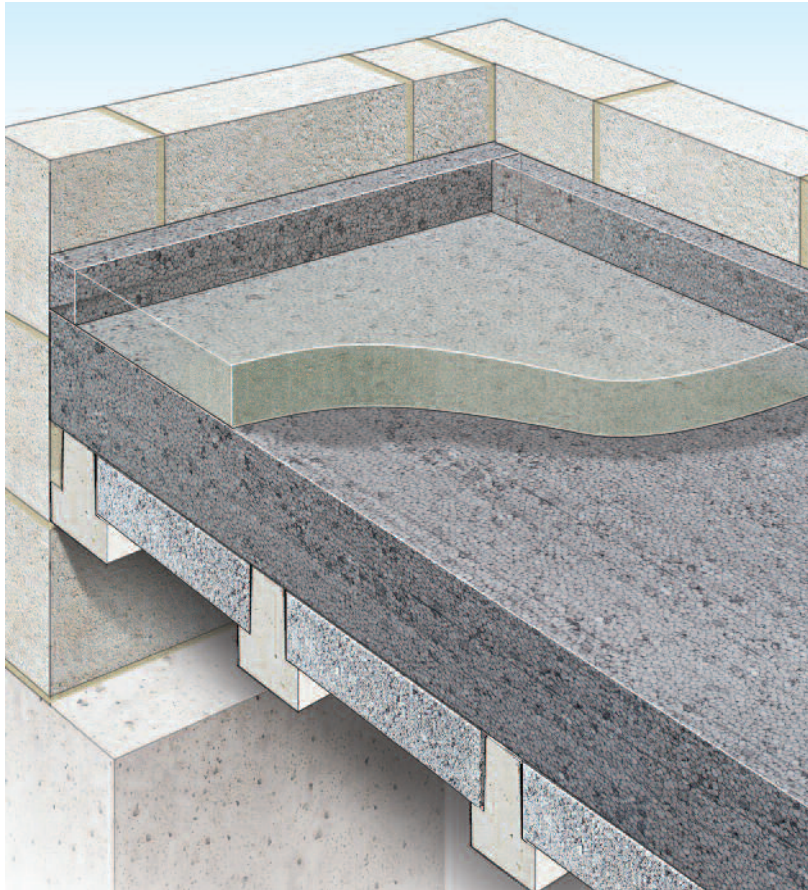


## THERMAL GROUND FLOOR INSULATION



**Approved Document  
Part L 2013 Solutions**



**Technical Handbook  
Section 6 2015 Solutions**



**Approved Document  
Part L 2014 Solutions**

### Cost effective thermal Insulation and floor systems

- Insitu Concrete Floors
- Beam & Block Floors
- Beam & Insulated Block Floors
- Timber Floors
- Floating Floors / Existing Floors
- Edge 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](http://www.thermal-economics.co.uk)

## TE Platinum Ground Floor insulation

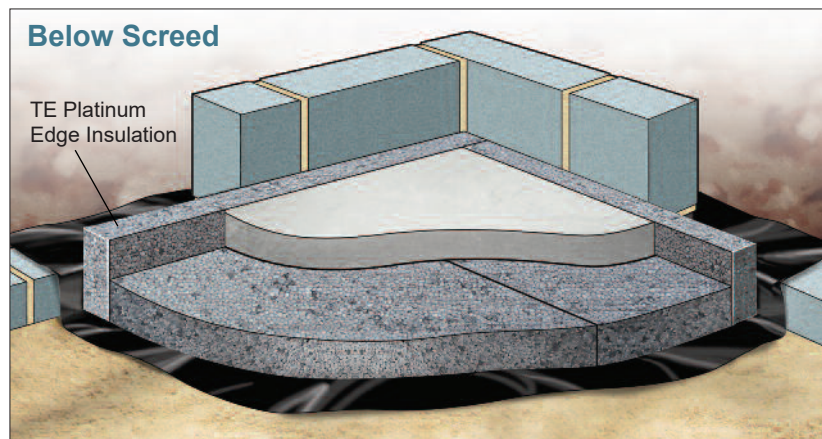
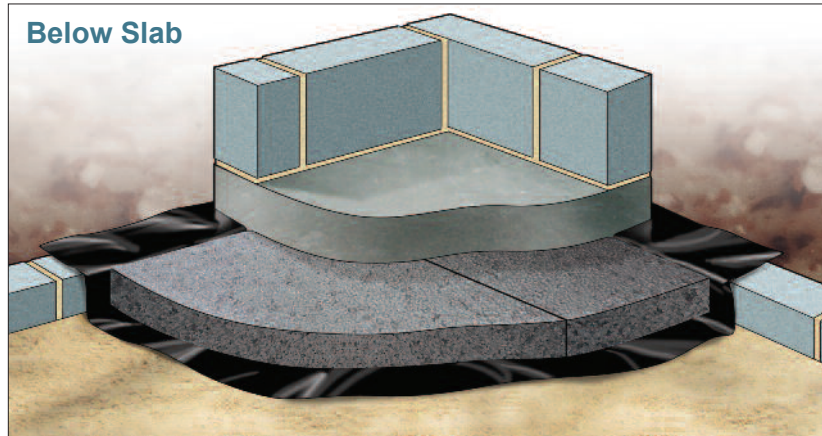
**PLATINUM**<sup>TM</sup>  
Platinum is a registered trade mark of Springvale EPS Ltd  
**ground floor insulation boards**

Thermal Economics Platinum Ground Floor Insulation provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance.

- Used by major UK house builders with around 5 million sq. meters being successfully installed.
- EPS is non-hygroscopic so does not absorb water from the ground.
- Environmentally friendly: No CFC's or HCFC's Used in production.
- ODP = Zero  
GWP = Less than 5

TE Platinum Edge Insulation available to prevent cold bridging at perimeter

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



### U-Value Examples - Concrete Slab

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

Approved Doc. Part L 2013 (England) - 0.25W/m<sup>2</sup>K

Technical Handbook Section 6 2015 (Scotland) - 0.18W/m<sup>2</sup>K

Approved Doc. Part L 2014 (Wales) - 0.18W/m<sup>2</sup>K

Insulation Thickness (mm)	Perimeter / Area Ratio									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
100	0.11	0.15	0.17	0.19	0.20	0.21	0.21	0.22	0.22	
130	0.10	0.13	0.15	0.16	0.17	0.17	0.18	0.18	0.18	
150	0.09	0.12	0.13	0.14	0.15	0.15	0.16	0.16	0.16	
200	0.08	0.10	0.11	0.12	0.12	0.12	0.12	0.13	0.13	
250	0.07	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.11	

Meets minimum requirements of all building regulations across the UK.

Meets minimum requirement of Approved Doc. Part L 2013 (England) only.

Floor Build-up:  
65mm Screed.  
TE Platinum  
Ground Floor  
Insulation as listed.  
Insitu Slab.



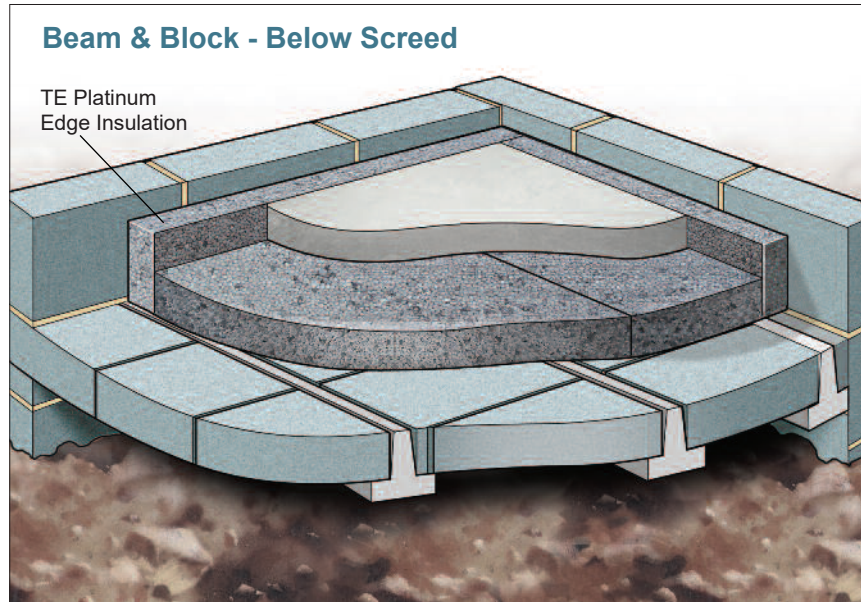
## TE Platinum Ground Floor Insulation

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**ground floor insulation boards**

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

Thermal Economics Platinum Ground Floor Insulation provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance.

- Used by major UK house builders with around 5 million sq. meters being successfully installed.
- EPS is non-hygroscopic so does not absorb water from the ground.
- Environmentally friendly: No CFC's or HCFC's Used in production.
- ODP = Zero  
GWP = Less than 5



TE Platinum Edge Insulation available to prevent cold bridging at perimeter

### U-Value Examples - Beam & Block

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

- Approved Doc. Part L 2013 (England) - 0.25W/m<sup>2</sup>K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m<sup>2</sup>K
- Approved Doc. Part L 2014 (Wales) - 0.18W/m<sup>2</sup>K

Insulation Thickness (mm)	Perimeter / Area Ratio									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
75	0.14	0.18	0.20	0.21	0.22	0.23	0.23	0.24	0.24	
100	0.12	0.15	0.17	0.18	0.19	0.19	0.19	0.20	0.20	
150	0.10	0.12	0.13	0.14	0.14	0.14	0.15	0.15	0.15	
200	0.09	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.12	
225	0.08	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	

Floor Build-up:  
65mm Screed.  
TE Platinum Ground Floor Insulation as listed.  
150mm Beams with 100mm Blocks (K-value =0.15).

Meets minimum requirements of all building regulations across the UK.

Meets minimum requirement of Approved Doc. Part L 2013 (England) only.

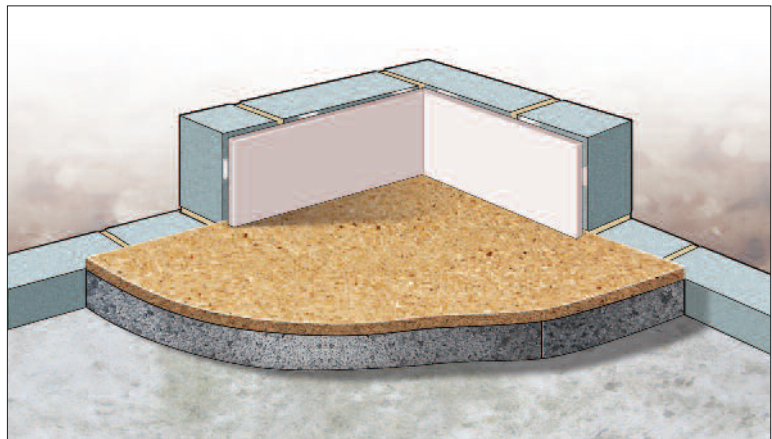
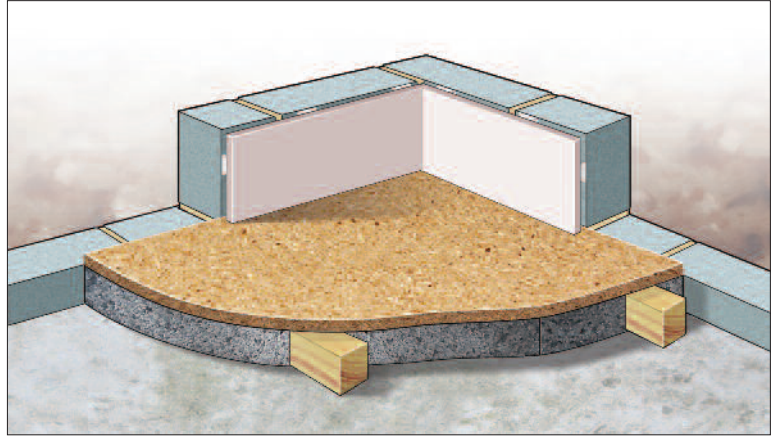
## TE Platinum Ground Floor insulation

**PLATINUM**<sup>™</sup>  
Platinum is a registered trade mark of Springvale EPS Ltd  
**ground floor insulation boards**

Thermal Economics Platinum Ground Floor Insulation provides an extremely cost effective alternative to PUR & PIR insulation boards with equivalent thermal performance.

- Provides significant savings over PUR/PIR.
- EPS is non-hygroscopic so does not absorb water from the ground.
- Environmentally friendly: No CFC's or HCFC's Used in production.
- ODP = Zero  
GWP = Less than 5

**A cost effective solution for concrete floor refurbishment.**



### U-Value Examples

Approved Docs. Part L (England & Wales) and Technical Handbook Section 6 (Scotland) require refurbished floors to achieve a maximum U-value of 0.70W/m<sup>2</sup>K and an area weighted average of 0.25W/m<sup>2</sup>K.

Cavity Size (mm)	Perimeter / Area Ratio								
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
75	0.13	0.19	0.23	0.26	0.28	0.29	0.30	0.31	0.32
100	0.12	0.17	0.20	0.22	0.24	0.25	0.26	0.27	0.27

Floor Build-up:  
22mm Chipboard.  
Insulation as listed  
between battens.  
Existing slab.

Cavity Size (mm)	Perimeter / Area Ratio								
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
75	0.12	0.17	0.20	0.22	0.23	0.24	0.25	0.26	0.27
100	0.11	0.15	0.17	0.18	0.19	0.20	0.21	0.21	0.22

Floor Build-up:  
22mm Chipboard.  
Insulation as listed.  
Existing slab.

Meets the area weighted average requirements of all refurbishment building regulations across the UK.

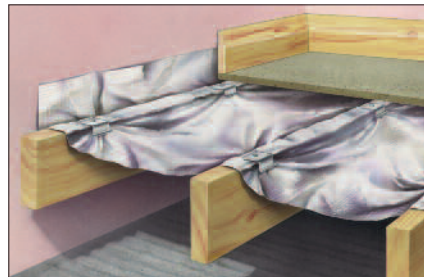
## Floortherm MP

### High Performance Micro Perforated Low E Insulation Membrane for refurbishment projects.

Floortherm MP is a micro perforated insulating membrane, allowing floor timbers to breathe.

It's low emissive surfaces reflect radiant heat and provide excellent thermal performance.

- Extremely cost effective solution.
- Clean alternative to Mineral Wool products.
- Allows floor timber to breathe.
- Simple to install.
- Reduces air movement through the floor.
- 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 floors to achieve a maximum U-value of 0.70W/m<sup>2</sup>K and an area weighted average of 0.25W/m<sup>2</sup>K.

		Perimeter / Area Ratio								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Cavity Size (mm)	50	0.17	0.24	0.28	0.30	0.32	0.33	0.34	0.35	0.36
	75	0.17	0.22	0.26	0.28	0.29	0.30	0.31	0.32	0.33

		Perimeter / Area Ratio								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Cavity Size (mm)	50	0.15	0.19	0.21	0.23	0.24	0.25	0.25	0.26	0.26
	75	0.14	0.17	0.19	0.20	0.21	0.22	0.22	0.22	0.23



Meets the area weighted average requirements of all refurbishment building regulations across the UK.

Floor Build-up:  
22mm Chipboard.  
Unventilated Cavity as listed.  
Floortherm MP.  
Ventilated Void.

Floor Build-up:  
22mm Chipboard.  
Unventilated Cavity as listed.  
Floortherm MP.  
Unventilated Cavity as listed.  
Floortherm MP.  
Ventilated Void.

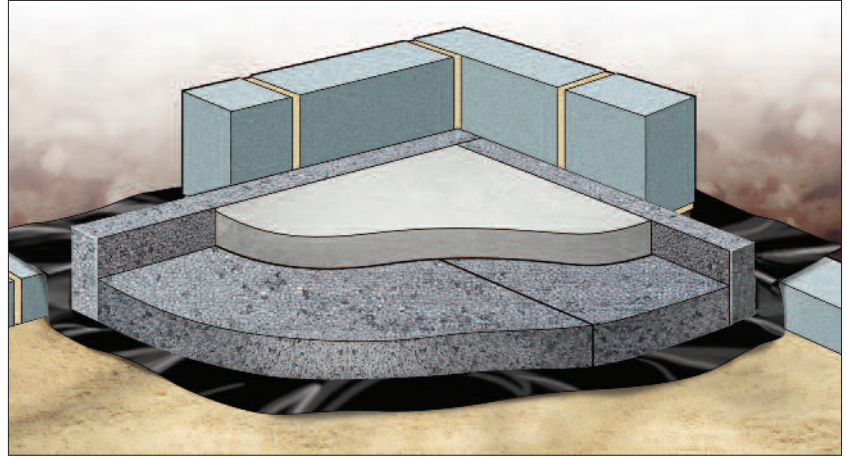


## Ground Floors- avoiding cold bridging

### Thermal Economics Edge Insulation

Simple insulation edge strips can help to prevent Cold Bridging around ground floor perimeters.

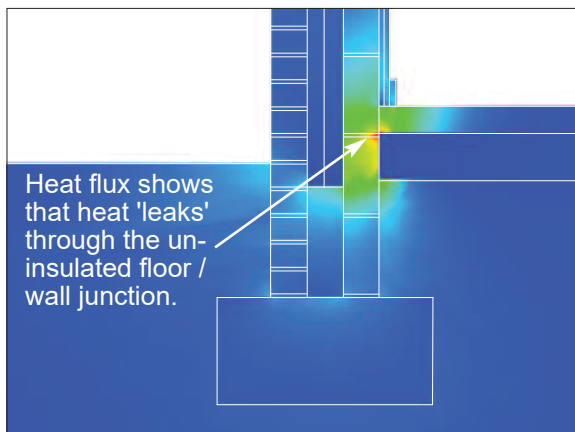
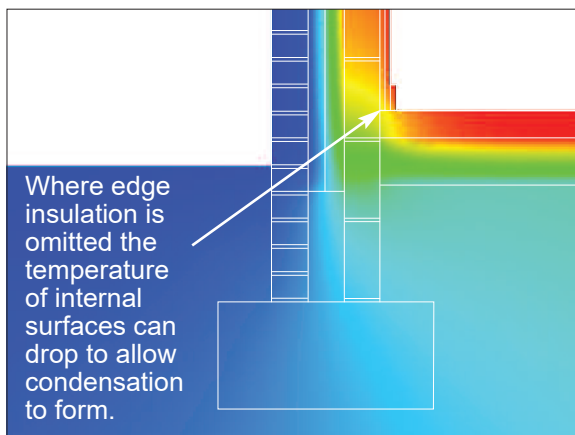
Using an insulation edge strip is a very simple way to prevent a cold bridge through the wall / floor junction. However, a recent study by the Zero Carbon Hub found that edge insulation strips are omitted from many sites across the UK.



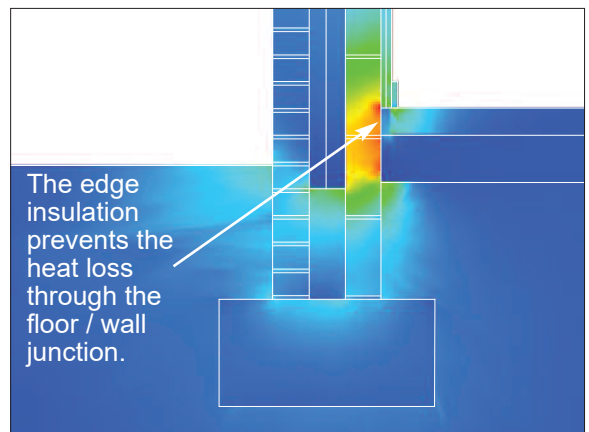
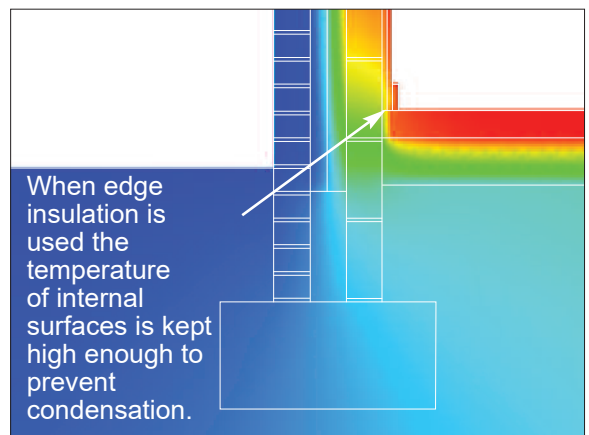
Thermal Economics can provide P<sub>Si</sub> calculations to detail the thickness of edge

insulation required or you can simply work to one of our tried and tested solutions. Edge strips are available in standard sizes or can be supplied in site specific sizes.

#### Without Edge Insulation



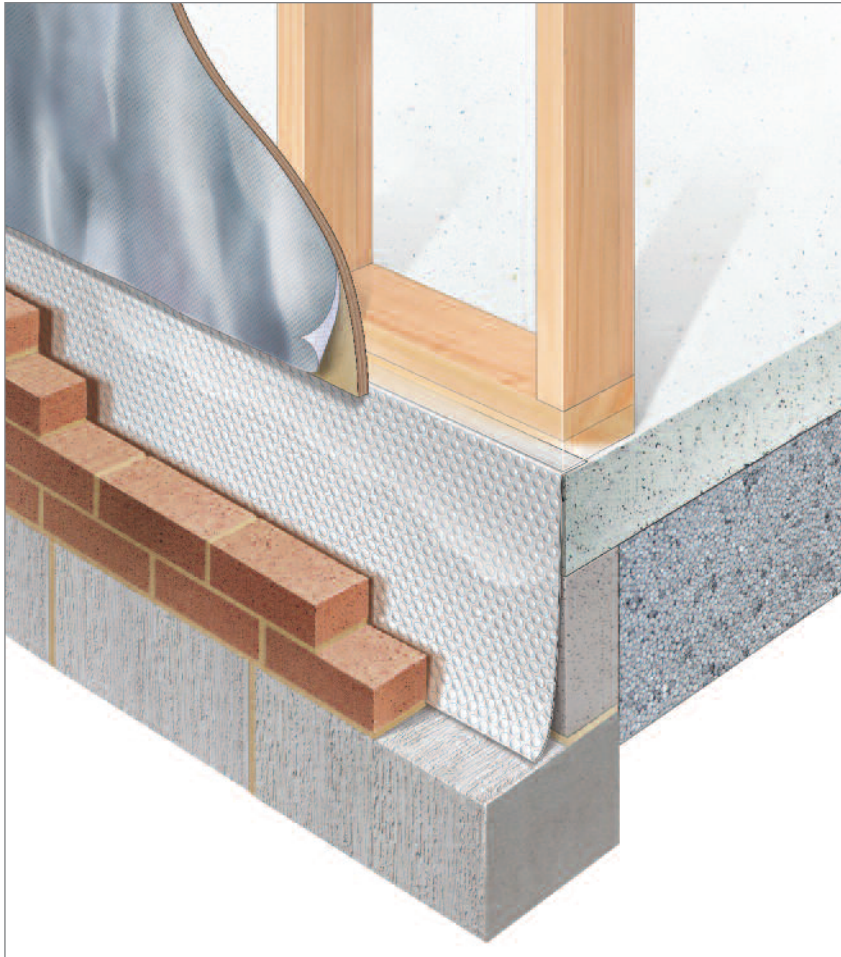
#### With Edge Insulation



**For help with cold bridging issues please contact Thermal Economics Technical Department on 01582 544255**

## Slab insulation for cold bridging prevention

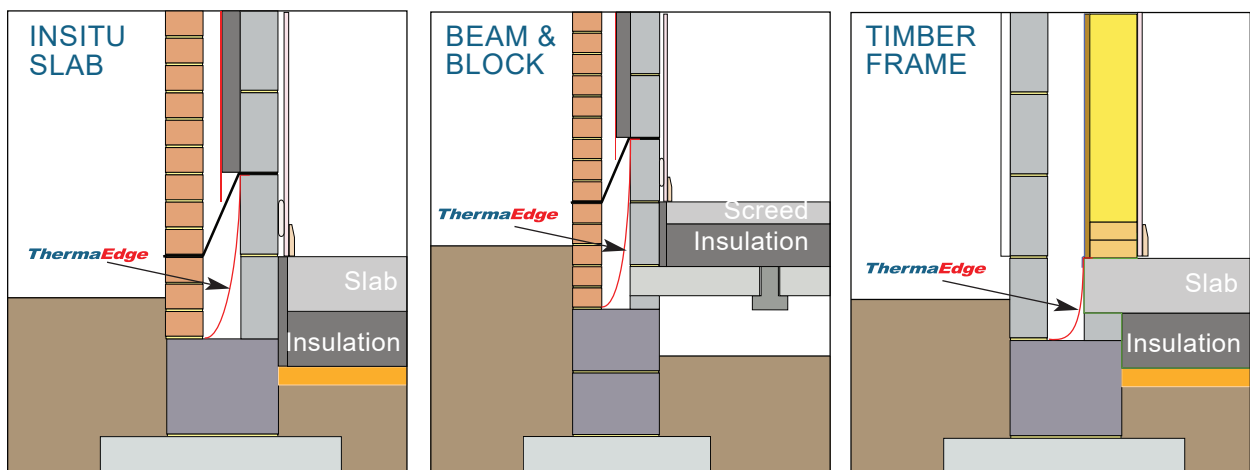
### ThermaEdge



A simple and low cost solution for insulating the edges of ground floor slabs to prevent cold bridging.

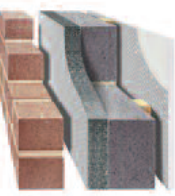



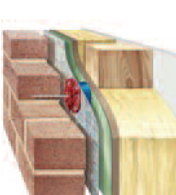

- Flat top edge allows ThermaEdge to be built into the inner leaf.
- Suitable for use with masonry or framed constructions.
- Thin & flexible.
- Easy to fit.
- Water & rain resistant helping to prevent water penetration.
- Environmentally friendly:  
ODP = Zero  
GWP = Less than 5

### Standard Details









For help with cold bridging issues please contact Thermal Economics  
Technical Department on 01582 544255

## Thermal Solutions

MASONRY WALLS		<b>ALREFLEX<sup>®</sup> Platinum</b> High performance, BBA certified cavity wall insulation and rain water barrier. Used by major house builders across the UK.	TIMBER FRAME		<b>Therma breathe</b> The only spun bond, Class W1 insulating Breather membrane available in the UK. Designed to improve U-values without increasing structure thickness.	WALLS		<b>ULTRATHERM</b> High performance, BBA certified cavity wall insulation and rain barrier. Designed for achieving very low wall U-values. Ideal for use where the structure thickness needs to be kept to a minimum.
		<b>ALREFLEX<sup>®</sup> Platinum</b> Extremely cost effective, dry lining insulation system for refurbishment applications.			<b>PERFO REFLEX</b> Vapour permeable, insulating membrane. Designed to improve U-values without increasing structure thickness. Ideal for Section 6 2015 compliance.		ROOFS	

## Acoustic Solutions

CONCRETE FLOORS		<b>Isorubber Base</b> 6mm thick acoustic matting for use below screeds or timber floor finishes. Robust Details: E-FC-4, E-FC-14	TIMBER FLOORS		<b>Isosonic Timberfloor</b> Acoustic system for timber floor constructions. Suitable for new build or refurb projects. Part E compliant	U F H		<b>Isorubber HP3</b> 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
		<b>Isorubber Top</b> 3mm thick acoustic overlay for use over concrete or timber floors. Robust Details: E-FC-9, E-FC-10			<b>Isosonic Platformfloor</b> 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		VINYL UNDERLAY	

## 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  
E: info@thermal-economics.co.uk  
W: www.thermal-economics.co.uk



Visit our website for mobile friendly installation guides



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](http://www.thermal-economics.co.uk)