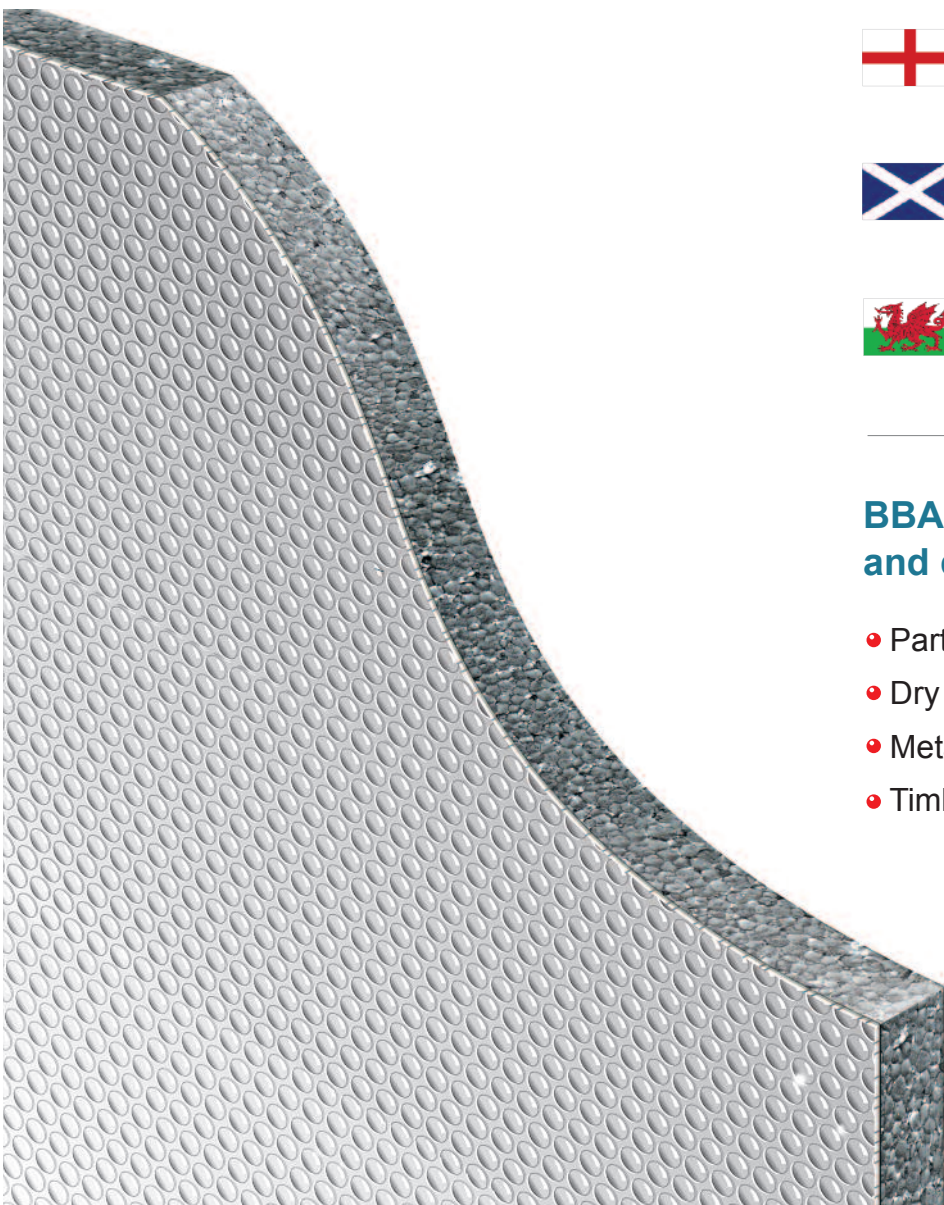


ALREFLEX PLATINUM - THERMAL INSULATION FOR WALLS



Approved Document
Part L 2013 Solutions



Technical Handbook
Section 6 2015 Solutions



Approved Document
Part L 2014 Solutions

BBA certified thermal insulation and cavity rain barrier

- Partial Fill Cavity Wall Insulation
- Dry Lining Insulation
- Metal Frame Insulation
- Timber Frame Insulation

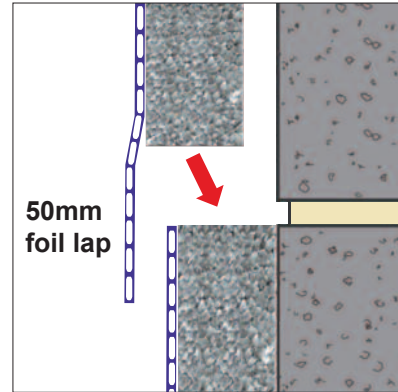


For help choosing the right product for your project please contact Thermal Economics
Technical Department on 01582 544255

For all our Acoustic & Thermal insulation products visit: www.thermal-economics.co.uk

ELIMINATING ISSUES ASSOCIATED WITH PARTIAL FILL INSULATION

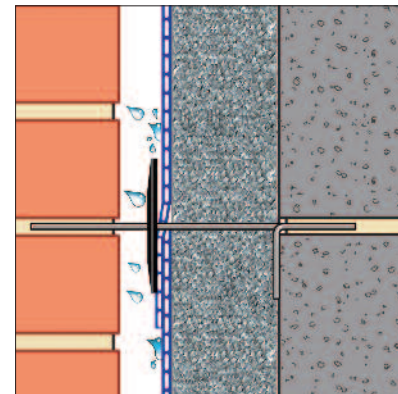
The only partial fill insulations with a BBA Certified Cavity Rain Barrier.



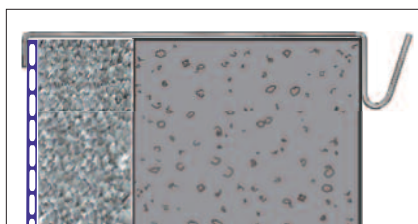
Each Alreflex Platinum Cavity Board has a 50mm foil lap along the bottom edge (see above right).

When installed this creates a weather lap that has been certified by the BBA as a cavity rain barrier to prevent water ingress.

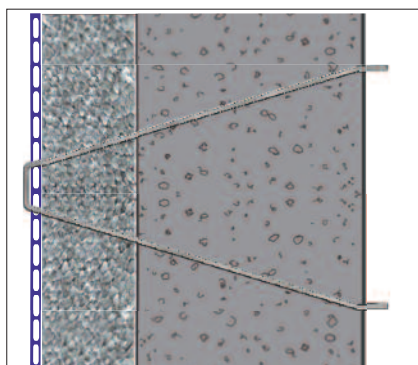
The horizontal lap system has been tested in the BBA cavity wall water ingress rig. When tested there was zero water penetration across the cavity.



Alreflex Insulation Clips and Wall Ties that prevent boards from falling forwards in the cavity.



Alreflex Insulation Clip - section view



Alreflex Insulation Clip - plan view

When installing partial fill cavity insulation, the boards had a tendency to fall forwards. This allows mortar snots to collect behind the boards, preventing them from being returned to their correct position.

This leads to ill fitting boards that can bridge the cavity and allow water to penetrate into the inner leaf.

The Alreflex Insulation Clip is an optional installation aid that completely eliminates this problem. This simple, re-useable clip holds the boards against the inner leaf until the wall ties and retaining clips are fitted.

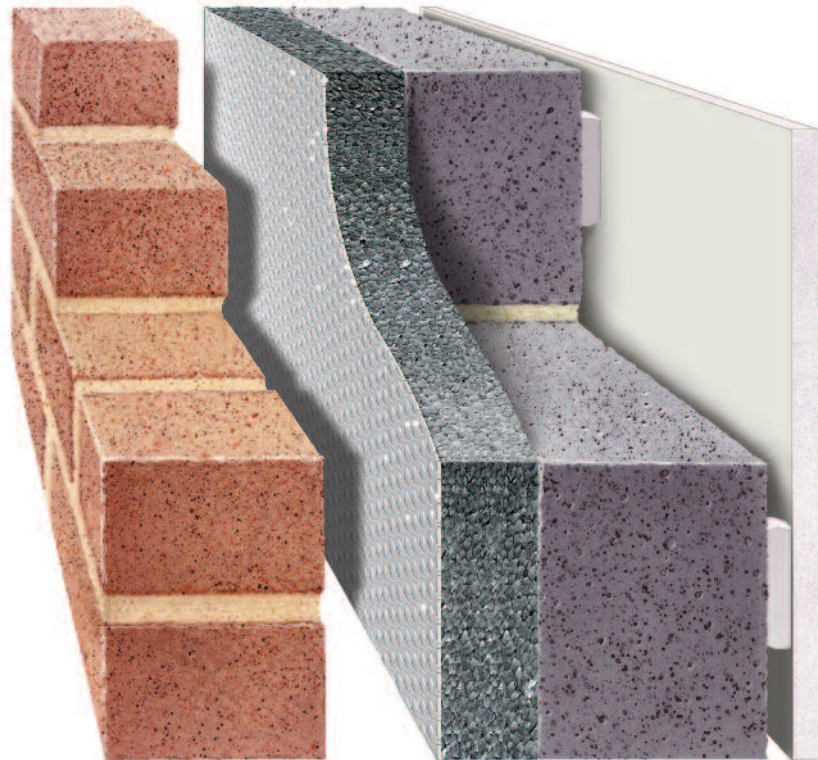
Our product specific wall ties ensure that the retaining clips hold the boards securely and position the ties drip to prevent water bridging across the cavity. These ties are part of the BBA certification and are an integral part of the cavity rain barrier system.

Partial Fill Cavity Wall Insulation

A cost effective solution for Part L 2013 & Section 6 2015 compliance

Alreflex Platinum provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance.

- BBA Certified insulation & cavity rain barrier.
- Used by major UK House builders.
- Suitable for use in all exposure areas with standard 50mm cavity.
- Environmentally friendly: No CFC's or HCFC's used in production.
- ODP = Zero
GWP = Less than 5



U-Value Examples

Building Regulations require new build walls to achieve the following area weighted averages:

- Approved Doc. Part L 2013 (England) - 0.30W/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.22W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.21W/m²K

Block K-value (W/mK)	Alreflex Platinum thickness (mm)					
	50	60	70	80	90	100
1.13	0.33	0.30	0.27	0.25	0.23	0.21
0.49	0.32	0.29	0.26	0.24	0.22	0.21
0.25	0.30	0.28	0.25	0.23	0.22	0.20
0.19	0.29	0.27	0.25	0.23	0.21	0.20
0.11	0.27	0.25	0.23	0.21	0.20	0.19

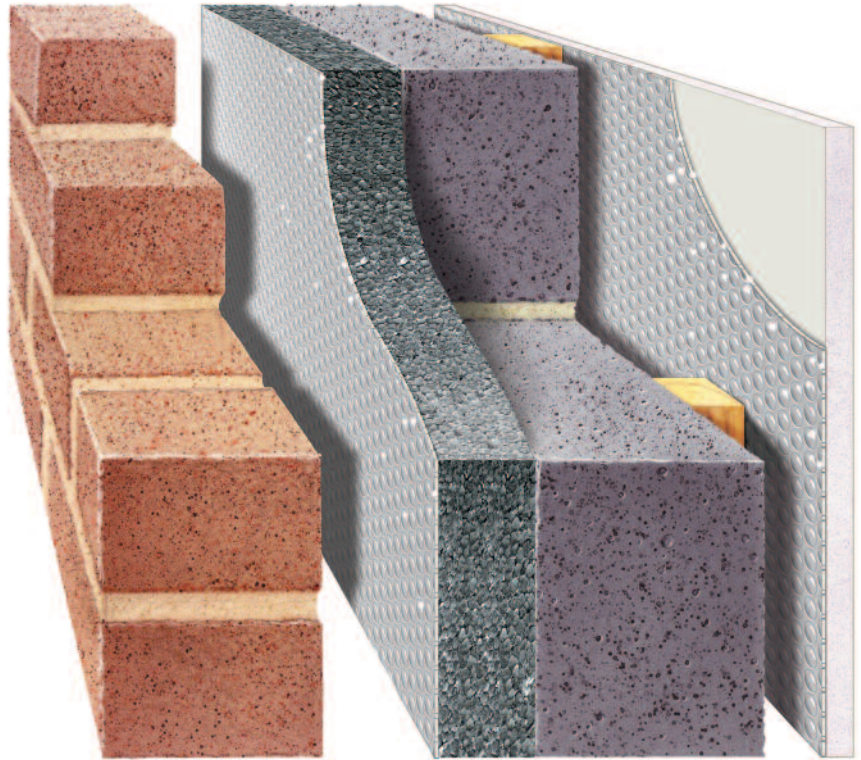
Wall Build-up:
102mm Brick
50mm Cavity
Alreflex Platinum as listed
100mm Block as listed
12.5mm Plasterboard on dabs

- England only- Meets minimum requirement of A.D. Part L 2013
- England & Scotland- Meets minimum requirements of A.D. Part L 2013 (England) & Section 6 2015 (Scotland).
- All of UK- Meets minimum requirements of all building regulations across the UK.

A cost effective solution for exceeding the requirements of Part L 2013 & Section 6 2015

Alreflex Platinum with Alreflex 1L1 dry lining provides an extremely cost effective method of achieving very low U-values without increasing cavity sizes.

- BBA Certified insulation and cavity rain barrier and dry lining.
- Alreflex 1L1 dry lining vastly improves air tightness.
- Used by major UK House Builders with minimum 6 million sq.metres being installed successfully.
- Suitable for use in all exposure areas.
- Environmentally friendly: No CFC's or HCFC's used in production.
- ODP = Zero
GWP = Less than 5



U-Value Examples

Building Regulations require new build walls to achieve the following area weighted averages:

Approved Doc. Part L 2013 (England) - 0.30W/m²K

Technical Handbook Section 6 2015 (Scotland) - 0.22W/m²K

Approved Doc. Part L 2014 (Wales) - 0.21W/m²K

Block K-value (W/mK)	Alreflex Platinum Thickness (mm)					
	50	60	70	80	90	100
1.13	0.28	0.25	0.23	0.22	0.20	0.19
0.49	0.27	0.25	0.23	0.21	0.20	0.19
0.25	0.26	0.24	0.22	0.21	0.19	0.18
0.19	0.25	0.23	0.22	0.20	0.19	0.18
0.11	0.24	0.22	0.20	0.19	0.18	0.17

 England only- Meets minimum requirement of A.D. Part L 2013

 England & Scotland- Meets minimum requirements of A.D. Part L 2013 (England) & Section 6 2015 (Scotland).

 All of UK- Meets minimum requirements of all building regulations across the UK.

Wall Build-up:

102mm Brick

50mm Cavity

Alreflex Platinum as listed

100mm Block as listed

3mm Alreflex 1L1

25mm Batten

12.5mm Plasterboard

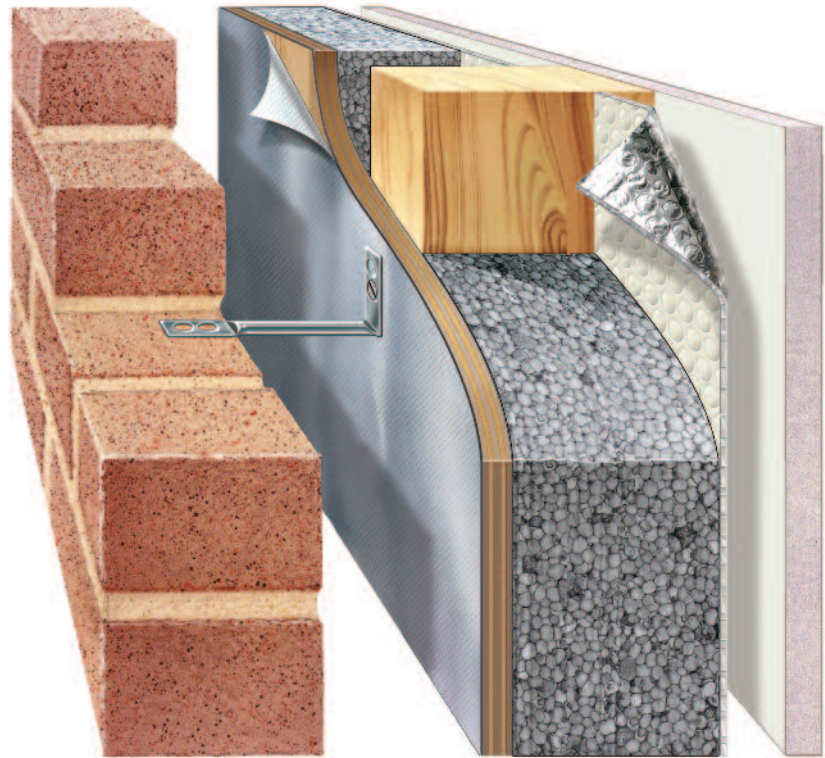
Timber Frame Insulation

Part of a 140mm Stud solution for Part L 2013 & Section 6 2015 compliance.

Alreflex Platinum provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance in non-vented metal frame construction.

- Cost effective way to meet Section 6 2015 values within a 140mm stud
- Internal foil face can be sealed as vapour barrier
- Service void directly behind plasterboard

For further information regarding alternative detail with Perfo Reflex a BBA certified vapour permeable insulating membrane (including how it can help achieve the latest building regulation requirements) please refer to the Perfo Reflex brochure or our website: www.thermal-economics.co.uk



U-Value Examples

Building Regulations require new build walls to achieve the following area weighted averages:

Approved Doc. Part L 2013 (England) - 0.30W/m²K

Technical Handbook Section 6 2015 (Scotland) - 0.22W/m²K

Approved Doc. Part L 2014 (Wales) - 0.21W/m²K

Alreflex Platinum Thickness (mm)

	75	80	90	100	110	120
Standard Breather Membrane	0.31	0.30	0.28	0.27	0.26	0.25
Thermabreath Breather Membrane	0.27	0.27	0.25	0.24	0.23	0.22
Standard Breather Membrane + Perfo Reflex Double	0.25	0.24	0.23	0.22	0.21	0.20

- **England only**- Meets minimum requirement of A.D. Part L 2013
- **England & Scotland**- Meets minimum requirements of A.D. Part L 2013 (England) & Section 6 2015 (Scotland).
- **All of UK**- Meets minimum requirements of all building regulations across the UK.

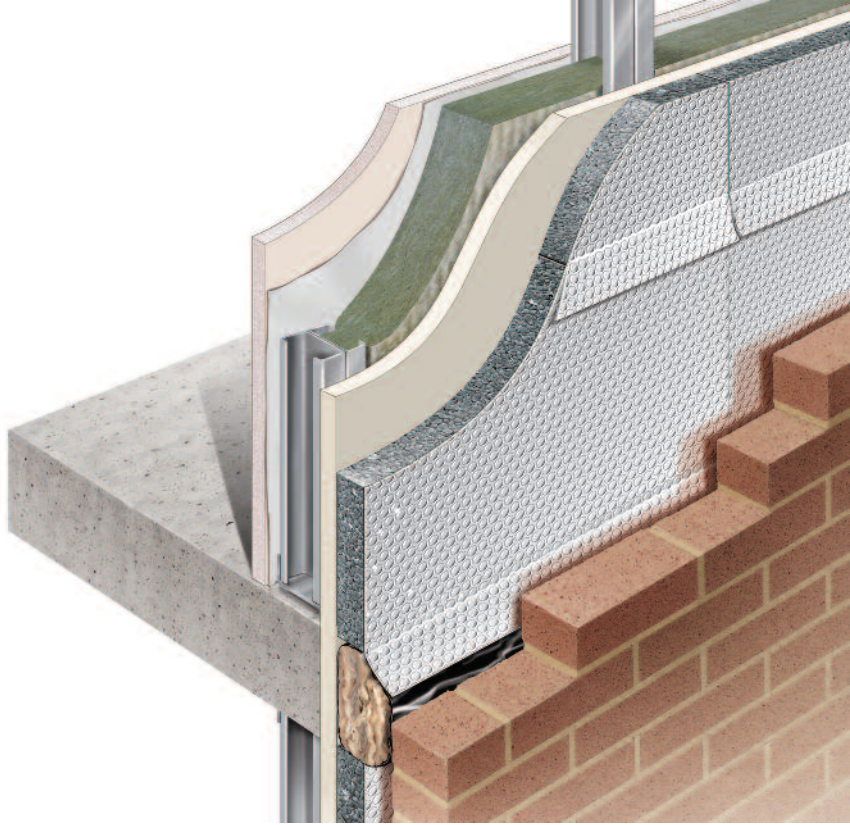
Wall Build-up:
102mm Brick
50mm Cavity
Breather Membrane as listed
12mm OSB
140mm Timber Studs with Alreflex Platinum as listed
12.5mm Plasterboard

Metal Frame Insulation

A cost effective solution for Part L 2013 & Section 6 2015 compliance

Alreflex Platinum provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance in non-vented metal frame construction.

- Significant cost savings over PUR & PIR solutions
- BBA certified
- Provides rain barrier during construction
- Space saving- Reduced construction depth
- Helps alleviate condensation in metal frame
- Environmentally friendly:
 - No CFC's or HCFC's used in production.
 - ODP = Zero
 - GWP = Less than 5



U-Value Examples

Building Regulations require new build walls to achieve the following area weighted averages:

- Approved Doc. Part L 2013 (England) - 0.30W/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.22W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.21W/m²K

Mineral Wool K-value (W/mK)	Alreflex Platinum Thickness (mm)					
	25	50	60	75	90	100
0.044	0.28	0.23	0.21	0.19	0.17	0.16
0.038	0.28	0.22	0.20	0.18	0.17	0.16
0.032	0.27	0.21	0.20	0.18	0.16	0.15

- England only- Meets minimum requirement of A.D. Part L 2013
- England & Scotland- Meets minimum requirements of A.D. Part L 2013 (England) & Section 6 2015 (Scotland).
- All of UK- Meets minimum requirements of all building regulations across the UK.

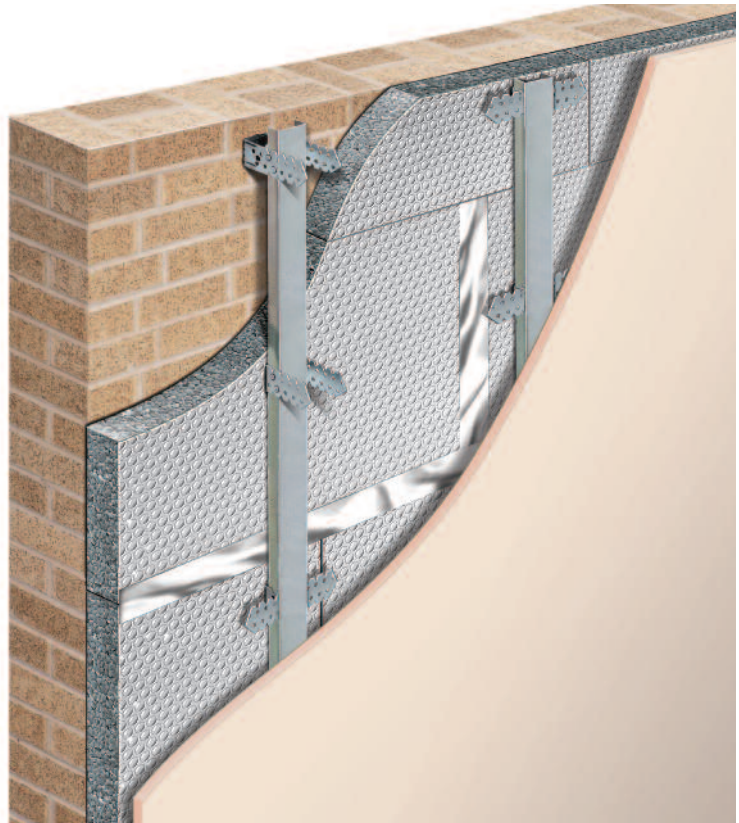
Wall Build-up:
 102mm Brick
 50mm Cavity
 Alreflex Platinum as listed
 20mm Cement Particle Board
 100mm SFS - Filled with Mineral Wool as listed
 VCL
 12.5mm Plasterboard

Dry Lining Insulation

A cost effective solution for Part L 2013 & Section 6 2015 refurbishment projects

Alreflex Platinum dry lining provides an extremely cost effective method of upgrading existing walls and achieving building regulation standards.

- Significant cost savings over laminate lining boards
- Integral vapour and damp proof membrane
- Clear service void behind plasterboard
- Dry system (no wet trades)
- Environmentally friendly: No CFC's or HCFC's used in production.
- ODP = Zero
GWP = Less than 5



U-Value Examples

Approved Docs. Part L (England & Wales) and Technical Handbook Section 6 (Scotland) require refurbished walls to achieve a maximum U-value of 0.70W/m²K and an Area Weighted Average of 0.30W/m²K.

Wall Type	Alreflex Platinum Thickness (mm)				
	0	25	50	75	100
Type 1	2.16	0.54	0.38	0.29	0.24
Type 2	3.85	0.61	0.41	0.31	0.25
Type 3	1.18	0.44	0.33	0.26	0.22
Type 4	1.74	0.51	0.37	0.28	0.23
Type 5	0.69	0.35	0.28	0.23	0.19


Wall Type 1: 225mm Solid Brick

Wall Type 2: 100mm Dense Block (K=1.13)

Wall Type 3: 100mm Lightweight Block (K=0.11)

Wall Type 4: 100mm Brick, 50mm Clear Cavity, 100mm Dense Block

Wall Type 5: 100mm Brick, 50mm Mineral Wool (K=0.044), 100mm Dense Block

 All of UK- Meets minimum requirements of all building regulations across the UK.

Thermal Solutions

FLOOR



ALREFLEX beamshield PLUS

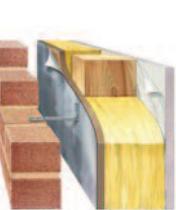
High performance, BBA certified Beam & Insulated Block system for achieving very low ground floor U-values.



PLATINUM ground floor insulation


Extremely cost effective, BBA certified ground floor insulation. Provides significant savings over PUR/PIR boards with equivalent performance.

TIMBER FRAME



Therma breathe


The only spun bond, Class W1 insulating Breather membrane available in the UK. Designed to improve U-values without increasing structure thickness.



PERFO REFLEX

Vapour permeable, insulating membrane. Designed to improve U-values without increasing structure thickness. Ideal for Section 6 2015 compliance.

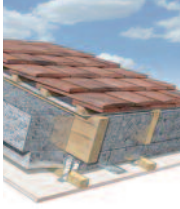
WALLS



ULTRATHERM

High performance, BBA certified cavity wall insulation and rain barrier. Designed for achieving the very lowest wall U-values. Ideal for use where the structure thickness needs to be kept to a minimum.

ROOFS




RAFTER THERM

Cost effective, LABC approved pitched roof insulation system. Designed for use in non-ventilated roof structures.

Acoustic Solutions


CONCRETE FLOORS



Isorubber Base

6mm thick acoustic matting for use below screeds or timber floor finishes.

Robust Details:
E-FC-4
E-FC-14




Isorubber Top

3mm thick acoustic overlay for use over concrete or timber floors.

Robust Details:
E-FC-9
E-FC-10

TIMBER FLOORS




Isosonic Timberfloor

Acoustic system for timber floor constructions.

Suitable for new build or refurb projects.

Part E compliant



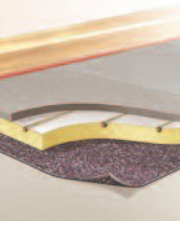
Isosonic Platformfloor

25mm thick acoustic deck. Comprising 18mm T&G chipboard and a 7mm acoustic layer.

Suitable for use in new build and refurb projects.

Robust Detail: FFT5

U F H




Isorubber HP3

3mm thick acoustic matting for use below screeds or timber floor finishes.

Ideal for use with all types of under floor heating system.

Robust Detail: E-FC-12

VINYL UNDERLAY



Isorubber Top

Suitable for use below all types of vinyl floor finish including:

- Tiles
- Planks
- Sheets

Independently tested for wear and lifting.

Technical Services

CALCULATIONS

Thermal Economics highly qualified and experienced Technical Department can provide a range of calculations and assessments including:

- SAP Calculations**
- PSi Assessments**
- Condensation Calculations**
- U-value Calculations**
- CSH / BREEAM Assessments**
- Energy Performance Certificates**

DESIGN ADVICE

We can design cost effective solutions that meet your needs and comply with the latest building regulations.

We can also help to provide bespoke, high performance solutions for planning requirements, CSH/BREEAM credits or to overcome project specific issues.

We have recently saved a house builder over £1000 per dwelling, by simply revising the thermal insulations being used. This equates to a £75,000 saving across the site.

T: 01582 450814
F: 01582 429305
E: info@thermal-economics.co.uk
W: www.thermal-economics.co.uk



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For all our Acoustic & Thermal insulation products visit: www.thermal-economics.co.uk