



U-VALUE & INSTALLATION GUIDE



aluma
flex

1.2m x 8.33m
**THERMO-REFLECTIVE
INSULATION FOR
ROOFS, WALLS, LOFTS
AND TIMBER FRAME**



01621 776252

www.alumaflex.co.uk

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Product summary

Width	1.2m
Length	8.33m
Thickness	25 -30mm
Core Value	0.90m ² k/w
Roofs	1.8m ² k/w
Walls	2.26m ² k/w
Emissivity	0.05
Weight	700g/m ²
Vapour Barrier	1200MN.sg ¹

Technical information

Thermal insulation saves energy costs

Alumaflex® the thin and highly efficient multi-foil insulation is designed to help reduce energy costs, save on space and meet the thermal requirements of building regulations.

Easy to install multi-foil insulation

Alumaflex® multi-foil insulation is easy to install. It saves time and helps improve air-tightness compared with other forms of insulation. Alumaflex® reduces waste, dust and cold-bridging within the construction.

Multi-foil insulation available in rolls

Alumaflex® multi-foil insulation is available in 1.2m wide rolls, can be used in roofs, walls and floors to improve the thermal performance of the structure. Rolls are provided with certification & fixing details.

Approved insulation

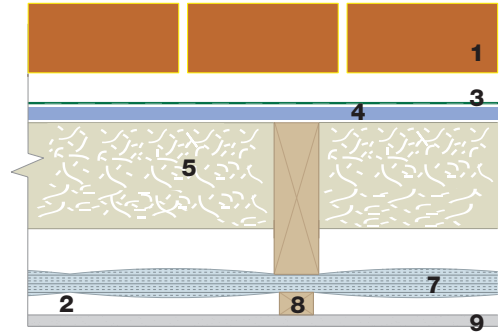
Tested in the UK by UKAS accreditation body. A thermal certificate for walls and roofs provides reassurance to users, designers, insurers and regulators.

Wall Fixing Application

1. Brickwork
2. Airspace
3. Membrane
4. Sheathing Board (e.g. Magply)
5. Insulation ($\lambda 0.038$) (e.g. Natuwool)
6. Insulation ($\lambda 0.022$) (e.g. PIR)
7. Alumaflex (1 or 2 layer)
8. Batten
9. Plasterboard

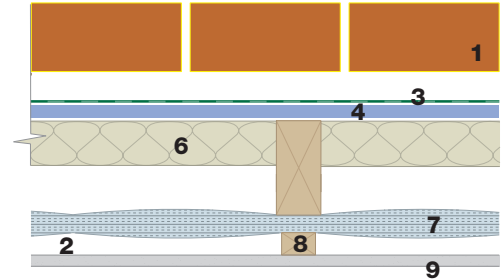
Timber Frame Walls

140mm studwork and rigid insulation board



Timber Frame Walls

90mm studwork and rigid PIR between



WALLS U - Value calculations

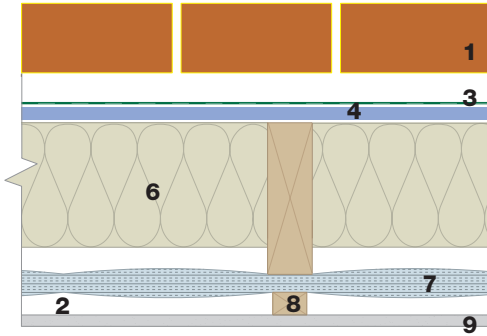
TARGET U-VALUE	Insulation between rafters (mm) eg PIR, Extruded Polystyrene and Mineral Wool				Alumaflex No. of Layers	Studwork Centres (mm)
	0.022 W/mk	0.032 W/mk	0.037 W/mk	0.040 W/mk		
0.30	25	30	35	40	1	400 / 600
0.28	30	40	45	50	1	400 / 600
0.18	100	120	140	150	1	400 / 600
0.14	145	190	210	220	1	400 / 600
0.30	0	0	0	0	2	400 / 600
0.28	0	0	0	0	2	400 / 600
0.18	50	60	70	75	2	400 / 600
0.14	100	130	140	145	2	400 / 600

Roofs: Refurbishment 0.18 Thermal element on existing 0.18 New build 0.13

Walls: Refurbishment 0.30 Thermal element on existing (incl. extension) 0.28 New build 0.18

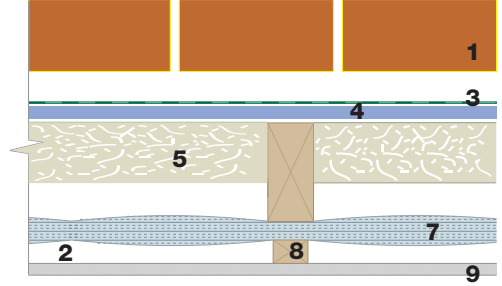
Timber Frame Walls

140mm studwork and rigid insulation board



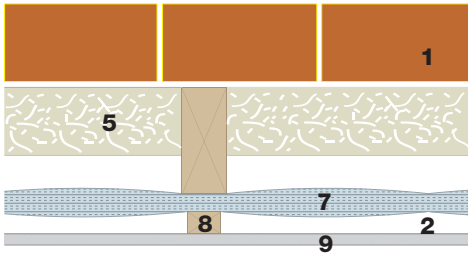
Timber Frame Walls

90mm studwork and rigid PIR between



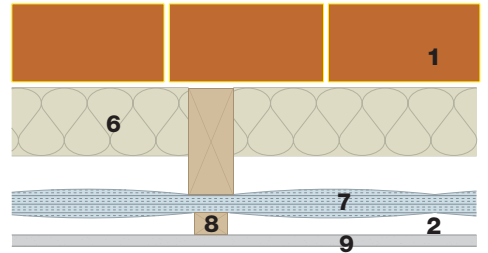
Masonry Wall (Natuwool)

90mm studwork rigid PIR between



Masonry Wall (PIR)

90mm studwork rigid PIR between



Timber Frame Installation Procedure

1. Installation may be either vertical or horizontal runs. Horizontal installation should start at floor and go to the ceiling.
2. Unroll the product across the inside of the timber studs and fix using staples or nails of at least 14 mm length.
3. The next layer must overlap the first layer by at least 10 cm and be taped along the entire length of the joint with Alumaflex aluminium tape. If securely taped, the products can also function as a vapour control layer and air barrier.
4. The product should be permanently fixed in place using wooden battens of size at least 32 mm by 25 mm, parallel or perpendicular to the wall studs held in place with nails.
5. When the top layer has been battened, excess material is removed by running a sharp knife along edge of batten.
6. Plasterboard is fixed to the battens in the conventional manner.

Solid Masonry Installation Procedure

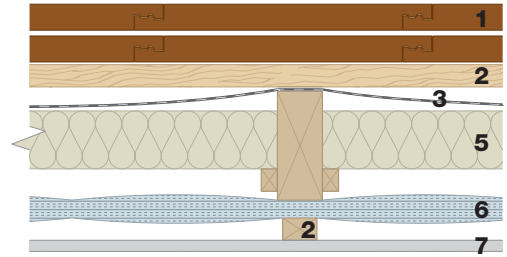
1. Timber battens at least 32 mm deep by 25 mm wide are screwed to the wall at no greater than 600 mm vertical centres, at wall perimeters and horizontally as required.
2. The product is installed as for timber frame walls with plasterboard battens coinciding with the existing battens.

Roof Fixing Application

1. Roof Finish
2. Batten
3. Membrane
4. Sheathing Board (e.g. Magply)
5. Insulation (e.g. PIR)
6. Alumaflex (1 or 2 layer)
7. Plasterboard

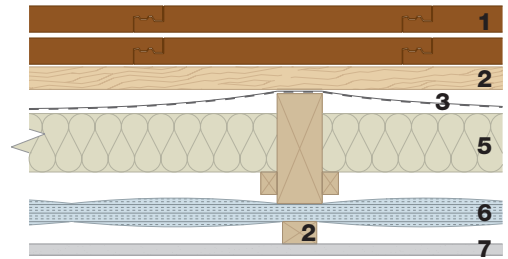
Alumaflex Below Rafter

100mm rafters and rigid insulation board



Alumaflex Below Rafter

150mm rafters and rigid insulation board



Roof U - Value calculations

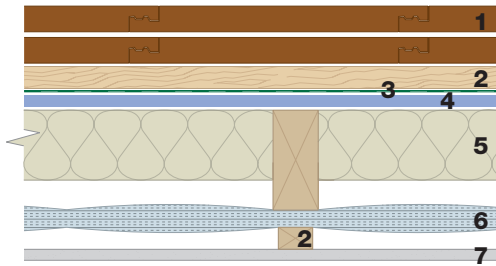
TARGET U-VALUE	Insulation between rafters (mm) eg PIR, Extruded Polystyrene and Mineral Wool				Alumaflex below	Rafter
	0.022 W/mk	0.032 W/mk	0.037 W/mk	0.040 W/mk	No. of Layers	Centres (mm)
0.18	100	140	160	170	1	400
0.13	170	230	250	270	1	400
0.18	60	90	100	110	2	400
0.13	120	170	190	210	2	400
0.18	90	130	150	160	1	600
0.13	150	210	240	250	1	600
0.18	55	90	100	100	2	600
0.13	110	160	180	190	2	600

Roofs: Refurbishment 0.18 Thermal element on existing 0.18 New build 0.13

Walls: Refurbishment 0.30 Thermal element on existing (incl. extension) 0.28 New build 0.18

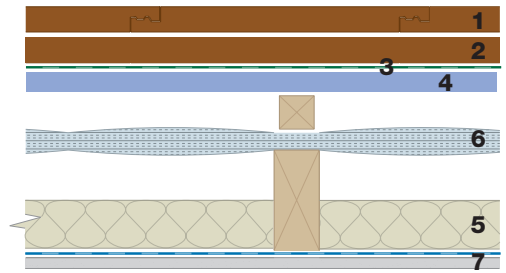
Dormer Cheek

Alumaflex inside studs



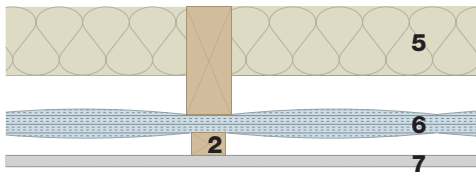
Dormer Cheek

Alumaflex outside studs



Dwarf Wall

Alumaflex inside studs



Above Rafter Installation Procedure

1. Installation starts from eaves and the insulation is unrolled parallel to the eaves.
2. As the product is unrolled across the rafters it is fixed using nails or staples of at least 14 mm length.
3. The next roll overlaps the preceding layer by 100 mm, seal the overlap along the length using Alumaflex aluminium tape.
4. The product should be permanently fixed in place using wooden battens parallel to the rafters, held in place with nails.
5. When the top layer has been battened, excess material may be cut by running a sharp knife along the edge of the batten.
6. A breathable roofing membrane (i.e. roof tile underlay) should be installed on the counter battens and tiling battens attached perpendicular to the rafters.
7. Roof tiles or slates installed in accordance with BS 5534 : 2003.
8. When applying roof tiles or slates to a warm roof construction, follow manufacturer recommendation.

Below Rafter Installation Procedure

1. Installation starts from the ridge with the product being unrolled parallel to the eaves.
2. The product is unrolled across the rafters, fixed in place using double-sided tape, nails or staples at least 14 mm depth.
3. The next roll overlaps the preceding layer by at least 100 mm, the overlap should be sealed along the length using tape.
4. Product is held in place using wooden battens fixed with nails. Battens may run parallel or perpendicular to the rafters.
5. When the bottom layer is battened, excess material may be cut by running a sharp knife along the edge of the batten.
6. Exposed edges of the product should be sealed with a suitable adhesive tape. Any tears or holes in the outer layer should be repaired with heat-reflective tape.
7. A foil-backed plasterboard is fixed to the battens. The batten size should be 32 mm by 25 mm, with the fixings at either 150 mm spacing for nails or 230 mm for screws. This batten size should be sufficient to ensure a 20 mm air gap between the product and the plasterboard.
8. When applying roof tiles or slates to a warm roof construction, follow manufacturer recommendation.

Floor Fixing Application

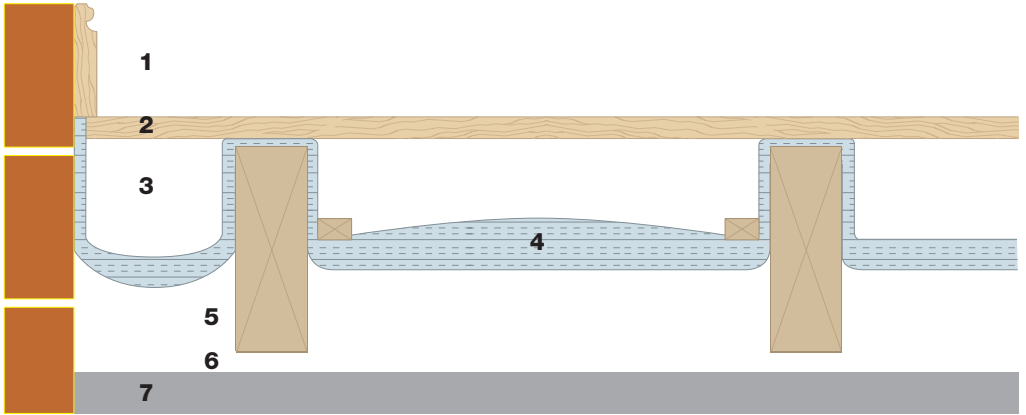


Diagram Key

1. Inside Surface	2. Chipboard Deck	3. Joist Cavity	4. Alumaflex
5. Cavity	6. Ventilation Void	7. Ground	

Flat Roofs Fixing Application (50mm x 150mm Joists)

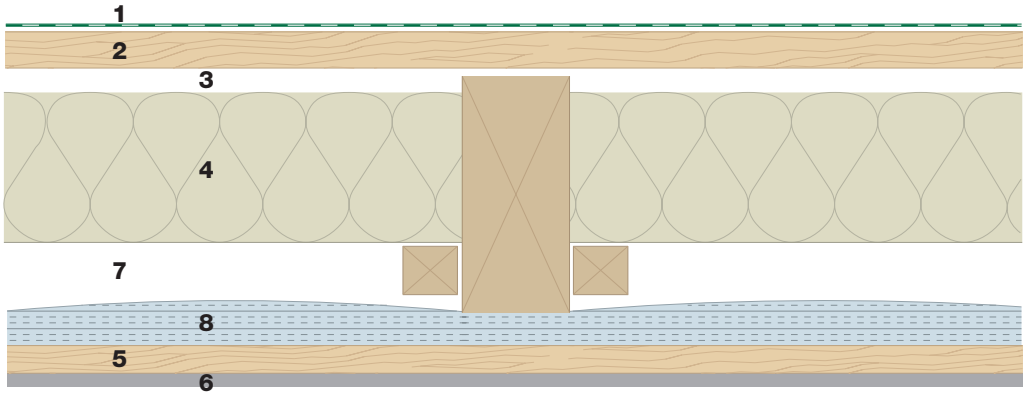


Diagram Key

1. EPDM	2. Ply Decking	3. Cavity Ventilated	4. PIR
5. Batten Cavity	6. Plasterboard	7. Non-Ventilated Cavity	8. Alumaflex

Floors U - Value calculations

P/A below	50 mm airgap above	100mm air gap above	150mm airgap above
0.2	0.22 W/m ² K	0.20 W/m ² K	0.19 W/m ² K
0.5	0.28 W/m ² K	0.25 W/m ² K	0.24 W/m ² K

General Floor Fixing Instructions

1. Installation of Alumaflex for floor applications should be in accordance with the certificate, fixing instruction and current good building practice.
2. Alumaflex must be installed with a 50mm overlap.
3. Alumaflex can be cut with a craft knife or sharp pair of scissors.
4. Alumaflex can be easily fixed with staples at regular intervals. minimum 14mm stainless steel or galvanised staples are recommended.
5. No protective clothing / handling required.
6. Alumaflex is rolled out over the joists, then stapled in place to create required airspace or nailed in place to maintain the required 50mm airspace. The horizontal joints are tightly overlapped and left open to allow any moisture accumulation to dissipate. Alumaflex 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.

Flat Roofs U - Value calculations

Alumaflex and 100mm PIR 0.18	Alumaflex (2 layers) and 70mm PIR 0.17
Alumaflex and 120mm PIR 0.16	Alumaflex (2 layers) and 100mm PIR 0.13

General Flat Roof Fixing Instructions

1. Alumaflex should be overlapped at each joint by approx. 50mm and stapled onto the joists, the joints should be sealed using foil tape. When Alumaflex is cut to fit around openings or connections, gaps must be minimised and any exposed cut edges should be sealed with foil tape to prevent condensation.
2. Alumaflex should be cut equal to the width of the roof section plus 100mm. Installations should start from the external wall with Alumaflex being unrolled perpendicular to the rafters, after which it is fixed using staples, nails or saddle clips.
3. Alumaflex 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 minimise the effect of thermal bridging, cross battening is advised.
4. When installed below joists, Alumaflex will perform as a vapour barrier



Staple alumaflex vertically to the studwork.



Overlap alumaflex by 100mm and use alumaflex tape on the sidelaps.



Fix 25mm battens on top of the alumaflex followed by the plasterboard finish.

Timber Frame Installation Procedure

1. Installation may be either vertical or horizontal runs. If horizontal, installation should start at the floor and go up to the ceiling.
2. The products are unrolled across the inside of the timber studs and fixed using staples or nails of at least 14 mm length.
3. The next layer must overlap the first layer by at least 100 mm and be taped along the entire length of the joint with Alumaflex aluminium tape. If securely taped, the products can also function as a vapour control layer and air barrier.
4. The product should be permanently fixed in place using wooden battens of size at least 32 mm by 25 mm, parallel or perpendicular to the wall studs held in place with nails.
5. When the top layer has been battened, any excess material may be removed by running a sharp knife along the edge of the batten.
6. Plasterboard is fixed to the battens in the conventional manner.

Solid Masonry Installation Procedure

1. Timber battens at least 32 mm deep by 25 mm wide are screwed to the wall at no greater than 600 mm vertical centres, at wall perimeters and horizontally as required.
2. The product is installed as for timber frame walls with plasterboard battens coinciding with the existing battens.



Staple alumaflex to the underside of the rafter.



Overlap alumaflex by 100mm and use alumaflex tape on the sidelaps.



Fix 25mm battens on top of the alumaflex followed by the plasterboard finish.

1. Installation starts from the ridge with the product being unrolled parallel to the eaves.
2. As the product is unrolled across the rafters, it's fixed in place using double-sided tape, nails or staples of at least 14 mm depth.
3. The next roll must overlap the preceding layer by at least 100 mm, and the overlap should be sealed along the entire length using tape.
4. The product should be permanently held in place using wooden battens fixed with nails. Battens may run either parallel or perpendicular to the rafters.
5. When the bottom layer has been battened, any excess material may be cut by running a sharp knife along the edge of the batten.
6. Any exposed edges of the product should be sealed with a suitable adhesive tape. Any tears or holes in the outer layer should be repaired with heat-reflective tape.
7. A foil-backed plasterboard is fixed to the battens. The batten size should be at least 32 mm by 25 mm, with the fixings at either 150 mm spacing for nails or 230 mm for screws. This batten size should be sufficient to ensure a 20 mm air gap between the product and the plasterboard.
8. When applying roof tiles or slates to a warm roof construction the recommendations of the tile/slate manufacturer should be followed.



THERMO-REFLECTIVE

Insulation



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