

Keeping you
snug wherever
you call home...

Application Guidance
WALLS



**therma
fleece**[®]
British wool insulation

BRICK / STONE SOLID WALL Standard VCL

In order to internally insulate solid walls with Thermafleece, the insulation is held in place using a timber stud frame. Thermafleece fits between the timber studs. The tightness of the fit as well as the friction between the insulation and the timber holds the insulation in place and prevents slumping.

Support the thermafleece with noggins running between the studs. Thermafleece can also be stapled to the side of the timber stud if desired. It isn't necessary to level the wall providing the timber studs can be securely fixed and the wall is in good condition.

Ensure that the wall is in good condition and there are no signs of moisture ingress and dampness. If there are you should identify the cause and address any damp issues prior to insulating. A breathable membrane can be installed against the wall to provide some separation between the insulation and the wall surface.

When using a vapour control and air-tightness layer on the warm side (the side nearest the inside) of the insulation attached across the timber studs, gaps must be properly sealed using appropriate tapes and sealants. Refer to the membrane supplier for details.



1. Lining board and plaster
2. Vapour control and airtightness layer
3. Timber studs
4. Thermafleece
5. Breather membrane
6. Solid wall

Typical U-Value - W/m²K

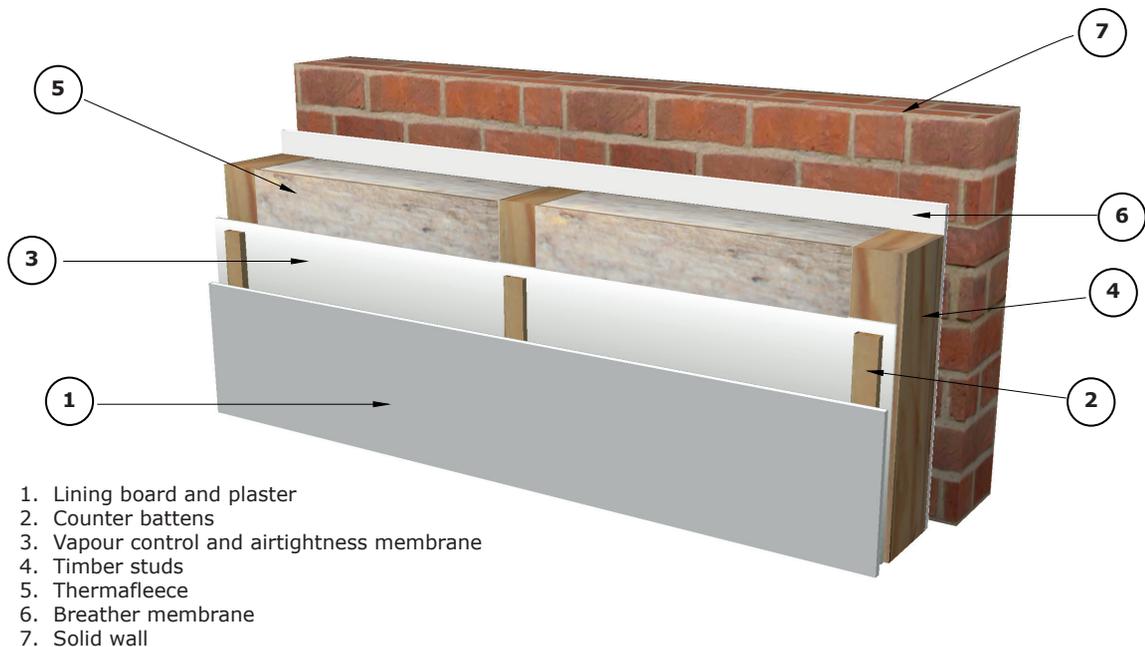
Insulation	Thermafleece between studs (47mm)		
	100mm	140mm	170mm
Thermafleece UltraWool	0.35	0.27	0.23
Thermafleece CosyWool Slab	0.37	0.29	0.24
Thermafleece CosyWool Roll	0.37	0.28	0.24

BRICK / STONE SOLID WALL Variable surface diffusion membrane

Using natural breathable insulation in conjunction with a variable s.d airtightness and vapour control membrane is an effective way to ensure a healthy moisture balance within the building fabric. The variable surface diffusion (s.d.) membrane works by blocking water vapour ingress in the colder months and allowing moisture to diffuse from the wall into the property in the warmer months.

A counter batten should be fixed between the variable s.d membrane and the lining board to provide an air space on the warm side of the membrane. The void created by the counter battens along the timber frame can be used to carry services. This ensures that the insulation remains undisturbed and airtightness remains intact when services are accessed for maintenance.

A layer of insulation can also be fixed across the timber stud frame to provide additional insulation. This has the advantage of reducing the thermal bridging in the wall system. It may not be possible to add additional insulation if there are space limitations internally.



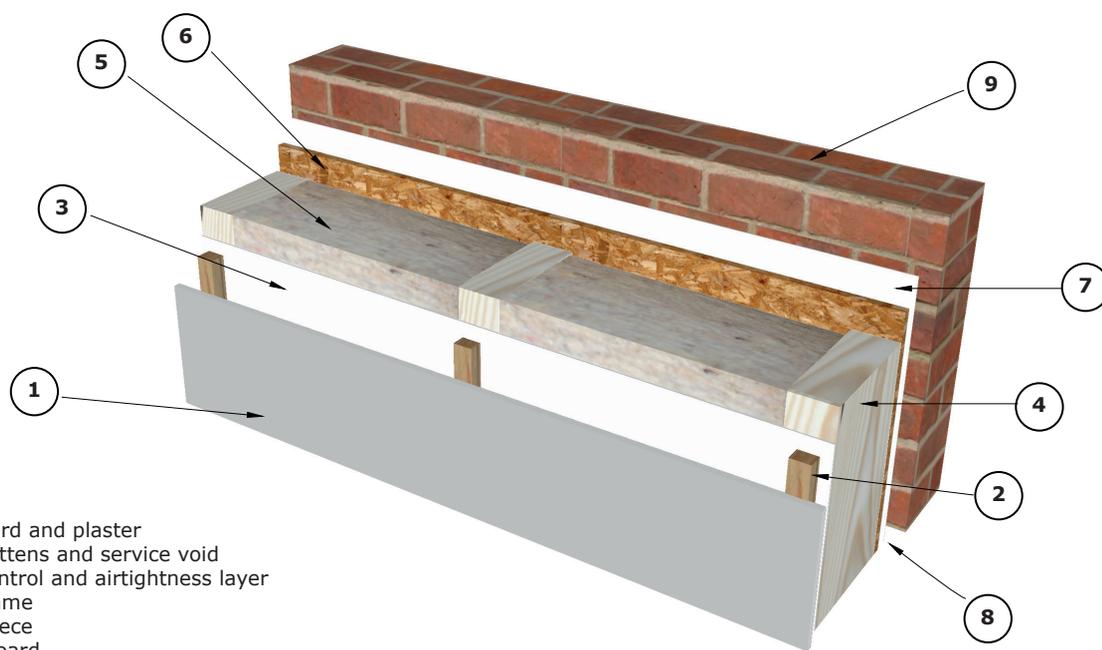
Typical U-Value - W/m ² K			
Insulation	Thermafleece between studs (47mm)		
	100mm	140mm	170mm
Thermafleece UltraWool	0.35	0.27	0.23
Thermafleece CosyWool Slab	0.37	0.29	0.24
Thermafleece CosyWool Roll	0.37	0.28	0.24

TIMBER FRAME WALL

Thermafleece can be used to fill the wall void in any type of timber frame wall system. The tightness of the fit as well as the friction between the insulation and the timber holds the insulation in place and prevents slumping.

The bottom of the insulation is usually supported by noggins running between the studs. Thermafleece can also be stapled to the side of the timber stud if desired.

Thermafleece is installed between the frame in the same way regardless of the build-up of the wall. The thickness of insulation required is determined by the target U-value. A layer of insulation can also be fixed across the timber stud frame to provide additional insulation. This has the advantage of reducing the thermal bridging in the wall system.



- 1. Lining board and plaster
- 2. Timber battens and service void
- 3. Vapour control and airtightness layer
- 4. Timber frame
- 5. Thermafleece
- 6. Racking board
- 7. Breather membrane
- 8. 50mm Cavity
- 9. Outer cladding

Typical U-Value - W/m²K

Insulation Depth	Thermafleece between studs (47mm)		
	140mm	170mm	200mm
Thermafleece UltraWool	0.26	0.23	0.21
Thermafleece CosyWool Slab	0.27	0.24	0.21
Thermafleece CosyWool Roll	0.28	0.24	0.22

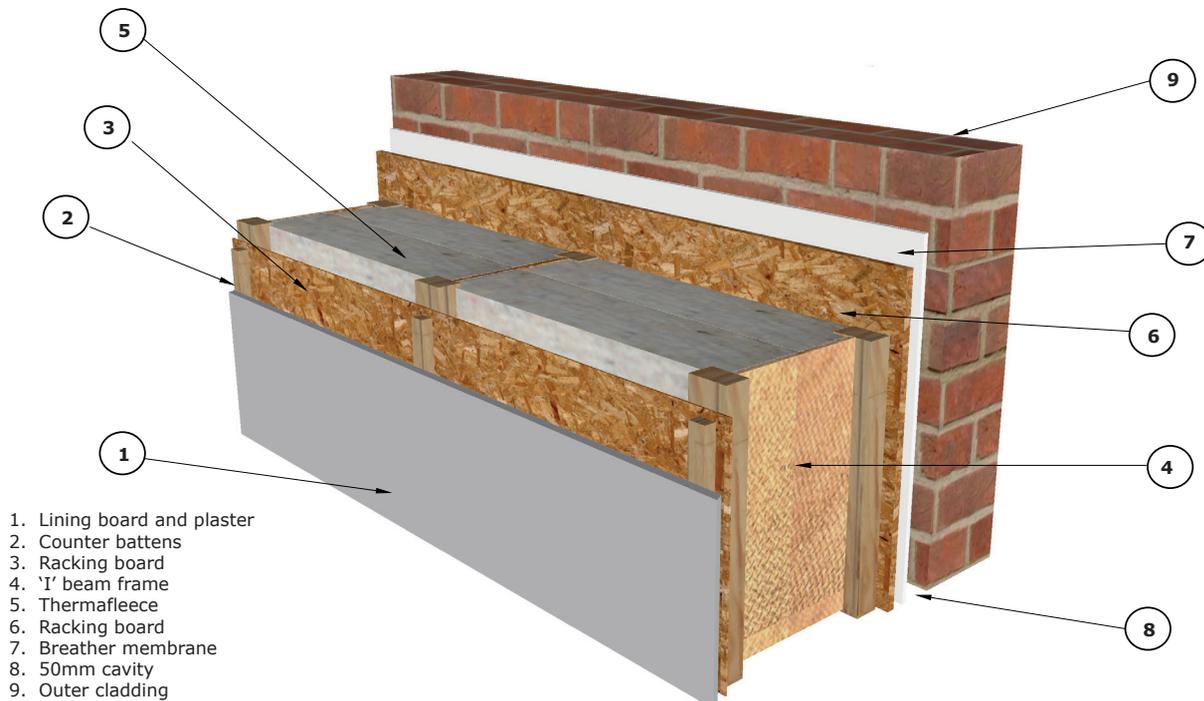
Timber Frame Walls



TIMBER FRAME WALL USING I-BEAM

A timber 'I' beam frame wall system is often used to create a greater depth of timber frame which can be filled with a greater quantity of insulation. The thinner web of the "I" beam also reduces thermal bridging through the timber sections. The structural timber frame 'I' beam section has a racking board attached to the cavity side of the construction to give a high degree of strength.

The system can also be fabricated as a closed panel system, delivered to site in sections that can be pre-insulated with the Thermafleece. A service void can be created by counter battening along the timber frame internal face and fixing the internal finishing board. This ensures that the insulation remains undisturbed and airtightness remains intact when services are accessed for maintenance.



Typical U-Value - W/m ² K				
Insulation Depth	Thermafleece between I-beam studs (47mm flange)			
	220mm	240mm	300mm	360mm
Thermafleece UltraWool	0.16	0.15	0.12	0.11
Thermafleece CosyWool Slab	0.17	0.16	0.13	0.11
Thermafleece CosyWool Roll	0.17	0.16	0.13	0.12

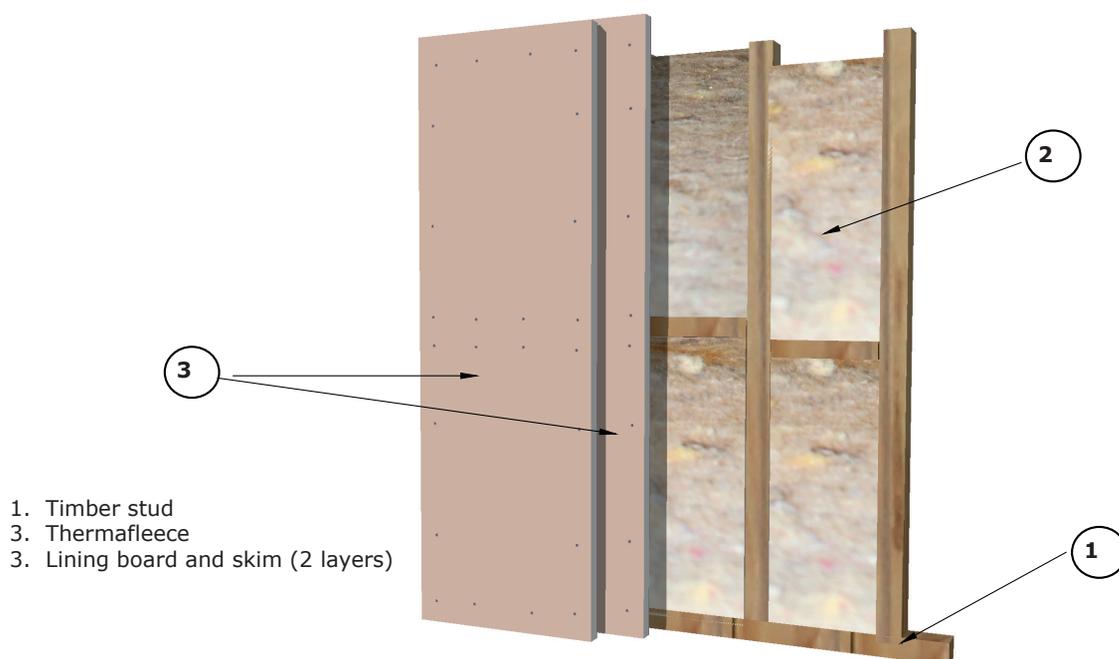


PARTITION WALLS

The sound absorbent properties and breathability of Thermafleece make it ideal for use in internal partition walls.

Thermafleece fits between the timber studs. The tightness of the fit combined with the friction between the insulation and the timber holds the insulation in place and prevents slumping. The bottom of the insulation is supported by noggins running between the studs. Thermafleece can be stapled to the side of the timber stud if desired.

For improved acoustic performance additional layers of lining board can be fixed to the wall. Ensure that joints between the additional layers are staggered.



Lining Board	Insulation between 70mm Timber Stud	Weighted Sound Reduction Index
Plasterboard 1 layer each side	CosyWool 70mm	R _w 40
Plasterboard 1 layer each side	UltraWool 70mm	R _w 41
Plasterboard 1 layer plus 2 layers	UltraWool 70mm	R _w 45
Plasterboard 2 layers each side	UltraWool 70mm	R _w 48
Fermacell 1 layer each side	UltraWool 70mm	R _w 47
Fermacell 1 layer plus 2 layers	UltraWool 70mm	R _w 52
Fermacell 2 layers each side	UltraWool 70mm	R _w 54

YOUR NOTES

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Version 5.01

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Application Guidance
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British wool insulation

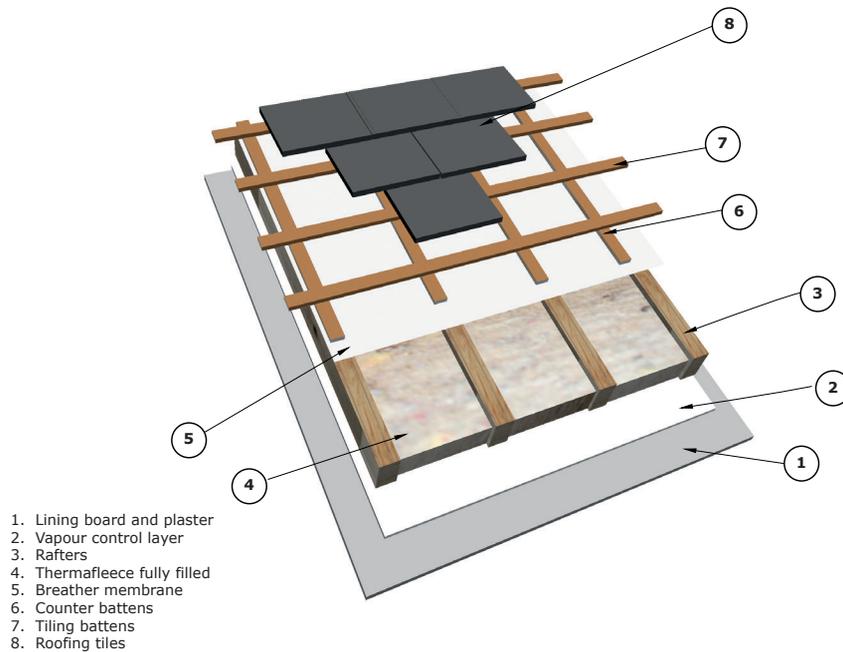
THERMAFLEECE FULL FILL BETWEEN RAFTER Supported Breather Membrane

A supported breather membrane is created when the membrane is fitted taut on top of rafters and secured using counter battens that run the length of the rafter. Tiling battens run across the counter batten forming a space under the tiles.

The rafter depth can be fully filled with Thermafleece which fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

It may be necessary or desirable to add an additional layer of Thermafleece under the rafter. A counter batten can be secured against the underside of the rafter running across or the rafter. Fit Thermafleece between. Running the second layer of insulation across the rafters is desirable because it creates a thermal break.

If necessary, install a vapour control layer to the warm side (underside) of the rafters prior to fixing the lining board.



Typical U-Value - W/m²K

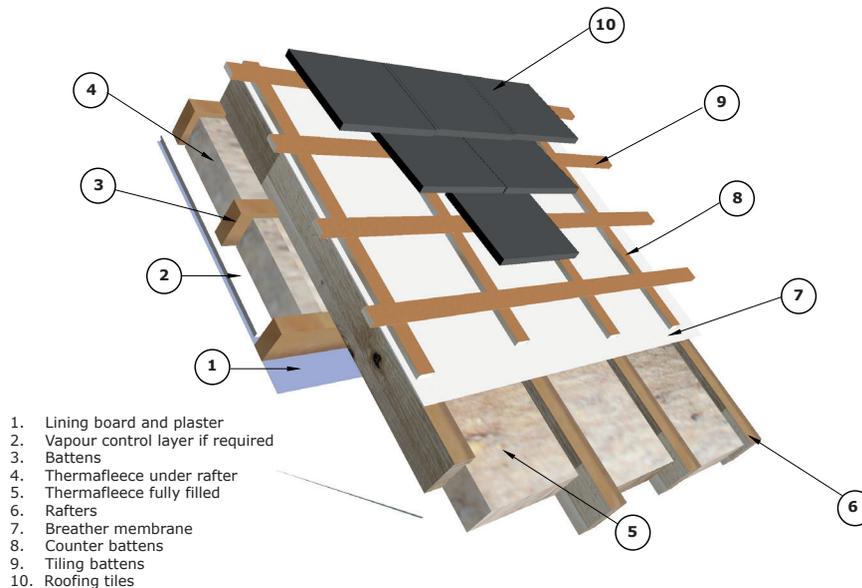
UltraWool Under Rafter	UltraWool Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.40	0.33	0.28	0.24	0.22
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.42	0.35	0.30	0.26	0.23
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.43	0.36	0.30	0.26	0.23

THERMAFLEECE FULL FILL BETWEEN AND BELOW RAFTER Supported Breather Membrane

A supported breather membrane is created when the membrane is fitted taut on top of rafters and secured using counter battens that run the length of the rafter. Tiling battens run across the counter batten forming a space under the tiles.

The rafter depth can be fully filled with Thermafleece which fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



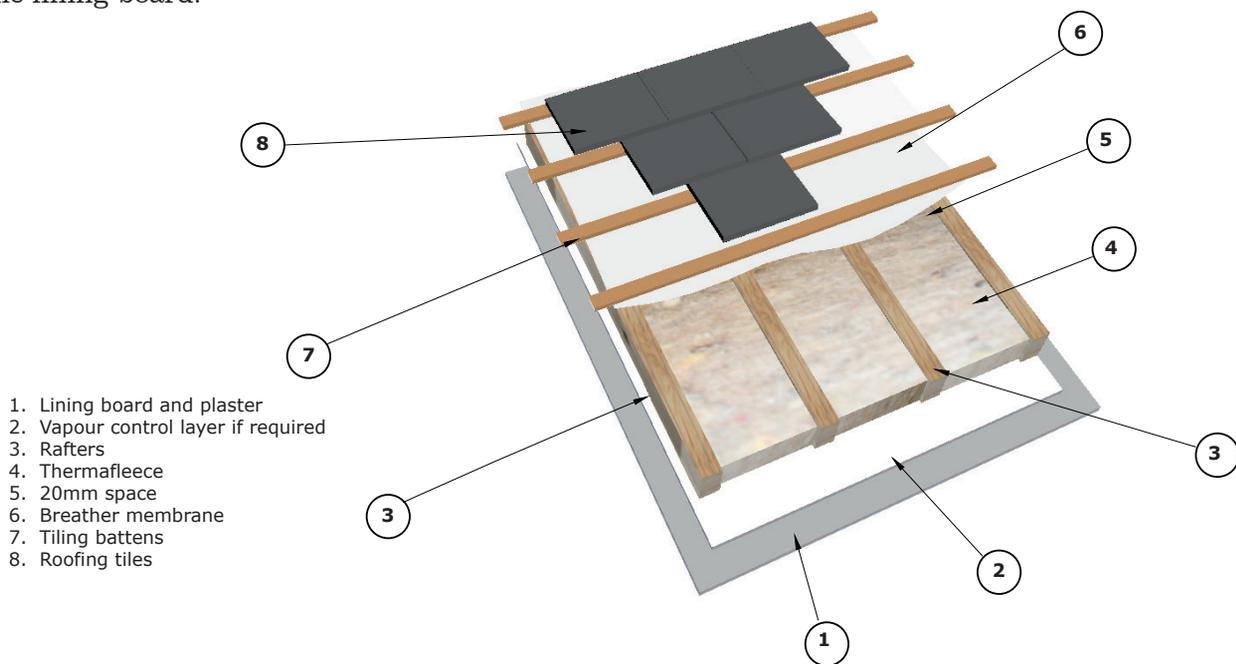
Typical U-Value - W/m ² K							
UltraWool Under Rafter	UltraWool Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.39	0.32	0.27	0.23	0.20	0.18	0.17
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.27	0.23	0.20	0.18	0.16	0.15	0.14
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.41	0.33	0.28	0.25	0.22	0.20	0.18
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.28	0.25	0.22	0.19	0.18	0.16	0.15
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.42	0.33	0.29	0.25	0.22	0.20	0.18
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
	0.29	0.25	0.22	0.20	0.18	0.16	0.15

THERMAFLEECE PARTIAL FILL BETWEEN RAFTER Unsupported Breather Membrane

An unsupported breather membrane is when the membrane is fitted over the rafters and secured by tiling battens running across the rafters. A drape of around 10mm is created in the membrane running across the rafter to allow a gap between the breather membrane and the tiling batten above. In this case there is no counter batten installed on top of the rafter.

Fit insulation between the rafters leaving a 20mm space above the insulation to accommodate the drape in the breather membrane above. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



1. Lining board and plaster
2. Vapour control layer if required
3. Rafters
4. Thermafleece
5. 20mm space
6. Breather membrane
7. Tiling battens
8. Roofing tiles

Typical U-Value - W/m ² K					
UltraWool Under Rafter	UltraWool Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.40	0.33	0.28	0.24	0.22
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.42	0.35	0.30	0.26	0.23
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.43	0.36	0.30	0.26	0.23

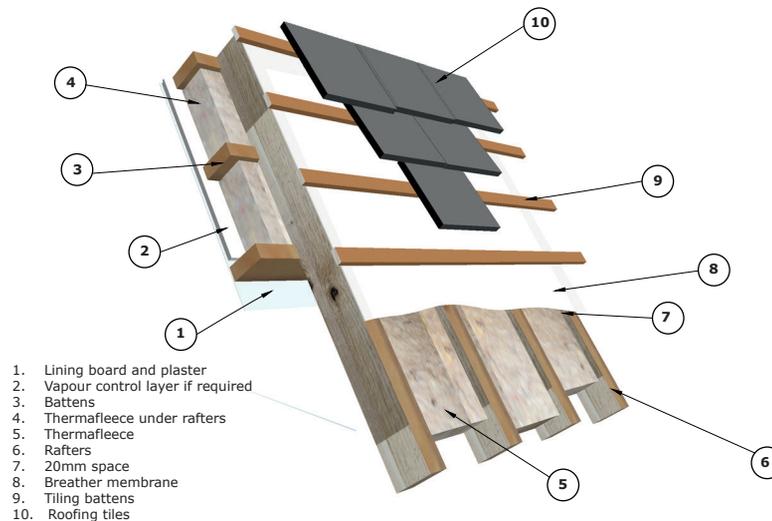
THERMAFLEECE PARTIAL FILL BETWEEN RAFTER AND UNDER RAFTER Unsupported Breather Membrane

An unsupported breather membrane is when the membrane is fitted over the rafters and secured by tiling battens running across the rafters. A drape of around 10mm is created in the membrane running across the rafter to allow a gap between the breather membrane and the tiling batten above. In this case there is no counter batten installed on top of the rafter.

Fit insulation between the rafters leaving a 20mm space above the insulation to accommodate the drape in the breather membrane above. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

It may be necessary or desirable to add an additional layer of Thermafleece under the rafter. A counter batten can be secured against the underside of the rafter running across the rafter. Fit Thermafleece between. Running the second layer of insulation across the rafters is desirable because it creates a thermal break.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



Typical U-Value - W/m²K

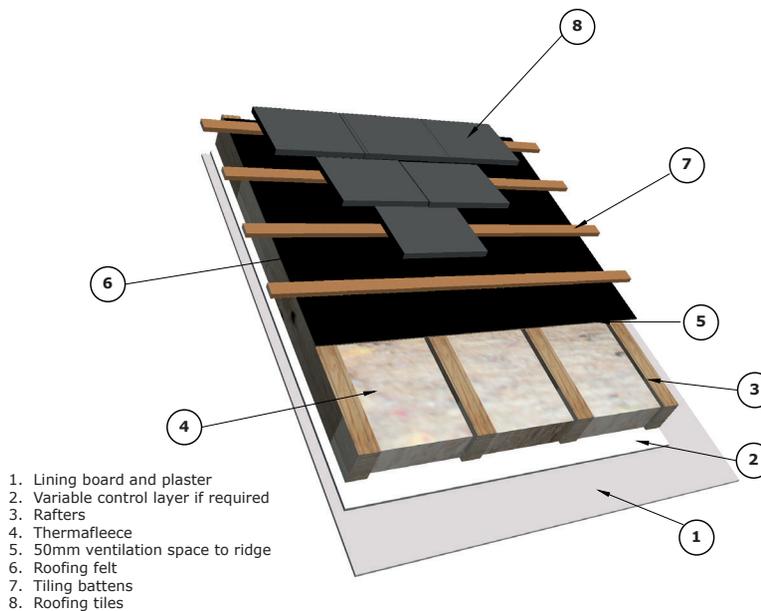
UltraWool Under Rafter	UltraWool Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.39	0.32	0.27	0.23	0.20	0.18	0.17
100 mm	0.27	0.23	0.20	0.18	0.16	0.15	0.14
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.41	0.33	0.28	0.25	0.22	0.20	0.18
100 mm	0.28	0.25	0.22	0.19	0.18	0.16	0.15
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.42	0.33	0.29	0.25	0.22	0.20	0.18
100 mm	0.29	0.25	0.22	0.20	0.18	0.16	0.15

THERMAFLEECE PARTIAL FILL BETWEEN RAFTER High Vapour Resistance Roofing Felt

Traditional bitumen roofing felt is laid over the rafter and secured by tiling battens running across the top of the rafter. Bitumen roofing felt is not breathable and has a high vapour resistance so it is important to create a well ventilated space under the roofing felt to avoid the risk of condensation.

Fit insulation between the rafters leaving a 50mm space between the insulation and roofing felt to provide clear ventilation down to the eaves and up to the ridge. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



Typical U-Value - W/m ² K					
UltraWool Under Rafter	UltraWool Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.40	0.33	0.28	0.24	0.22
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.42	0.35	0.30	0.26	0.23
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.43	0.36	0.30	0.26	0.23

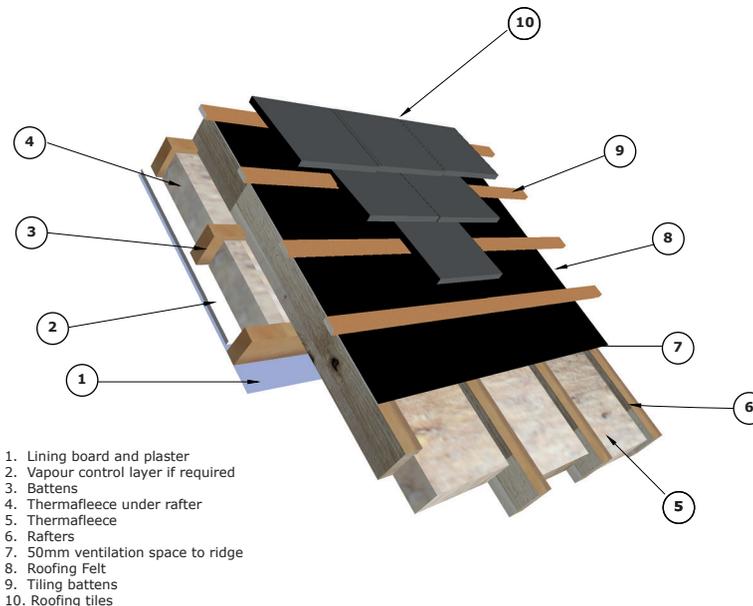
THERMAFLEECE PARTIAL FILL BETWEEN RAFTER AND UNDER RAFTER High Vapour Resistance Roofing Felt

Traditional bitumen roofing felt is laid over the rafter and secured by tiling battens running across the top of the rafters. Bitumen roofing felt is not breathable and has a high vapour resistance so it is important to create a well ventilated space under the roofing felt to avoid the risk of condensation.

Fit insulation between the rafters leaving a 50mm space between the insulation and roofing felt to provide clear ventilation down to the eaves and up to the ridge. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

It may be necessary or desirable to add an additional layer of Thermafleece under the rafter. A counter batten can be secured against the underside of the rafter running across the rafter. Fit Thermafleece between. Running the second layer of insulation across the rafters is desirable because it creates a thermal break.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



Typical U-Value - W/m²K

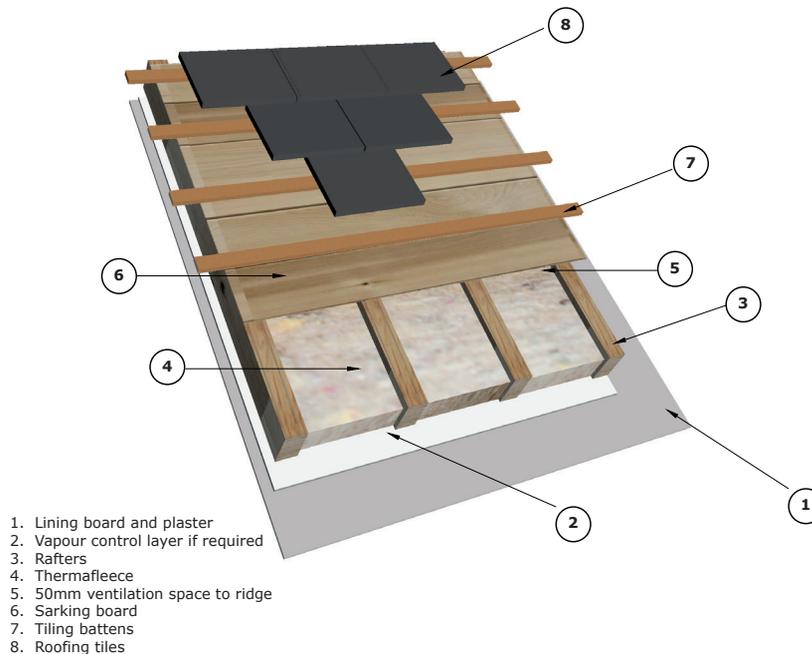
UltraWool Under Rafter	UltraWool Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.39	0.32	0.27	0.23	0.20	0.18	0.17
100 mm	0.27	0.23	0.20	0.18	0.16	0.15	0.14
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.41	0.33	0.28	0.25	0.22	0.20	0.18
100 mm	0.28	0.25	0.22	0.19	0.18	0.16	0.15
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.42	0.33	0.29	0.25	0.22	0.20	0.18
100 mm	0.29	0.25	0.22	0.20	0.18	0.16	0.15

THERMAFLEECE PARTIAL FILL BETWEEN RAFTER Timber Sarking Boards

Timber sarking boards run across the top of the rafter with tiling battens fixed above. Sarking boards are deemed to have a high vapour resistance so it is important to create a well ventilated space under the sarking to avoid the risk of condensation.

Fit insulation between the rafters leaving a 50mm space between the insulation and sarking to provide clear ventilation down to the eaves and up to the ridge. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



Typical U-Value - W/m ² K					
UltraWool Under Rafter	UltraWool Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.40	0.33	0.28	0.24	0.22
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.42	0.35	0.30	0.26	0.23
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter				
	100 mm	125 mm	150 mm	175 mm	200 mm
0 mm	0.43	0.36	0.30	0.26	0.23

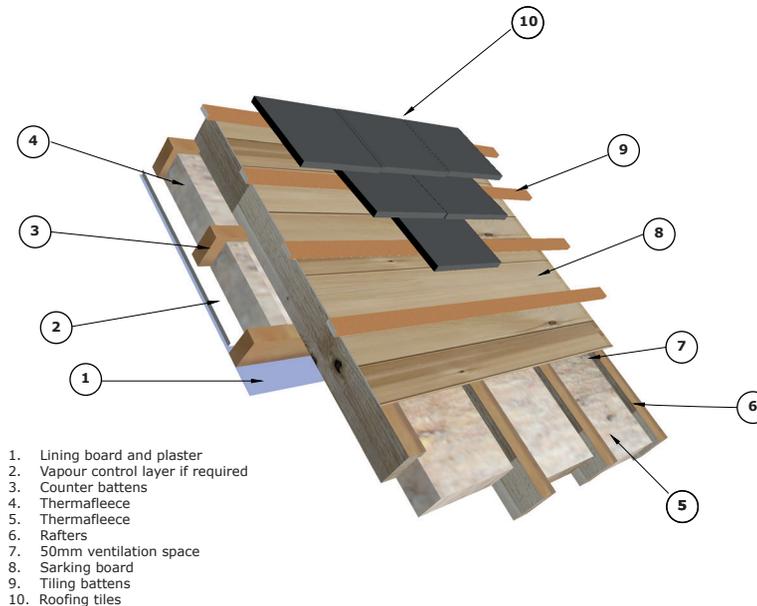
THERMAFLEECE PARTIAL FILL BETWEEN RAFTER AND UNDER RAFTER Timber Sarking Boards

Timber sarking boards run across the top of the rafter with tiling battens fix above. Sarking boards are deemed to have a high vapour resistance so it is important to create a well ventilated space under the sarking to avoid the risk of condensation.

Fit insulation between the rafters leaving a 50mm space between the insulation and sarking to provide clear ventilation down to the eaves. Thermafleece fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

It may be necessary or desirable to add an additional layer of Thermafleece under the rafter. A counter batten can be secured against the underside of the rafter running across the rafter. Fit Thermafleece between. Running the second layer of insulation across the rafters is desirable because it creates a thermal break.

If necessary, install a vapour control layer to the warm side (underside) of the battens prior to fixing the lining board.



Typical U-Value - W/m²K

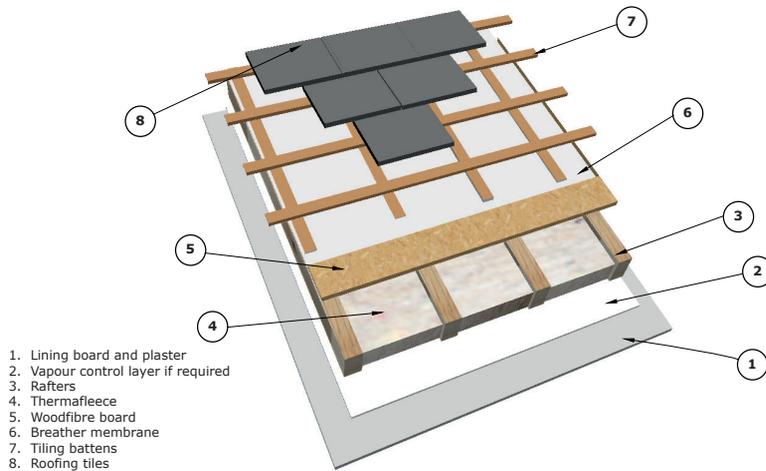
UltraWool Under Rafter	UltraWool Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.39	0.32	0.27	0.23	0.20	0.18	0.17
100 mm	0.27	0.23	0.20	0.18	0.16	0.15	0.14
CosyWool Slab Under Rafter	CosyWool Slab Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.41	0.33	0.28	0.25	0.22	0.20	0.18
100 mm	0.28	0.25	0.22	0.19	0.18	0.16	0.15
CosyWool Roll Under Rafter	CosyWool Roll Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
50 mm	0.42	0.33	0.29	0.25	0.22	0.20	0.18
100 mm	0.29	0.25	0.22	0.20	0.18	0.16	0.15

THERMAFLEECE FULL FILL BETWEEN RAFTER Breathable Wood Fibreboard Over Rafter

Breathable wood fibreboards are a popular way of insulating above rafters. This insures that minimal space is lost under the rafters whilst improving thermal and acoustic performance of the roof structure.

The wood fibreboards over the rafter are vapour open and breathable. This means that the rafter depth can be fully filled with Thermafleece which fits neatly between rafters. The tightness of the fit combined with the friction against the rafters holds the insulation in place and prevents slumping. Thermafleece can also be stapled to the side of the rafter if desired.

It is important to refer to the installation guidance from the supplier of the wood fibreboard insulation. If necessary, install a vapour control layer to the warm side (underside) of the rafters prior to



Typical U-Value - W/m²K

Wood Fibreboard Over Rafter 0.040 λ	UltraWool Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
60 mm	0.34	0.29	0.25	0.22	0.19	0.17	0.16
80 mm	0.29	0.25	0.22	0.19	0.17	0.16	0.15
Wood Fibreboard Over Rafter 0.040 λ	CosyWool Slab Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
60 mm	0.35	0.29	0.25	0.22	0.20	0.18	0.17
80 mm	0.30	0.26	0.25	0.20	0.18	0.17	0.15
Wood Fibreboard Over Rafter 0.040 λ	CosyWool Roll Between Rafter						
	50 mm	75 mm	100 mm	125 mm	150 mm	175 mm	200 mm
60 mm	0.35	0.30	0.26	0.23	0.20	0.18	0.17
80 mm	0.30	0.26	0.23	0.20	0.18	0.17	0.15

YOUR NOTES

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Version 5.01

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British wool insulation

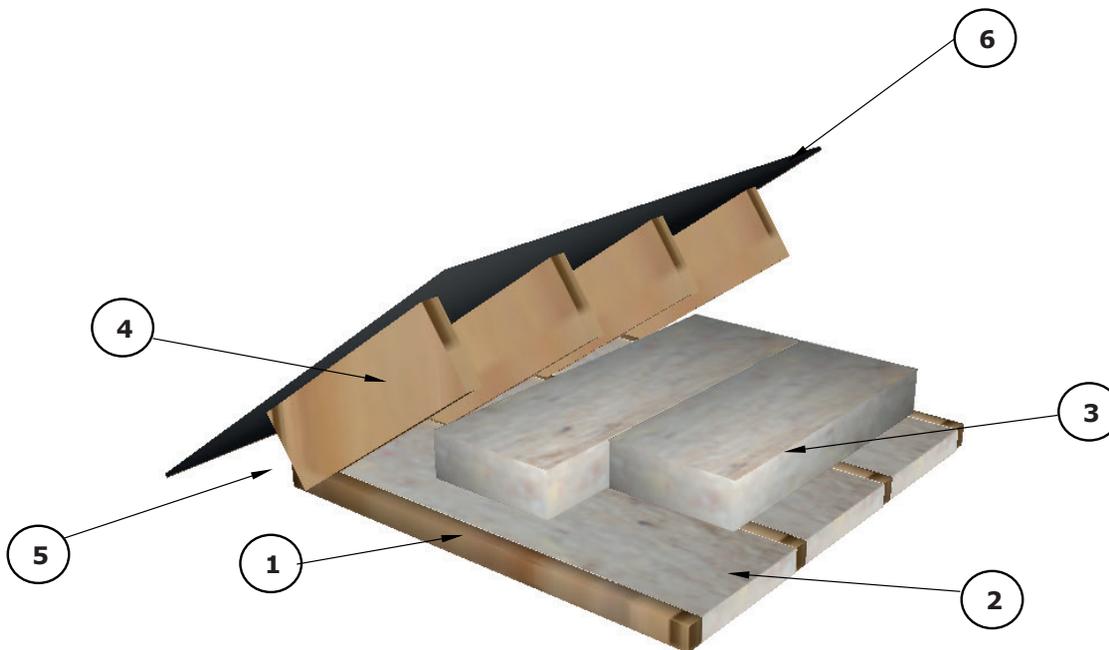
INSTALLING THERMAFLEECE

Thermafleece insulation is easy and safe to install in any loft situation. For existing buildings, we recommend a minimum depth of 240mm of CosyWool Roll in the loft space. For new builds, we recommend a minimum depth of 300mm of Thermafleece CosyWool Roll.

Fit first layer of insulation between the joists ensuring all joints are close butted to avoid air gaps. Cross-lay additional layers of insulation to reduce channels running the full height of the insulation.

Where a low vapour resistance breather membrane is used, take insulation over the wall plate to meet the wall insulation and push close to the breather membrane allow 20mm to accommodate the membrane drape. Refer to the membrane suppliers guidance for details.

Where a high vapour resistance membrane is used, ventilation at the eaves must be maintained. Ensure a gap of at least 50mm between the insulation and the eaves vents to ensure adequate air flow into the loft space.



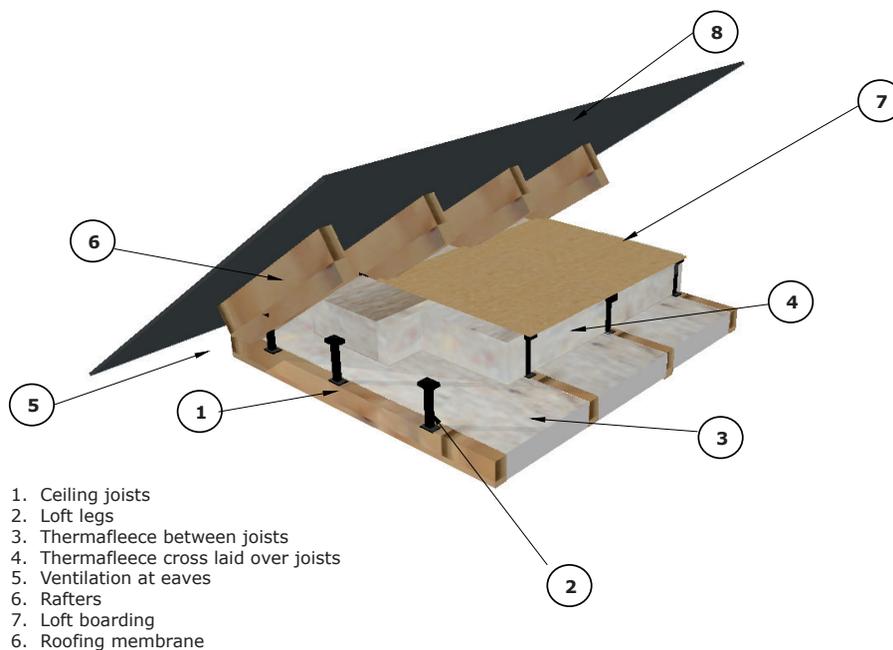
1. Ceiling joists
2. Thermafleece between joists
3. Thermafleece cross load over joists
4. Rafters
5. Ventilation at eaves
6. Roofing membranes

Thermafleece can also be used with loft legs to provide a boarded area for storage whilst also maintaining an appropriate depth of insulation. Refer to the loft leg manufacturer's instructions for installation. Thermafleece is installed as below. Care should be taken to avoid gaps in the insulation around the loft leg.

Insulation should not be fitted between joists under the water tanks. Additional layers of insulation should be installed along the sides of the tank to meet the lagging around the tank.

As with all insulation products, electrical cables in close proximity to insulation must be appropriately rated. It may be necessary to de-rate electrical cables. Guidance should be sought from a qualified electrician.

Down-light covers that meet Part F and Part B of the Building Regulations should be used where necessary.



Typical U-Value - W/m ² K			
Thermafleece CosyWool between joists			
Thermafleece over joists	100mm	150mm	170mm
100mm	0.19	0.16	0.15
140mm	0.16	0.14	0.13
150mm	0.16	0.13	0.13
200mm	0.13	0.11	0.11

Performance

Thermafleece will last the life of the building under normal conditions so once installed it does not require replacement. In the event of a significant roof leak or flood such that the insulation becomes wet, remove the insulation and replace with new insulation once the area has dried out and repairs made.

State of repair

Your loft should be in a good state of repair prior to installing insulation.

Ventilation

Ventilation prevents the risk of condensation forming in your loft. Condensation promotes mould growth, which can endanger the health and well-being of building occupants and ultimately the integrity of the building fabric through rotting and degradation. As you increase the depth of insulation in your loft, the loft space may become colder in winter making the need for ventilation important. You should ensure that existing ventilation pathways are kept clear prior to installing insulation.

Rainwater penetration

You should ensure there is no visible ongoing rainwater penetration or evidence of such penetration. If there is evidence of rainwater penetration you should ensure repairs are made prior to installing insulation.

Ceiling condition

Your ceiling shall be in a good visible state of repair.

Electrical connections

There should be no visible defects in the electrical wiring of the roof space.

Roof timbers

There should be no visible corrosion of the structural metal connections or degradation of timbers in the roof space.

Leakage and damp

There should be no evidence of ongoing leakage or damp from existing water supply pipework, tanks or heating systems. If you see evidence of a leak, ensure repairs are made prior to installing insulation.

Ventilation impediment

Where existing insulation has been pushed into the eaves and is impeding ventilation pathways, this should be moved prior to installing new insulation. If necessary, insulation interrupters/rafter trays should be fitted to ensure the air path remains open.

Pre-existing insulation

Existing loft insulation which is still fit for purpose can be left in situ and topped up to comply with current building regulations/standards. Examples of insulation being unfit for purpose include health and safety concerns (e.g. due to vermin infestation or bird litter or where signs of damp are visible). Care should be taken not to damage existing insulation around water tanks and pipework if it is in good condition.

Asbestos

Care should be taken around Asbestos and Asbestos-Containing Materials (ACMs) that are sometimes found in the loft spaces where it is used to insulate water tanks and pipes etc. and in heating systems

Protected Species

Please seek advice from the relevant body if you encounter protected species.

Clearance from flues or chimneys

Thermafleece insulation should not be installed within 150mm of a working flue or chimney. Electrical apparatus. A recessed light fitting that is not type “F-capped”, should either be replaced with a fitting that is certified both “F-capped” and “IP6X dust tight” rated at 50 watt or have equivalent covers placed over them to comply with relevant industry standards BS EN 60598-1/BS EN 60598-2.

For other electrical apparatus penetrating the ceiling the insulation material shall be retained at a minimum of 75mm (maximum 150mm) away from the apparatus.

Any transformers or ballast units (e.g. for halogen or LED lighting) should be placed on a suitably sized plate (typically 150x150mm) made from non-combustible material, which sits on top of the insulation where possible. If not possible the insulation material shall be retained at a minimum of 75mm (maximum 150mm). Transformers or ballast units should not be buried under insulation material unless they are specifically approved for this purpose.

High-ampere electric cables

Electric cables supplying storage heaters, immersion heaters, electric showers, electric cookers or solar PV shall not be covered by thermal insulation. Cables to these appliances shall be lifted above the insulation. If this is not possible, the insulation must be retained at a minimum distance of 75mm (maximum 150mm).

YOUR NOTES

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Version 5.01

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Keeping you
snug wherever
you call home...

Application Guidance
FLOORS



**therma
fleece**[®]
British wool insulation

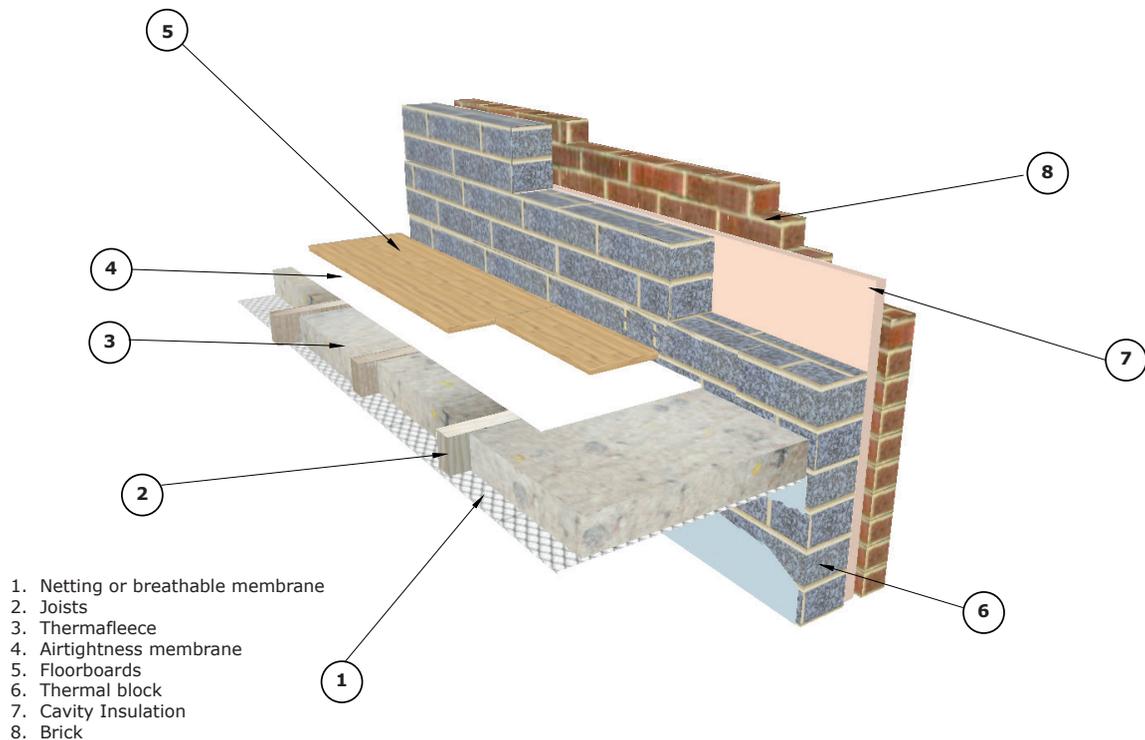
SUSPENDED GROUND FLOOR

Thermafleece is an ideal choice for helping minimise heat loss through suspended floors. Fit the insulation between the joists ensuring all joints are close-butted to avoid air gaps. Overlap additional layers to reduce thermal bridging and air gaps. Pay particular attention to the perimeter of the floor, filling every gap with insulation.

Support insulation with netting to the underside of the joist. An airtight breather membrane can be fitted to the underside of the joist to minimise air movement through the floor.

If the flooring comprises open floorboards, you could install an airtight breather membrane on the top side of the Thermafleece to avoid a build-up of dust and debris on top of the insulation and to reduce any movement.

Maintain a ventilated space at least 150mm below the level of the insulation. Ensure that all air vents under the floor are unobstructed and take care not to block ventilation air path.



Typical U-Value - W/m²K

	100 mm	125 mm	150 mm	175 mm	200 mm
UltraWool Between Floor Joists	0.30	0.26	0.22	0.20	0.18
CosyWool Slab Between Floor Joists	0.31	0.27	0.23	0.21	0.19
CosyWool Roll Between Floor Joists	0.31	0.27	0.24	0.21	0.19

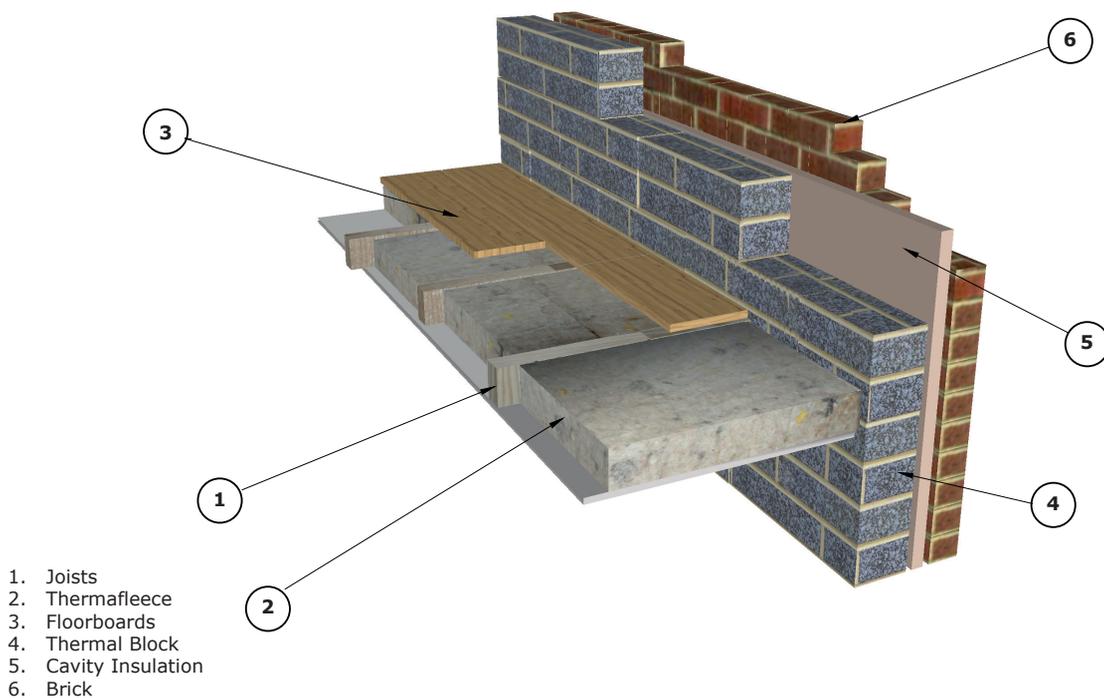
INSULATING BETWEEN FLOORS

Thermafleece can be easily installed between joists to provide additional thermal insulation and acoustic absorption within the structure.

Fit the insulation between the joists ensuring all joints are close-butted to avoid air gaps. Overlap additional layers to reduce thermal bridging and air gaps. Pay particular attention to the perimeter of the floor, filling every gap with insulation.

The friction of the insulation should hold it in place. However, if insulation is installed from below, you can hold it in place using netting until the ceiling layers are secured.

As with other insulation products, it may be necessary in some cases to de-rate electrical cables buried in insulation.



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