barrier.

### Example U-Value

U-Value Combined Method (W/m <sup>2</sup> K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m <sup>2</sup> K/W)
EPDM	-	-	-
Ply decking	-	-	-
Joist Cavity (ventilated)	50.00	-	0.170
Joist / PIR Insulation	100.00	0.022	4.545
SuperQuilt	14.00	-	1.520
Batten Cavity	25.00	-	0.490
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			6.891

### Example Construction



### U-Value table (All calculations are based on 50mm joists and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 160mm Mineral Wool (0.040 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 140mm Mineral Wool (0.033 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 180mm Mineral Wool (0.033 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 100mm PIR (0.022 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 135mm PIR (0.022 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 165mm PIR (0.022 W/mk)	0.13 W/m <sup>2</sup> k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 150mm Mineral Wool (0.040 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 125mm Mineral Wool (0.033 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 170mm Mineral Wool (0.033 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 90mm PIR (0.022 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 120mm PIR (0.022 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 145mm PIR (0.022 W/mk)	0.13 W/m <sup>2</sup> k

## Under Joist Flat Roof

### Fixing Instructions

Installation of SuperQuilt for under joist flat roof applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the joists, the joints should be sealed using YBS Foil Tape. When SuperQuilt is cut to fit around openings or connections, gaps must be minimized and any exposed cut edges should be sealed with YBS Foil Tape to prevent condensation. SuperQuilt should be cut equal to the width of the roof section plus 100mm. Installation should start from the external wall with SuperQuilt being unrolled perpendicular to the rafters, after which it is fixed using staples, nails or YBS saddle clips.

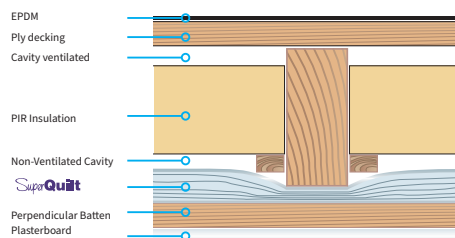
SuperQuilt should be held in place using timber battens or by other means as shown, in such a way that there is a nominal 25mm air cavity above the product (if applicable) and a nominal 25mm air cavity below. To minimize the effect of thermal bridging cross battening is advised.

When installed below joists SuperQuilt will perform as a vapour barrier.

#### Example U-Value

U-Value Combined Method (W/m²K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
EPDM	-	-	-
Ply decking	-	-	-
Cavity (ventilated)	50.00	-	0.170
Joist / PIR Insulation	90.00	0.022	4.091
Cavity (non-ventilated)	25.00	-	0.490
SuperQuilt	14.00	-	1.520
Batten Cavity	25.00	-	0.490
Plasterboard	12.50	-	0.066
Inside Surface	-	-	0.100
Total Resistance			6.927

#### Example Construction



### U-Value table (All calculations are based on 50mm joists and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 140mm Mineral Wool (0.040 W/mk)	0.18 W/m²k
SuperQuilt and 120mm Mineral Wool (0.033 W/mk)	0.18 W/m²k
SuperQuilt and 170mm Mineral Wool (0.033 W/mk)	0.15 W/m²k
SuperQuilt and 90mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 120mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 150mm PIR (0.022 W/mk)	0.13 W/m²k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 130mm Mineral Wool (0.040 W/mk)	0.18 W/m²k
SuperQuilt and 110mm Mineral Wool (0.033 W/mk)	0.18 W/m²k
SuperQuilt and 150mm Mineral Wool (0.033 W/mk)	0.15 W/m²k
SuperQuilt and 80mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 110mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 135mm PIR (0.022 W/mk)	0.13 W/m²k

## Over Joist Flat Roof

### Fixing Instructions

Installation of SuperQuilt for over joist flat roof applications and additional insulation products should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the joists, the joints should be sealed using YBS Foil Tape. When SuperQuilt is cut to fit around openings or connections, gaps must be minimized and any exposed cut edges should be sealed with YBS Foil Tape to prevent condensation.

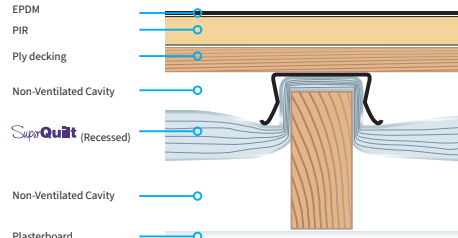
SuperQuilt should be cut equal to the width of the roof section plus 100mm. Installation should start from the external wall with SuperQuilt being unrolled perpendicular to the rafters, after which it is fixed using staples or nails or with saddle clips. SuperQuilt should be held in place using timber battens or by other means as shown, in such a way that there is a nominal 25mm air cavity above the product (if applicable) and a nominal 25mm air cavity below. To minimize the effect of thermal bridging cross battening is advised.

Additional insulation should be installed above the SuperQuilt. When installed below rafters SuperQuilt will perform as a vapour barrier.

#### Example U-Value

U-Value Combined Method (W/m²K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
EPDM	-	-	0.040
PIR	65.00	0.022	2.955
Ply decking	18.00	0.130	0.138
Joist / Non-Ventilated Cavity	25.00	-	0.490
SuperQuilt (Recessed)	14.00	-	1.520
Joist / Non-Ventilated Cavity	75.00	-	0.490
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			5.799

#### Example Construction



### U-Value table (All calculations are based on 50mm joists and include the effect of cold bridging)

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 65mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 90mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 105mm PIR (0.022 W/mk)	0.13 W/m²k
SuperQuilt and 85mm XPS (0.029 W/mk)	0.18 W/m²k
SuperQuilt and 120mm XPS (0.029 W/mk)	0.15 W/m²k
SuperQuilt and 140mm XPS (0.029 W/mk)	0.13 W/m²k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 65mm PIR (0.022 W/mk)	0.18 W/m²k
SuperQuilt and 90mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 105mm PIR (0.022 W/mk)	0.15 W/m²k
SuperQuilt and 85mm XPS (0.029 W/mk)	0.18 W/m²k
SuperQuilt and 120mm XPS (0.029 W/mk)	0.15 W/m²k
SuperQuilt and 135mm XPS (0.029 W/mk)	0.13 W/m²k

## Two Layer Flat Roof

### Fixing Instructions

Installation of SuperQuilt for over and under rafter flat roof applications with additional insulation should be in accordance with the manufacturers certificate, fixing instructions and current good building practice.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the rafters, the joints should be sealed using YBS Foil Tape. When SuperQuilt is cut to fit around openings or connections, gaps must be minimized and any exposed cut edges should be sealed with YBS Foil Tape to prevent condensation.

SuperQuilt should be cut equal to the width of the roof section plus 100mm. Installation should start from the external wall with SuperQuilt being unrolled perpendicular to the joists, after which it is fixed using staples, nails or YBS saddle clips.

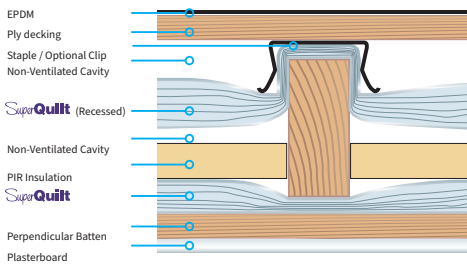
SuperQuilt should be held in place using timber battens or by other means as shown, in such a way that there is a nominal 25mm air cavity above the product (if applicable) and a nominal 25mm air cavity below. To minimize the effect of thermal bridging cross battening is advised.

When installed below joists SuperQuilt will perform as a vapour barrier.

#### Example U-Value

U-Value Combined Method (W/m <sup>2</sup> K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m <sup>2</sup> K/W)
EPDM	-	-	0.040
Ply decking	18.00	0.130	0.138
Non-Ventilated Cavity	25.00	-	0.490
SuperQuilt (Recessed)	14.00	-	1.520
Joist / Non-Ventilated Cavity	25.00	-	0.490
PIR	25.00	0.022	1.136
SuperQuilt	14.00	-	1.520
Batten Cavity	25.00	-	0.490
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			5.990

#### Example Construction



**U-Value table** (When using two layers of our impressive SuperQuilt and 50mm PIR in a roof application, a u-value of 0.15w/m<sup>2</sup>k can be achieved. In a wall application, two layers of the SuperQuilt can achieve a 0.20w/m<sup>2</sup>k)

#### Description (rafters at 400mm centres)

Description	U-Value
SuperQuilt and 50mm Mineral Wool (0.040 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 100mm Mineral Wool (0.040 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 40mm Mineral Wool (0.033 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 40mm PIR (0.022 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 65mm PIR (0.022 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 95mm PIR (0.022 W/mk)	0.13 W/m <sup>2</sup> k

#### Description (rafters at 600mm centres)

Description	U-Value
SuperQuilt and 45mm Mineral Wool (0.040 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 90mm Mineral Wool (0.040 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 40mm Mineral Wool (0.033 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 25mm PIR (0.022 W/mk)	0.18 W/m <sup>2</sup> k
SuperQuilt and 55mm PIR (0.022 W/mk)	0.15 W/m <sup>2</sup> k
SuperQuilt and 65mm PIR (0.022 W/mk)	0.13 W/m <sup>2</sup> k

## Recessed Detail

### Under Rafter Application

Ensure that there is an airspace above the SuperQuilt at all times.

1. SuperQuilt is stapled to the underside of the first rafter.
2. SuperQuilt is recessed into the rafter void and fixed with staples or with battens.
3. The material is then fixed to opposite rafter as per instruction 2.
4. SuperQuilt is then wrapped around the rafter and the procedure starts again.

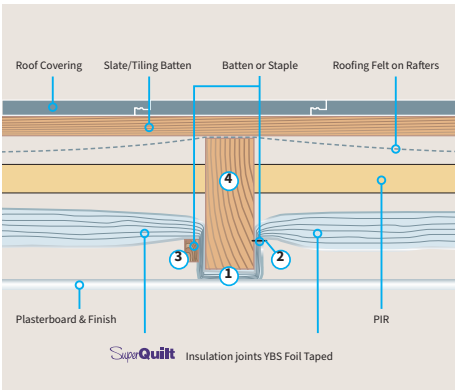
Once all the SuperQuilt is fitted, all joints should be taped using YBS Foil tape. Plasterboard can then be fixed directly to the underside of the rafters below the SuperQuilt.



View SuperQuilt Under Rafter Installation video  
You Tube @ybsinsulation



### Under Rafter Application



## Purlin Details

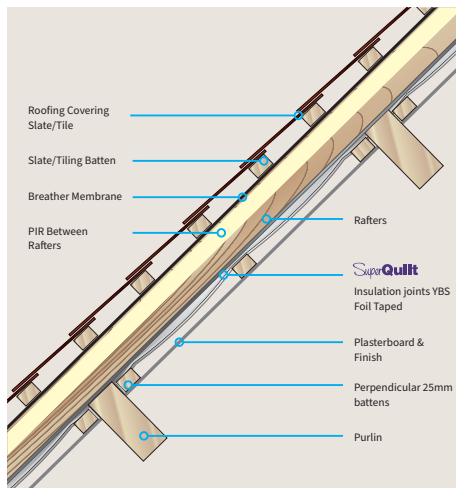
### Between Purlins Application

SuperQuilt is fixed horizontally or vertically and stapled to the underside of the rafters.

At the purlins the SuperQuilt is turned up and stapled in place.

Perpendicular Battens are fixed through the SuperQuilt into the rafters, at the purlins the battens are fixed into the rafters crushing the SuperQuilt tightly against the purlins.

Plasterboard can then be fixed to the battens.



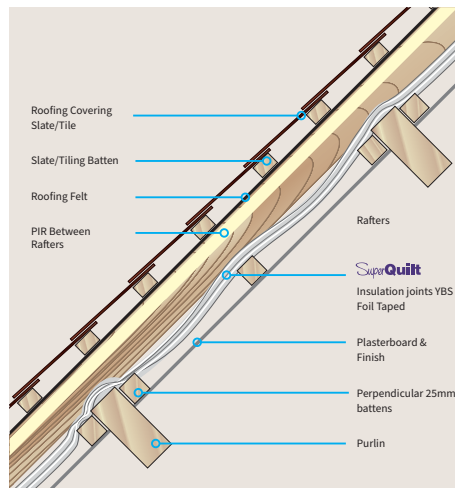
### Around Purlins Application

SuperQuilt is fixed horizontally or vertically and stapled to the underside of the rafters.

At the purlins the SuperQuilt is cut and pushed behind the purlins then taped to the next piece at the opposite side of the purlin.

Perpendicular Battens are fixed through the SuperQuilt into the rafters.

Plasterboard can then be fixed to the battens.



## Detailing

### Fixing Instructions

SuperQuilt is fixed above rafters as per fixing details and turned up at the vent/wall/rooflight and sealed with YBS Foil Tape. Battens are placed on the rafters above the SuperQuilt. A breather membrane is fixed above the battens and finished by turning up at the vent/wall/rooflight and sealing to the vent/wall/rooflight. Tile battens are fixed in place. The flashing/collar for the vent/wall/rooflight is fitted above the tile battens and then tiles.

### Foil taped joints

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the battens, the joints should be sealed using YBS 75mm Foil Tape.

### Vapour control layer

When all joints are sealed using foil tape SuperQuilt also works as a vapour control layer.

- SuperQuilt knife available
- YBS Foil joining tape available

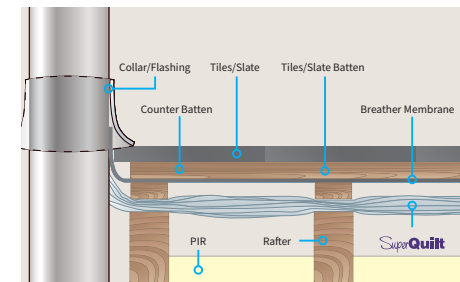
## Under Rafter Fixing Details

SuperQuilt is stapled to the underside of the rafters. At the eaves the SuperQuilt is cut and taken down between the joists to the cavity wall insulation or the wall plate. The material needs to be fixed to the rafters with minimum 14mm staples and taped to the joists and cavity wall insulation or wall plate so that an airtight envelope is created.

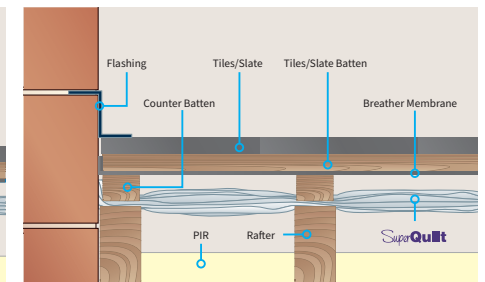
## Over Rafter Fixing Details

SuperQuilt is stapled to the rafters. At the eaves the SuperQuilt is cut and taken down between the rafters to the cavity wall insulation or the wall plate. The SuperQuilt needs to be sealed with staples and taped to the rafters and the cavity wall insulation or wall plate to create an airtight envelope.

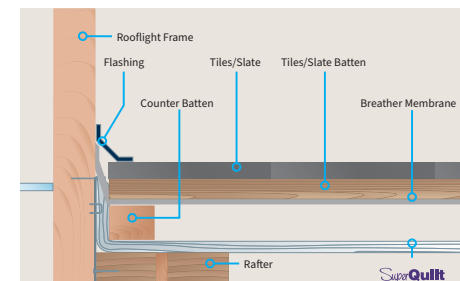
### Vents / Light Pipes



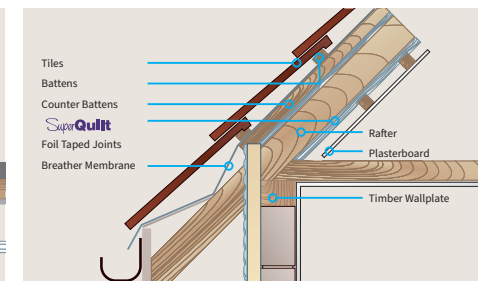
### Flashing



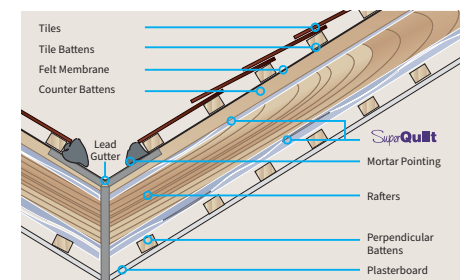
### Rooflight



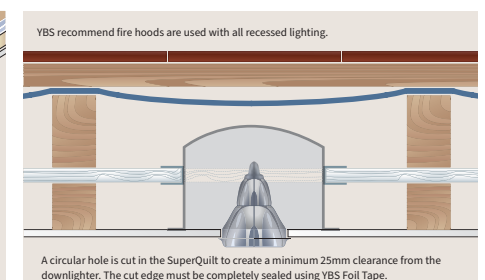
### Eaves



### Valleys



### Downlighters







# WALL INSULATION

## INSULATION FOR USE IN WALLS

### HOW DOES SUPERQUILT WORK?

Due to the special composition of multi-layers of insulation, SuperQuilt effectively deals with all forms of energy transfer (i.e. conduction, convection and radiation). SuperQuilt works most effectively by reflecting infra-red radiation. This means that not only is SuperQuilt effective in winter by reflecting heat back into the building and cold out, but also in summer SuperQuilt is a very effective barrier to solar overheating which reduces the need for artificial cooling systems as it prevents the accumulation of heat within the building.

### GENERAL FIXING INSTRUCTIONS

Installation of SuperQuilt for Timber Frame and Masonry Wall Applications and additional insulation products should be in accordance with the Certificate, YBS fixing instructions and current good building practice.

When the SuperQuilt is cut to fit around openings, care should be taken to minimise gaps. SuperQuilt can be cut easily using sharp scissors or a knife.

The surfaces of the masonry wall should be sound and free from loose material; large projections should be removed and holes filled and levelled. A survey of the wall may be required to establish the extent of any packing that may be required to ensure a uniform plane for the materials to be fixed.

Bearing surfaces for timber battens should comply with BS 8212 : 1995. The depth of timber battens will determine the air space achieved on either side of the SuperQuilt, YBS recommend 25mm battens.

All joints and perforations in the products must be securely sealed with YBS Foil Tape

Services may be accommodated within the void created by the dry lining system.

If the wall you are refurbishing has a damp or mould issue, this needs to/must be rectified before any insulation is installed.

### BENEFITS

- Meets requirements of L1A, L1B 2010
- Fully Agrément certified
- Thermally tested in accordance with EN 16012
- High thermal resistance of up to  $3.00\text{m}^2\text{K/W}$
- Ideal for new build & refurbishment
- Effective solar over-heating barrier
- Lightweight, thin & flexible
- Fast and simple installation
- Vapour control layer

## Timber Frames & Dormer Cheeks

### Fixing Instructions

Installation of SuperQuilt for Timber Frame wall applications and additional insulation products should be in accordance with the certificate, YBS fixing instructions and current good building practice.

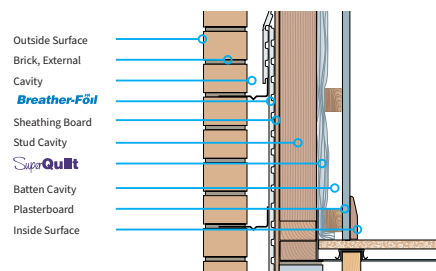
SuperQuilt is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the timber studs at minimum 300mm centres.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the battens, the joints should be sealed using 75mm YBS Foil Tape.

Perpendicular counter battens, recommended 25mm by 38mm are fixed to the wall. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed over the materials and onto the battens in the usual manner.

U-Value Combined Method (W/m²K)			0.24
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
Outside Surface	-	-	0.060
Brick, External	102.50	0.770	0.133
Cavity	50.00	-	0.665
BreatherFoil FR	4.00	-	0.125
Sheathing Board	12.00	0.130	0.092
Stud Cavity	89.00	-	0.740
SuperQuilt	14.00	-	1.52
Batten Cavity	38.00	-	0.740
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.120



### U-Value table

Description	25mm Batten	38mm Batten
SuperQuilt and YBS BreatherFoil FR	0.25 W/m²k	0.24 W/m²k
SuperQuilt, YBS BreatherFoil FR and 50mm Glasswool (0.040 W/mk)	0.21 W/m²k	0.20 W/m²k
SuperQuilt, YBS BreatherFoil FR and 100mm Glasswool (0.040 W/mk)	0.17 W/m²k	0.16 W/m²k
SuperQuilt, YBS BreatherFoil FR and 25mm PIR (0.022 W/mk)	0.21 W/m²k	0.20 W/m²k
SuperQuilt, YBS BreatherFoil FR and 50mm PIR (0.022 W/mk)	0.18 W/m²k	0.17 W/m²k
SuperQuilt, YBS BreatherFoil FR and 100mm PIR (0.022 W/mk)	0.14 W/m²k	0.14 W/m²k
SuperQuilt, YBS BreatherFoil FR and 140mm PIR (0.022 W/mk)	0.13 W/m²k	0.12 W/m²k
SuperQuilt, YBS BreatherFoil and SuperQuilt	0.17 W/m²k	0.17 W/m²k
SuperQuilt, Standard Breather Membrane	0.30 W/m²k	0.28 W/m²k
SuperQuilt, Standard Breather Membrane and 50mm Glasswool (0.040 W/mk)	0.24 W/m²k	0.22 W/m²k
SuperQuilt, Standard Breather Membrane and 100mm Glasswool (0.040 W/mk)	0.19 W/m²k	0.18 W/m²k
SuperQuilt, Standard Breather Membrane and 25mm PIR (0.022 W/mk)	0.25 W/m²k	0.23 W/m²k
SuperQuilt, Standard Breather Membrane and 50mm PIR (0.022 W/mk)	0.21 W/m²k	0.20 W/m²k
SuperQuilt, Standard Breather Membrane and 100mm PIR (0.022 W/mk)	0.16 W/m²k	0.15 W/m²k
SuperQuilt, Standard Breather Membrane and 140mm PIR (0.022 W/mk)	0.14 W/m²k	0.13 W/m²k
SuperQuilt, Standard Breather Membrane and SuperQuilt	0.19 W/m²k	0.18 W/m²k

## Cavity Wall

### Fixing Instructions

A spider clip is fitted on to the wall tie against the inner leaf and this creates the minimum cavity between the product and the blockwork.

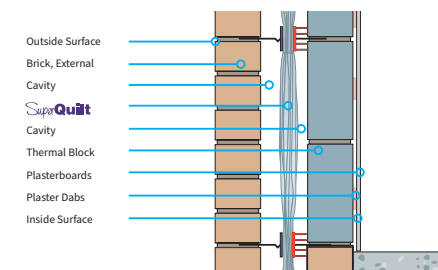
The initial run of SuperQuilt is positioned over the wall ties, ensuring that it is kept taut but with sufficient drop to below floor insulation. SuperQuilt can be cut with a sharp blade to fit onto wall ties. The top edge of the material should be a minimum of 75mm over the top row of the wall ties giving a weathered lap joint.

When a full run is in position, the retaining clip is fixed to the wall tie to keep the SuperQuilt central to the cavity.

The second leaf is built up to the topmost line of the wall ties, (or two courses below) and the second run of SuperQuilt installed ensuring a minimum lap of 75mm. Vertical joints in the SuperQuilt should always be on a line of wall ties, ensuring a 100mm lap (ie 50mm either side of the wall tie) and sealed using YBS Foil Tape

At internal and external corners a recommended air space of 25mm must be maintained.

U-Value Combined Method (W/m²K)			0.24
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
Outside Surface	-	-	0.040
Brick, External	102.50	0.770	0.133
Cavity	50.00	-	0.740
SuperQuilt	40.00	-	1.52
Cavity	20.00	-	0.740
Thermal Block	100.00	0.110	0.909
Plaster Dabs	15.00	-	0.170
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.130



### U-Value table

Description	100mm Cavity	110mm Cavity
SuperQuilt and 100mm Dense Block (1.130 W/mk)	0.31 W/m²k	0.29 W/m²k
SuperQuilt and 100mm Medium Block (0.500 W/mk)	0.30 W/m²k	0.28 W/m²k
SuperQuilt and 100mm Lightweight Block (0.250 W/mk)	0.29 W/m²k	0.27 W/m²k
SuperQuilt and 100mm Thermal Block (1.110 W/mk)	0.26 W/m²k	0.24 W/m²k
SuperQuilt and 100mm Thermal Block (0.110 W/mk) Thin Mortar	0.25 W/m²k	0.24 W/m²k
SuperQuilt and 140mm Dense Block (1.130 W/mk)	0.31 W/m²k	0.29 W/m²k
SuperQuilt and 140mm Medium Block (0.500 W/mk)	0.29 W/m²k	0.27 W/m²k
SuperQuilt and 140mm Lightweight Block (0.250 W/mk)	0.25 W/m²k	0.26 W/m²k
SuperQuilt and 140mm Thermal Block (1.110 W/mk)	0.24 W/m²k	0.23 W/m²k
SuperQuilt and 140mm Thermal Block (0.110 W/mk) Thin Mortar	0.23 W/m²k	0.22 W/m²k

## Dry Lining

### Fixing Instructions

Vertical counter battens, minimum 25mm by 38mm battens are fixed to the wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

SuperQuilt is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the battens at minimum 300mm centres.

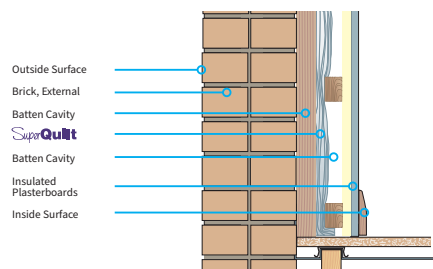
SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the battens, the joins should be sealed using 75mm YBS Foil Tape.

Counter battens are fixed to the wall battens through the material at 600mm centres.

The plasterboard is fixed over the SuperQuilt and onto the battens in the usual manner.

If there is a concern regarding condensation because of the installation of an insulating vapour barrier, please supply full build up information on fax or email to our technical team and they can carry out a condensation risk analysis for you.

U-Value Combined Method (W/m²K)			0.28
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
Outside Surface	-	-	0.040
Brick, External	100.00	0.770	0.292
Cavity	50.00	-	0.180
Block	100.00	1.130	0.89
Batten Cavity	38.00	-	0.740
SuperQuilt	14.00	-	1.52
Batten Cavity	38.00	-	0.740
Insulated Plasterboard	30.00	-	0.560
Inside Surface	-	-	0.130



### U-Value table

Description	25mm Batten	38mm Batten
SuperQuilt and Solid Wall	0.34 W/m²k	0.29 W/m²k
SuperQuilt, Solid Wall and 30mm Insulated Plasterboard EPS	0.29 W/m²k	0.26 W/m²k
SuperQuilt, Solid Wall and 40mm Insulated Plasterboard EPS	0.27 W/m²k	0.24 W/m²k
SuperQuilt, Solid Wall and SuperQuilt	0.22 W/m²k	0.19 W/m²k
SuperQuilt and Cavity Wall un-insulated	0.33 W/m²k	0.28 W/m²k
SuperQuilt, Cavity Wall un-insulated & 30mm Ins. Plasterboard EPS	0.28 W/m²k	0.25 W/m²k
SuperQuilt, Cavity Wall un-insulated & 40mm Ins. Plasterboard EPS	0.26 W/m²k	0.23 W/m²k
SuperQuilt, Cavity Wall un-insulated & SuperQuilt	0.22 W/m²k	0.18 W/m²k
SuperQuilt and Cavity Wall Insulated	0.25 W/m²k	0.22 W/m²k
SuperQuilt, Cavity Wall Insulated & 30mm Ins. Plasterboard EPS	0.23 W/m²k	0.21 W/m²k
SuperQuilt, Cavity Wall Insulated & 40mm Ins. Plasterboard EPS	0.22 W/m²k	0.20 W/m²k
SuperQuilt, Cavity Wall Insulated & SuperQuilt	0.18 W/m²k	0.16 W/m²k

## Dwarf Wall

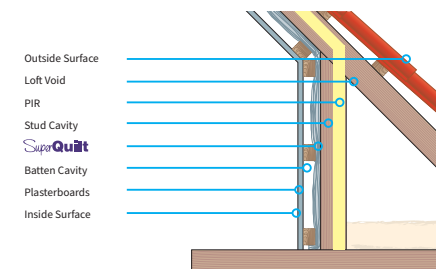
### Fixing Instructions

Installation of SuperQuilt for dwarf wall applications with additional insulation products should be in accordance with the certificate, YBS fixing instructions and current good building practice.

SuperQuilt is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the timber studs at minimum 300mm centres.

SuperQuilt should be overlapped at each joint by approx. 50mm and stapled onto the battens, the joins should be sealed using 75mm YBS Foil Tape. Perpendicular counter battens, recommended 25mm by 38mm are fixed to the wall. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows. The plasterboard is fixed over the products and onto the battens in the usual manner.

U-Value Combined Method (W/m²K)			0.19
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
Outside Surface	-	-	0.040
Loft Void	-	-	0.500
PIR (Between Studs)	50.00	0.22	2.174
Stud cavity	35.00	-	0.740
SuperQuilt	14.00	-	1.52
Batten Cavity	38.00	-	0.740
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.130



### U-Value table

Description	25mm Batten	38mm Batten
SuperQuilt and 50mm Glasswool (0.040 W/mk)	0.24 W/m²k	0.22 W/m²k
SuperQuilt and 100mm Glasswool (0.040 W/mk)	0.19 W/m²k	0.18 W/m²k
SuperQuilt and 25mm PIR (0.022 W/mk)	0.25 W/m²k	0.23 W/m²k
SuperQuilt and 50mm PIR (0.022 W/mk)	0.21 W/m²k	0.19 W/m²k
SuperQuilt and 75mm PIR (0.022 W/mk)	0.18 W/m²k	0.17 W/m²k
SuperQuilt and 100mm PIR (0.022 W/mk)	0.16 W/m²k	0.15 W/m²k
SuperQuilt Two Layer	0.21 W/m²k	0.19 W/m²k



External Wall Insulation

Fixing Instructions

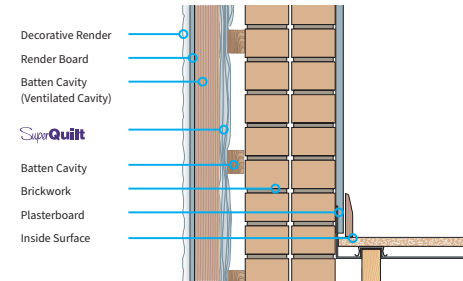
All timber exposed to the outer cavity, except naturally durable species should be treated.

SuperQuilt is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the timber battens at minimum 300 mm centres.

SuperQuilt should be overlapped at each joint by approximately 50 mm and stapled onto the battens, the joins should be sealed using 75mm YBS Foil Tape.

Vertical battens, recommended 25 mm by 38 mm are fixed to the vertical battens; battens should always be placed at the top and bottom of the wall and around the perimeter of doors and windows. The carrier board is fixed over the product and onto the battens, the external rendered finishing should comply with BS EN 13914-119.

U-Value Combined Method (W/m²K)			0.30
	Thickness (mm)	Conductivity (W/mK)	Resistance (m²K/W)
Outside Surface	-	-	0.390
Render	19.00	-	-
Render Board	22.00	-	-
Batten (Ventilated Cavity)	38.00	-	-
SuperQuilt	14.00	-	1.52
Batten Cavity	38.00	-	0.740
Brickwork	225.00	0.560	0.402
Drylining - plaster dabs	15.00	-	0.170
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.130



U-Value table

Solid Wall	25mm Batten	38mm Batten
SuperQuilt and Cladding	0.30 W/m²k	0.26 W/m²k
SuperQuilt and Render Board (Ventilated Cavity)	0.33 W/m²k	0.30 W/m²k
Cavity Wall	25mm Batten	38mm Batten
SuperQuilt and Cladding	0.30 W/m²k	0.27 W/m²k
SuperQuilt and Render Board (Ventilated Cavity)	0.33 W/m²k	0.31 W/m²k

INSULATION FOR USE IN FLOORS

HOW DOES SUPERQUILT WORK?

Due to the special composition of multi-layers of insulation, SuperQuilt effectively deals with all forms of energy transfer (i.e. conduction, convection and radiation). SuperQuilt works most effectively by reflecting infra-red radiation. This means that not only is SuperQuilt effective in winter by reflecting heat back into the building and cold out, but also in summer, SuperQuilt is a very effective barrier to solar overheating which reduces the need for artificial cooling systems as it prevents the accumulation of heat within the building.

GENERAL FIXING INSTRUCTIONS

Installation of SuperQuilt for floor applications should be in accordance with the certificate, YBS fixing instructions and current good building practice.

SuperQuilt must be installed with a 50mm overlap. SuperQuilt can be cut with a YBS SuperQuilt cutter, craft knife or a sharp pair of scissors.

SuperQuilt can be easily fixed with staples at regular intervals. Minimum 14mm stainless steel or galvanised staples are recommended.

No protective clothing/handling required.

Benefits

- Fast and simple installation
- High core thermal resistance of 1.52m²K/W
- Tear Resistant
- Effective in summer and winter
- For suspended & floating floors
- Lightweight, thin & flexible

P/A Ratio

The heat loss in a floor is greater at the exposed perimeter edge of the floor. To calculate the U-value, the exposed perimeter edge to area ratio needs to be worked out e.g. a 100m2 area, semi-detached house with 3 external walls of 10m each has a perimeter to area ratio 0.3 (i.e. 30m :100m2 = 0.3).





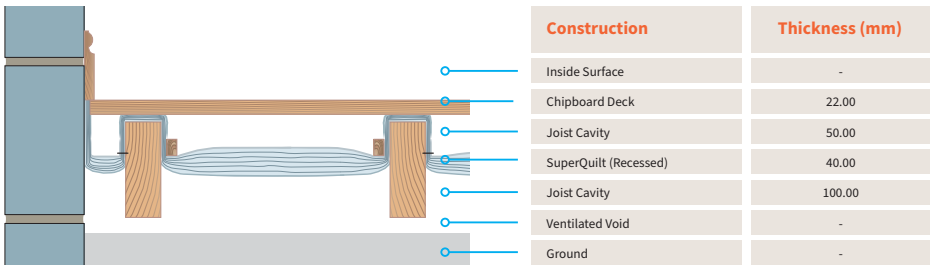
## Suspended Timber Floor

### Fixing Instructions

SuperQuilt is rolled out over the joists, then stapled in place to create required airspace or nailed in place through the YBS saddle clips to maintain the required 50mm airspace

(4 saddle clips per m<sup>2</sup>). The horizontal joints are tightly overlapped and left open to allow any moisture accumulation to dissipate. SuperQuilt should be sealed around the perimeter or brought up above the floor deck. The decking is then fixed at 200mm centres with screws 37mm into the joists.

SuperQuilt can be used in conjunction with Superfloor Clips to provide a channel for underfloor heating pipework; please visit [www.ybsinsulation.com](http://www.ybsinsulation.com) and look under Superfloor for more information. (Please note that thermal outputs for underfloor heating have not been tested with SuperQuilt)



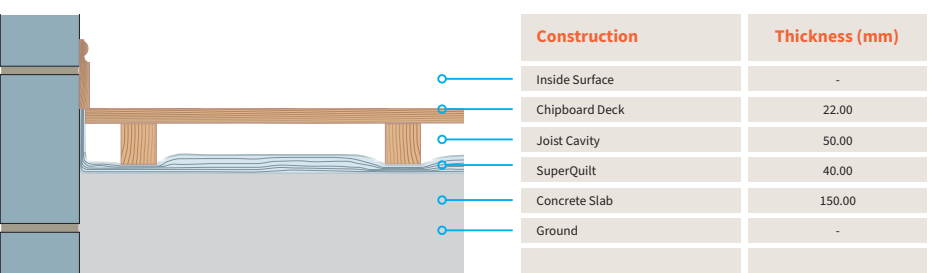
### U-Value table

P/A Ratio	U-Value (with 50mm Cavity above)	U-Value (with 100mm Cavity above)
0.1	0.13 W/m²k	0.12 W/m²k
0.2	0.18 W/m²k	0.16 W/m²k
0.3	0.21 W/m²k	0.18 W/m²k
0.4	0.22 W/m²k	0.20 W/m²k
0.5	0.24 W/m²k	0.20 W/m²k
0.6	0.24 W/m²k	0.21 W/m²k
0.7	0.25 W/m²k	0.22 W/m²k
0.8	0.26 W/m²k	0.22 W/m²k
0.9	0.26 W/m²k	0.23 W/m²k
1	0.27 W/m²k	0.23 W/m²k

## Floating Timber Floor

### Fixing Instructions

SuperQuilt is rolled out onto the concrete floor leaving enough edge overlap to protrude above the floor deck. Timber joists/battens are then laid on top of the SuperQuilt, spaced at centres to suit the particular flooring. The deck is then fixed at 200mm centres with screws 37mm into the joists/battens.



### U-Value table

P/A Ratio	U-Value (with 50mm Cavity above)	U-Value (with 100mm Cavity above)
0.1	0.13 W/m²k	0.12 W/m²k
0.2	0.20 W/m²k	0.17 W/m²k
0.3	0.24 W/m²k	0.20 W/m²k
0.4	0.26 W/m²k	0.22 W/m²k
0.5	0.28 W/m²k	0.23 W/m²k
0.6	0.30 W/m²k	0.24 W/m²k
0.7	0.31 W/m²k	0.25 W/m²k
0.8	0.32 W/m²k	0.26 W/m²k
0.9	0.33 W/m²k	0.27 W/m²k
1	0.34 W/m²k	0.27 W/m²k

Crawl Space & Cellars

Fixing Instructions

SuperQuilt is rolled out under the floor joists than stapled in place. Access is gained using the under floor crawl space. The horizontal joints are tightly overlapped and left open to allow any moisture accumulation to dissipate. SuperQuilt should be sealed around the perimeter or brought up above the floor deck.

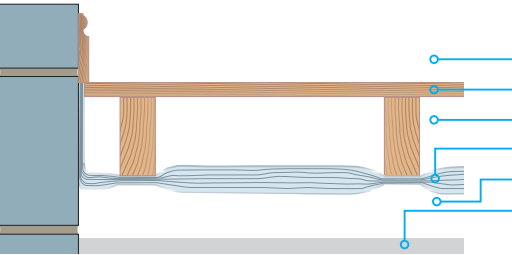
Accessories



SuperQuilt knife available on request



YBS Foil Tape available



Construction	Thickness (mm)
Inside Surface	-
Tongue & Groove Floorboards	22.00
Joist Cavity	150.00
SuperQuilt	40.00
Ventilated Void	-
Ground	-

U-Value table

P/A Ratio	U-Value (with 150mm Cavity above)	U-Value (with 200mm Cavity above)
0.1	0.11 W/m²k	0.11 W/m²k
0.2	0.14 W/m²k	0.14 W/m²k
0.3	0.16 W/m²k	0.15 W/m²k
0.4	0.17 W/m²k	0.16 W/m²k
0.5	0.18 W/m²k	0.17 W/m²k
0.6	0.18 W/m²k	0.17 W/m²k
0.7	0.19 W/m²k	0.18 W/m²k
0.8	0.19 W/m²k	0.18 W/m²k
0.9	0.19 W/m²k	0.18 W/m²k
1	0.20 W/m²k	0.19 W/m²k

OTHER PRODUCTS IN THE YBS RANGE

Multi-Foil Quilt Insulation

BreatherQuilt

BreatherQuilt is a flexible, easy to install, breathable high insulation designed to replace standard breather membranes while also giving a high level of thermal performance. The composition of the product effectively deals with condensation and all forms of energy transfer.

ThermaQuilt

ThermaQuilt is a flexible, easy to install, multilayer insulation which is a lower cost equivalent of other multilayer insulation products on the market. The unique composition of the product effectively deals with all forms of energy transfer.

FloorQuilt

FloorQuilt is a Multi-foil Insulation ideal for renovation projects where room height is an issue. Specially designed for solid floors, FloorQuilt improves the performance of the under floor heating system and resists the passage of water through the floor.

Foil Membrane Insulation

Foil-Tec

Foil-Tec is an ultra-thin, flexible, easy to install, vapour control membrane which effectively controls condensation and air tightness in both walls and roofs, while offering great thermal benefits. Foil-Tec can also be used independently as an insulation membrane in floor applications.

Breather-Foil FR

Breather-Foil FR is specially developed for use in timber-frame and modular building constructions, YBS Breather-Foil FR can greatly increase the U-value of a timber-frame wall and outperforms traditional breather membranes.

Air-Tec

Airtec is a thin, flexible, easy to install aluminium bubble insulation membrane which acts by trapping air within its bubble structure while creating low emissivity air spaces from its foil faced outer layers, enhancing its overall thermal capabilities.

Cavity Closures

Type R

Type R cavity closer has been specifically designed to create a more waterproof cavity closer system, available in widths of 50mm to 300mm with optional fire rated version. Type R comprises two rigid PVC extrusions, one of which has a flexible water seal. Once the window is in place the flexible seal sits against the window frame and acts as a secondary water seal.

Easi-Close

Easi-Close is a universal cavity closer, featuring a fully rigid plastic closer for a continuous insulation fill, available in 2 profiles 50mm to 100mm and 100mm to 150mm. Both profiles can easily be cut using the pre-cut grooves and installed on site meaning it can be used on various cavity sizes.



For custom calculations try our free u-value calculator today at

[www.ybsinsulation.com/u-value-calculator](http://www.ybsinsulation.com/u-value-calculator)

or contact the technical team on

**01909 726 025**

# YBS Insulation

by **SOPREMA**

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All calculations shown in the data sheet have been run in line with BDA Kiwa Agreement Certification

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