

# YBS Insulation

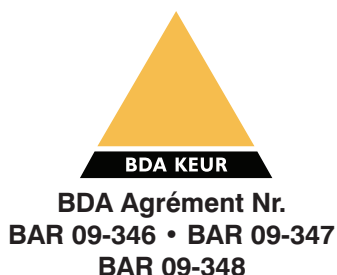
HIGH QUALITY PRODUCTS FOR THE BUILDING INDUSTRY

## SuperQuilt

Multi-layer Insulation Blanket for *Roofs*  
Thermal Insulation in a thin, flexible, multi-layer membrane



- Meets requirements of L1A, L1B 2010
- Pitched roof insulation
- Fully certificated
- Hot box tested meets requirements of BR443
- High thermal resistance of 2.71m<sup>2</sup>K/W
- Class 1 Surface spread of flame
- Ideal for New build & Refurbishment
- Effective solar over-heating barrier
- Lightweight, thin & flexible
- Fast and simple installation
- Vapour control layer



[www.ybsinsulation.com](http://www.ybsinsulation.com)

# INSULATION FOR USE IN ROOFS

## **Benefits**

- Meets requirements of L1A and L1B 2010 addition
- Fully certificated
- High thermal resistance of 2.71m<sup>2</sup>K/W
- Effective solar over-heating barrier
- Effective in summer and winter
- Lightweight, thin & flexible
- Fast and simple installation
- Tear Resistant
- For pitched roofs 18° or above

SuperQuilt is a very flexible, easy to fit, multilayer insulation that offers tremendous thermal benefits. Hot box testing confirms high thermal resistance of 2.71m<sup>2</sup>K/W for SuperQuilt accompanied by a 25mm air cavity either side of the material.

## **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 solar over-heating barrier reducing the need for artificial cooling systems, preventing uncomfortable build up of heat in the building.

## **General Fixing Instructions**

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

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

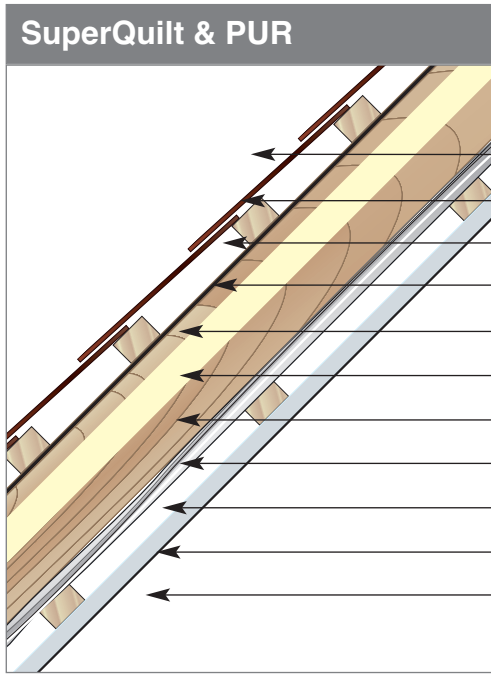
SuperQuilt can be cut with a craft knife or a sharp pair of scissors.

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

# Under Rafter Application



U-Value Combined Method (W/m <sup>2</sup> K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m <sup>2</sup> K/W)
Outside Surface	-	-	0.040
Slate / Tile	10.00	-	-
Batten Cavity	25.00	-	-
Breather Membrane	-	-	-
Rafter Cavity	40.00	-	0.274
PUR	65.00	0.023	2.609
Rafter Cavity	25.00	-	2.71
SuperQuilt	40.00		
Batten Cavity	25.00		
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			5.799

## Fixing Instructions



\*See installation video at [www.ybsinsulation.com](http://www.ybsinsulation.com)

Installation of SuperQuilt for under rafter 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 rafter height, pulled tight and stapled onto the rafters at minimum 300mm centres.

SuperQuilt should be overlapped at each joint by approx. 75mm 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.

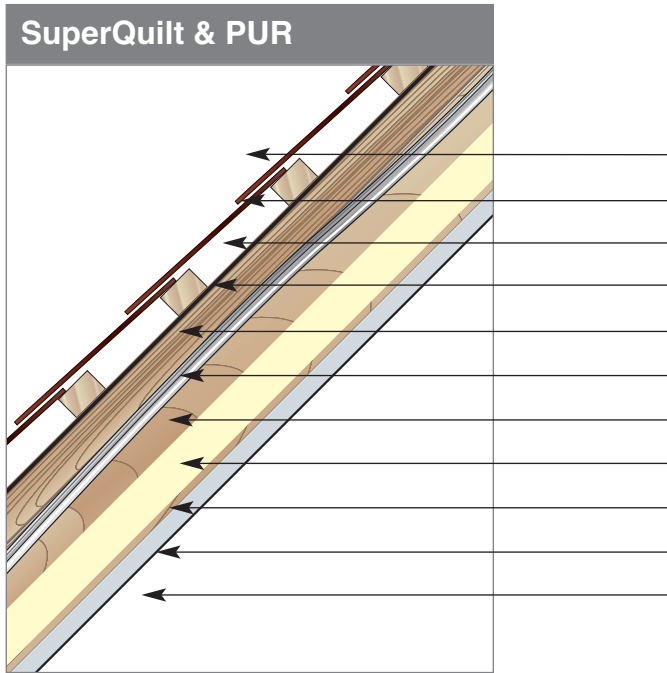
Vertical counter battens, recommended 25mm by 38mm are fixed to the rafters. Battens must always be fixed around the perimeter of windows.

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

## U-Value table

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 70mm PUR	0.18 W/m <sup>2</sup> k
SuperQuilt and 115mm Glasswool (0.040 W/mK)	0.18 W/m <sup>2</sup> k
SuperQuilt and 105mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt and 165mm Glasswool (0.040 W/mK)	0.15 W/m <sup>2</sup> k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 65mm PUR	0.18 W/m <sup>2</sup> k
SuperQuilt and 105mm Glasswool (0.040 W/mK)	0.18 W/m <sup>2</sup> k
SuperQuilt and 95mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt and 155mm Glasswool (0.040 W/mK)	0.15 W/m <sup>2</sup> k

# Over Rafter Application



U-Value Combined Method (W/m <sup>2</sup> K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m <sup>2</sup> K/W)
Outside Surface	-	-	0.040
Slate / Tile	10.00	-	-
Batten Cavity	25.00	-	-
Breather Membrane	-	-	-
Batten Cavity	25.00	-	2.71
SuperQuilt	40.00		
Rafter Cavity	25.00		
PUR	65.00	0.023	2.826
Rafter Cavity	40.00	-	0.274
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			6.610

## Fixing Instructions



\*See installation video at [www.ybsinsulation.com](http://www.ybsinsulation.com)

Installation of SuperQuilt for over rafter 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 rafter height, pulled tight and stapled onto the rafters at minimum 300mm centres.

SuperQuilt should be overlapped at each joint by approx. 75mm 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.

Vertical battens, recommended 25mm by 38mm are fixed to the rafters. Battens must always be fixed around the perimeter of windows.

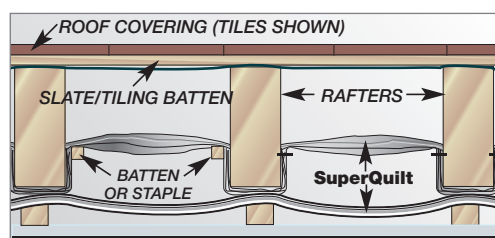
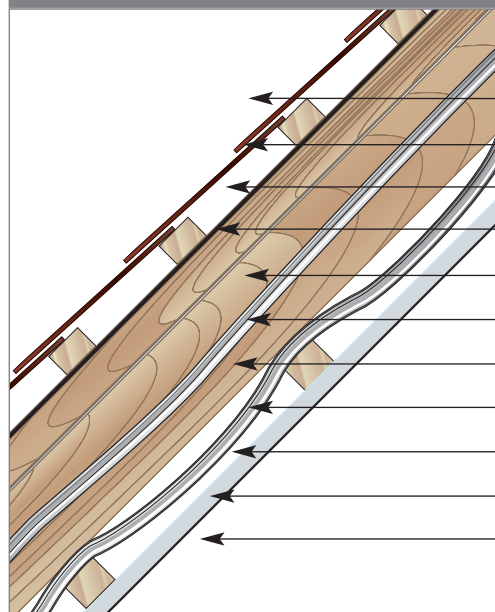
A breather membrane is fitted in accordance with the manufacturers fixing details above the battens before tile battens and tiles.

## U-Value table

Description (rafters at 400mm centres)	U-Value
SuperQuilt and 70mm PUR	0.18 W/m <sup>2</sup> k
SuperQuilt and 120mm Glasswool (0.040 W/mK)	0.18 W/m <sup>2</sup> k
SuperQuilt and 105mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt and 175mm Glasswool (0.040 W/mK)	0.15 W/m <sup>2</sup> k
Description (rafters at 600mm centres)	U-Value
SuperQuilt and 65mm PUR	0.18 W/m <sup>2</sup> k
SuperQuilt and 115mm Glasswool (0.040 W/mK)	0.18 W/m <sup>2</sup> k
SuperQuilt and 95mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt and 165mm Glasswool (0.040 W/mK)	0.15 W/m <sup>2</sup> k

# Two Layer Application

## SuperQuilt (Two Layers)



U-Value Combined Method (W/m <sup>2</sup> K)			0.18
	Thickness (mm)	Conductivity (W/mK)	Resistance (m <sup>2</sup> K/W)
Outside Surface	-	-	0.040
Slate / Tile	10.00	-	-
Batten Cavity	25.00	-	-
Roofing Felt	-	-	-
Rafter Cavity	50.00	-	2.71
SuperQuilt	40.00		
Rafter Cavity	50.00	-	2.71
SuperQuilt	40.00		
Batten Cavity	25.00	-	-
Plasterboard	12.50	0.190	0.066
Inside Surface	-	-	0.100
Total Resistance			5.806



**\*See installation video at [www.ybsinsulation.com](http://www.ybsinsulation.com)**

## Fixing Instructions

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

For recessed installation please see page 5.

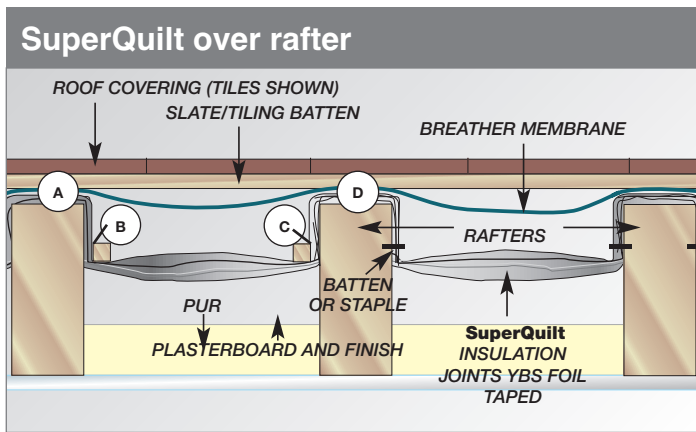
For under rafter installation please see page 2 fixing instructions.

When installing two layers of SuperQuilt a minimum air gap of 25mm should be maintained between layers at all times.

## U-Value table

Description (rafters at 400mm centres)	U-Value
SuperQuilt (2 Layers)	0.18 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 25mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 50mm Glasswool (0.044 W/mK)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 40mm insulated plasterboard (1.07 m <sup>2</sup> k/w)	0.15 W/m <sup>2</sup> k
Description (rafters at 600mm centres)	U-Value
SuperQuilt (2 Layers)	0.18 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 25mm PUR	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 50mm Glasswool (0.044 W/mK)	0.15 W/m <sup>2</sup> k
SuperQuilt (2 Layers) and 40mm insulated plasterboard (1.07 m <sup>2</sup> k/w)	0.15 W/m <sup>2</sup> k

## Recessed Detail



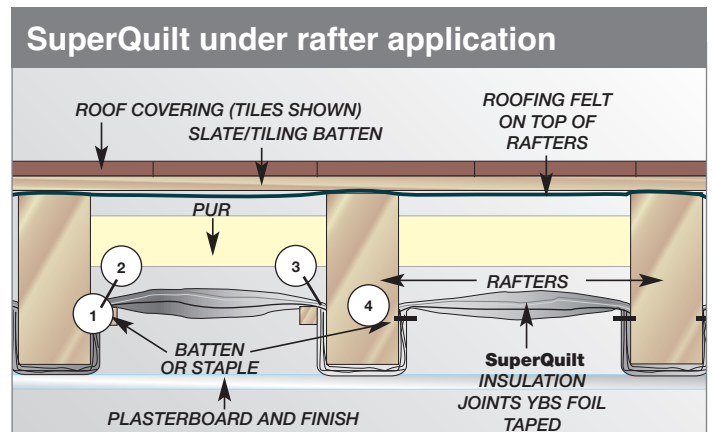
Where roof height is critical SuperQuilt can be recessed between the rafters.

- A. SuperQuilt is stapled to the top of the first rafter.
- B. SuperQuilt is recessed into the rafter void and fixed with staples or with battens.
- C. The material is then fixed to opposite rafter as per instruction B.
- D. 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.

A breather membrane is then fitted in accordance with the manufacturers fitting instructions.

Tile batten and tiles can then be fitted.



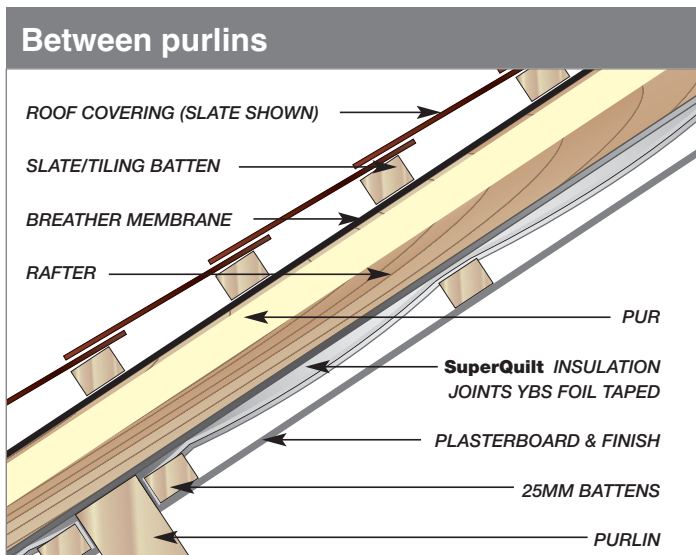
Ensure that there is a 25mm airspace above the SuperQuilt at all times.

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.

## Purlins Detail

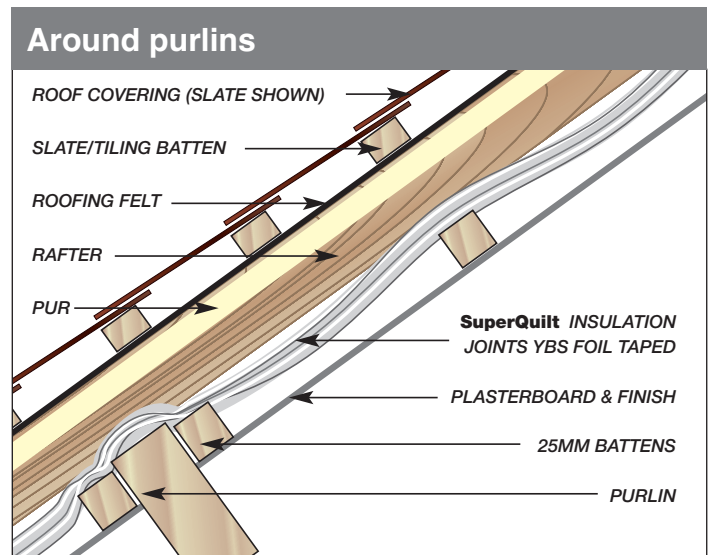


SuperQuilt is fixed horizontally or vertically and stapled to the underside of the the rafters.

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

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.



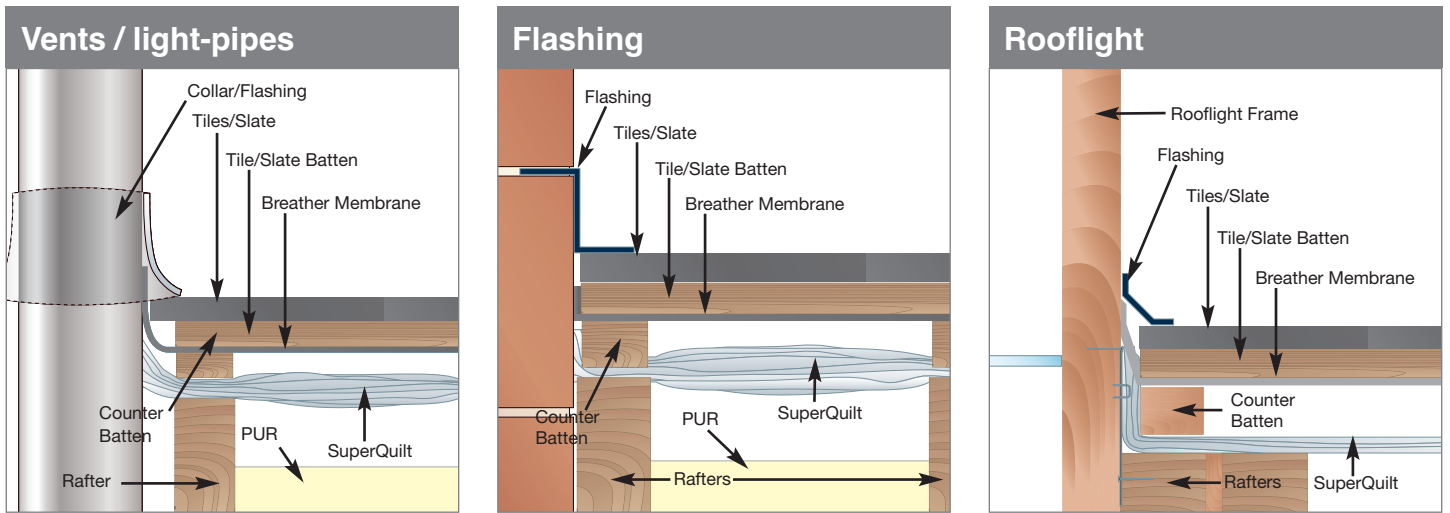
SuperQuilt is fixed horizontally or vertically and stapled to the underside of the the rafters.

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.

Battens are fixed through the SuperQuilt into the rafters.

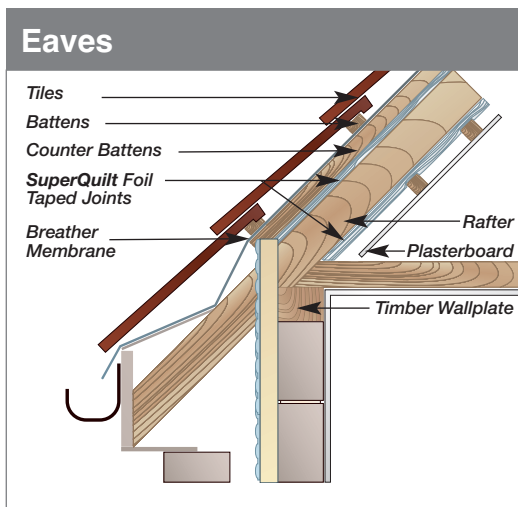
Plasterboard can then be fixed to the battens.

# 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.

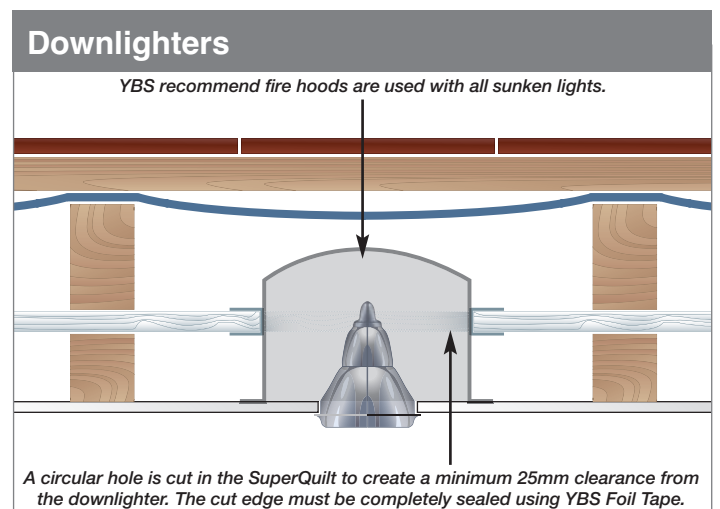
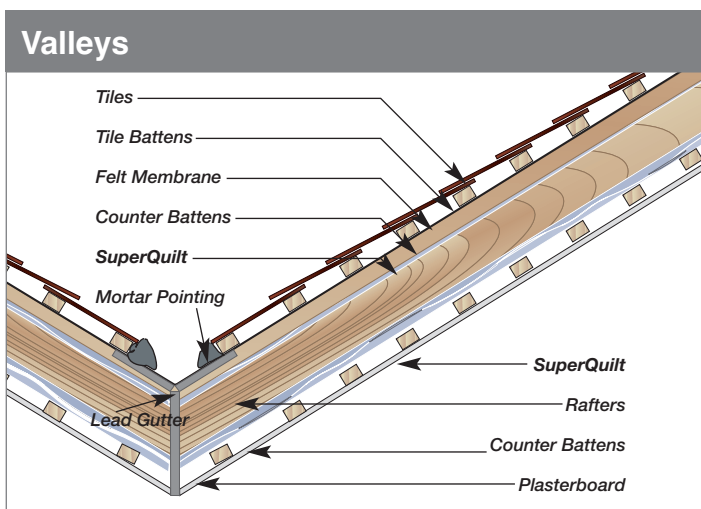


## Over Rafter Fixing Details

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.

## 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 sealed with staples and taped to the joists and the cavity wall insulation or wall plate to create an airtight envelope.



# Technical Properties

## Product Description

19 Components

Thickness 40mm approx.

Weight 800g/m<sup>2</sup>

## Mechanical Properties

### Value

### Reference Standard

Thermal performance 2.71m<sup>2</sup>K/W BS EN 12667

Flammability Class 1 BS 476-1

Class E BS EN 13501-1

Water vapour resistance 1569MNs/g BS EN 12572

Emission coefficients of surfaces 0.05 ASTM C 1371

Tensile strength 142KPA BS EN 1608

## Packaging

15m<sup>2</sup>

10m<sup>2</sup>

Width 1.5m 1.5m

Length 10m 6.667m

Weight 13.5Kg 9Kg

## Foil taped joints

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



## Vapour control layer

SuperQuilt also works as a vapour control layer

## Cutting SuperQuilt

SuperQuilt can easily be cut using either a stanley knife or a good pair of scissors.

