How to install Thermafleece

Walls

therma fleece®

Working in harmony with buildings.

Eden Renewable Innovations Ltd
Sales & General Enquiries: **017684 86285** | **enquiries@thermafleece.com**

www.thermafleece.com

v10

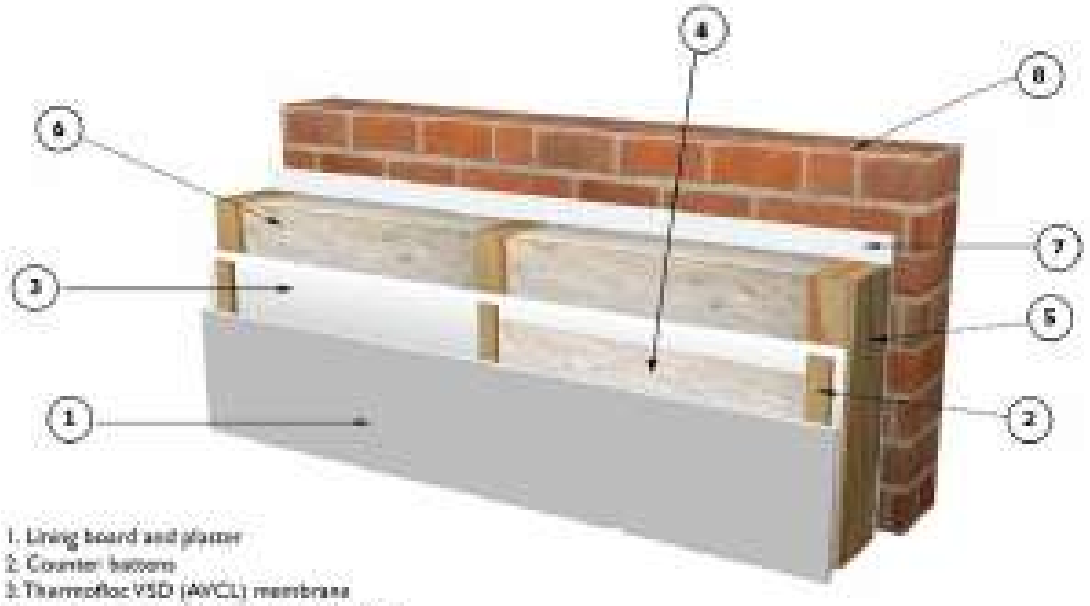
Walls

BRICK / STONE SOLID WALL

Variable Surface Diffusion Membrane

Using natural breathable insulation in conjunction with a variable surface diffusion (VSD) airtightness and vapour control membrane is an effective way to ensure a healthy moisture balance within the building fabric. The VSD 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. Condensation risks should be carefully evaluated prior to insulating any existing solid wall.

A counter batten can 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. An optional layer of 25mm CosyWool can also be installed within the service void to provide additional insulation.



1. Lining board and plaster
2. Counter battens
3. Thermofloc VSD (AirCL) membrane
4. Service void / optional 25mm CosyWool
5. Timber Studs
6. Thermafleece
7. Breather Membrane optional depending on wall condition
8. Solid wall - Brick / Stone

	Typical U-Value - W/m²K		
	Thermafleece between studs (47mm wide)		
	50mm	70mm	90mm
UltraWool with uninsulated service void	0.55	0.42	0.34
UltraWool + 25mm insulated sevice void	0.46	0.36	0.3

Walls

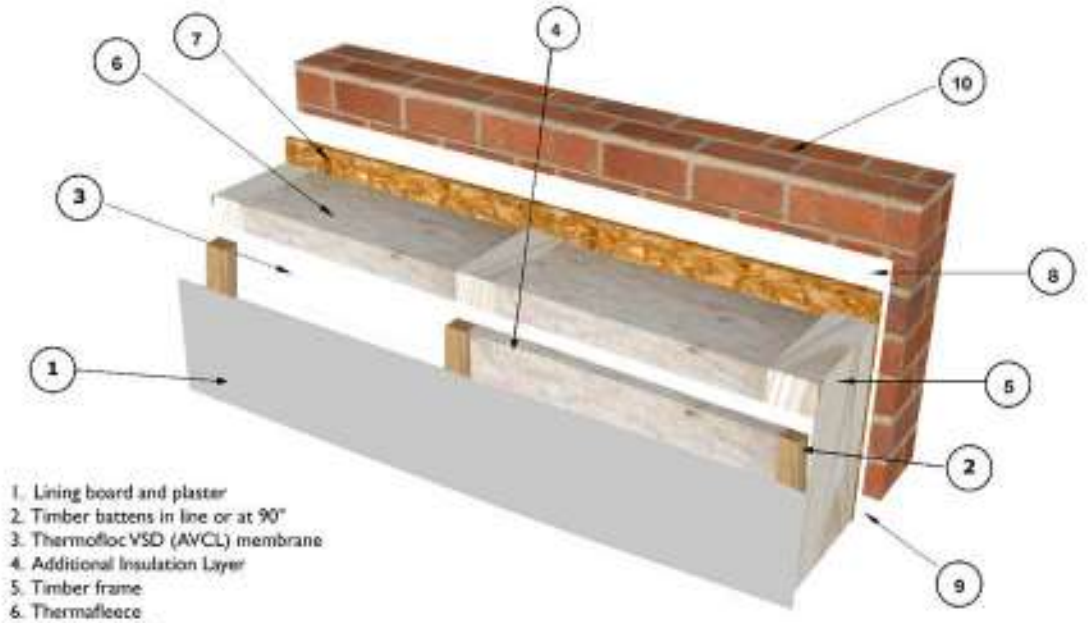
TIMBER FRAME WALL

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.

An optional layer of 25mm CosyWool can also be installed within the service void to provide additional insulation.



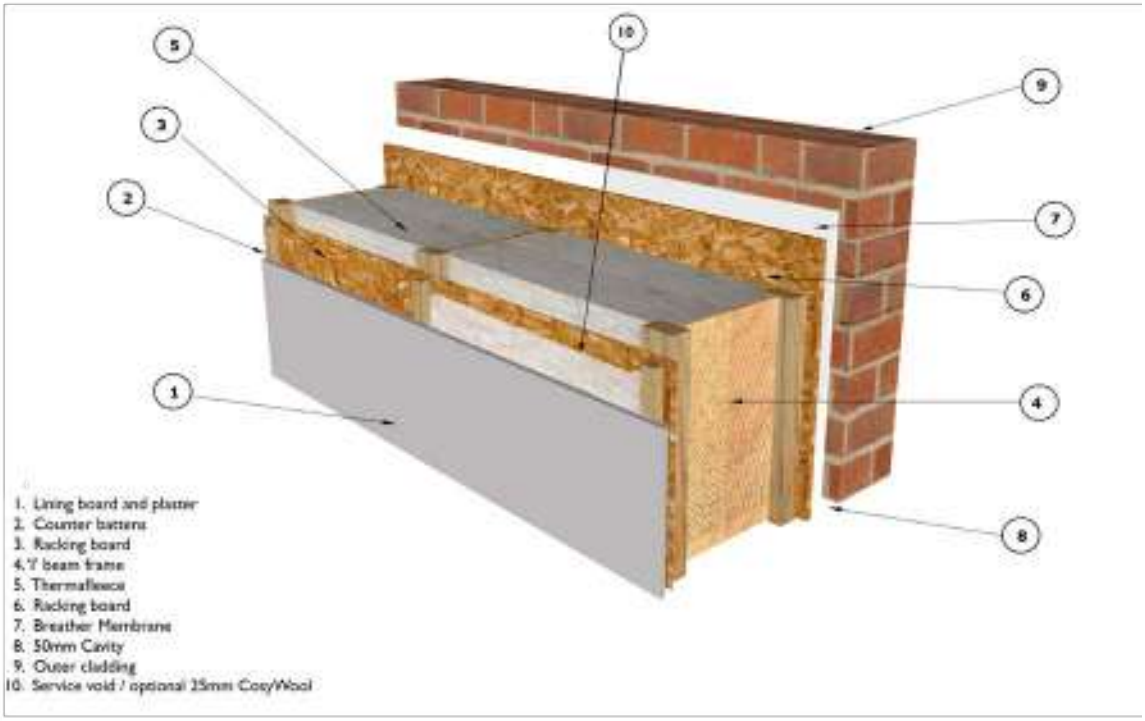
1. Lining board and plaster
2. Timber battens in line or at 90°
3. Thermofloc VSD (AVCL) membrane
4. Additional Insulation Layer
5. Timber frame
6. Thermafleece
7. Racking board
8. Breather Membrane
9. 50mm Cavity
10. Outer cladding

Typical U-Value - W/m²K				
	Thermafleece between studs (47mm)			
	140mm	170mm	200mm	225mm
UltraWool with uninsulated service void	0.27	0.23	0.20	0.18
UltraWool + 25mm insulated sevice void	0.24	0.21	0.18	0.17

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. An optional layer of 25mm CosyWool can be installed within the service void to provide additional insulation.



Typical U-Value - W/m²K				
	Thermafleece between studs (45mm flange)			
	220mm	240mm	300mm	360mm
UltraWool with uninsulated service void	0.16	0.14	0.12	0.10
UltraWool + 25mm insulated sevice void	0.14	0.13	0.11	0.09

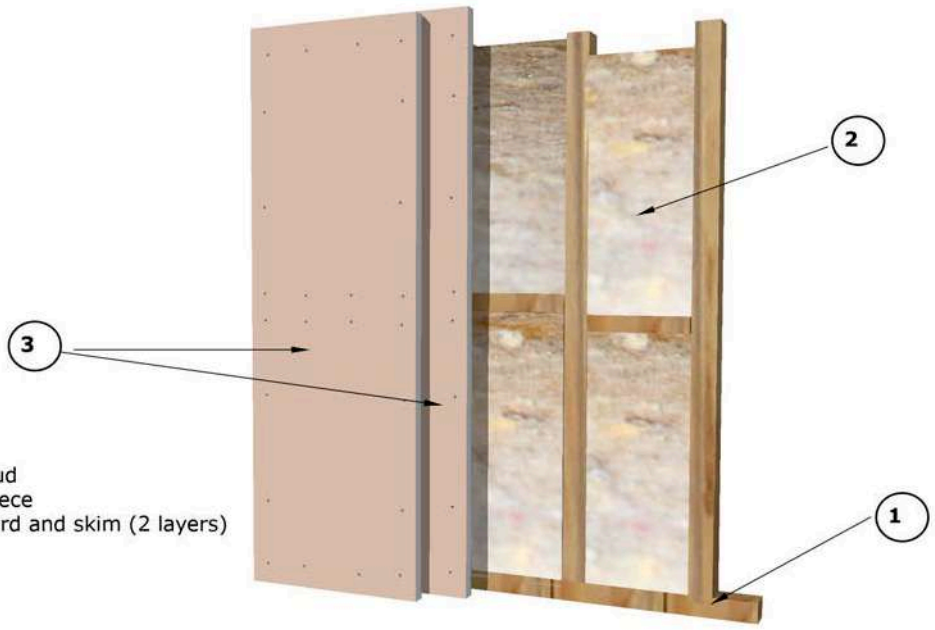
Walls

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 the joints between the additional layers are staggered.



1. Timber stud
3. Thermafleece
3. Lining board and skim (2 layers)

Lining Board	Insulation between 70mm Timber Stud	Weighted Sound Reduction Index
Plasterboard - 1 layer each side	UltraWool 70mm	R_w40
Plaster 1 layer each side	UltraWool 70mm	R_w41
Plasterboard 1 layer plus 2 layers	UltraWool 70mm	R_w45
Plasterboard 2 layers each side	UltraWool 70mm	R_w48
Fermacell 1 layer each side	UltraWool 70mm	R_w47
Fermacell 1 layer plus 2 layers	UltraWool 70mm	R_w52
Fermacell 2 layers each side	UltraWool 70mm	R_w54