Approved Document
Part L 2013 Solutions

Technical Handbook
Section 6 2015 Solutions

Approved Document
Part L 2014 Solutions

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

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

- Approved Doc. Part L 2013 (England) - 0.25W/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.18W/m²K

BBA Certified insulation for use in concrete floors.

- Used by major UK House builders with around 5 million sq. metres 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

**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/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.18W/m²K

<table>
<thead>
<tr>
<th>Insulation Thickness (mm)</th>
<th>Perimeter / Area Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1</td>
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<tr>
<td>100</td>
<td>0.11</td>
</tr>
<tr>
<td>130</td>
<td>0.10</td>
</tr>
<tr>
<td>150</td>
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<tr>
<td>200</td>
<td>0.08</td>
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<tr>
<td>250</td>
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- Floor Build-up: 65mm Screed.
- TE Platinum Ground Floor Insulation as listed. Insitu Slab.

Meets minimum requirements of all building regulations across the UK.  
Meets minimum requirement of Approved Doc. Part L 2013 (England) only.
Building Regulations require new build floors to achieve the following area weighted averages:

- Approved Doc. Part L 2013 (England) - 0.25W/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.18W/m²K

### BBA Certified Insulation

- **Platinum Ground Floor Insulation**
- Provides an extremely cost-effective alternative to PUR & PIR insulation boards with equivalent thermal performance.
- **BBA Certified insulation** for use in beam & block floors.
- **Used by major UK House builders** with around 5 million sq. metres 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**

### 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/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m²K
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#### U-Value Table

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<th>Insulation Thickness (mm)</th>
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<td>0.22</td>
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<td>0.18</td>
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<td>0.20</td>
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<td>0.14</td>
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<td>0.14</td>
<td>0.15</td>
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</table>

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

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

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### Thermal Economics

- **Platinum Ground Floor Insulation**
- **A cost effective solution for Part L 2013 & Section 6 2015 compliance.**

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### Standards

- **Beam & Block Floors**
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 PSI 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.

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**Without Edge Insulation**

- Where edge insulation is omitted the temperature of internal surfaces can drop to allow condensation to form.
- Heat flux shows that heat 'leaks' through the un-insulated floor / wall junction.

**With Edge Insulation**

- When edge insulation is used the temperature of internal surfaces is kept high enough to prevent condensation.
- The edge insulation prevents the heat loss through the floor / wall junction.

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For help with cold bridging issues please contact Thermal Economics Technical Department on 01582 544255
A cost effective solution for concrete floor refurbishment.

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

- BBA Certified insulation for use in floating floors.
- 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

**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/m²K and an area weighted average of 0.25W/m²K.

<table>
<thead>
<tr>
<th>Cavity Size (mm)</th>
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<tbody>
<tr>
<td>75</td>
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<tr>
<td>100</td>
<td>0.12 0.17 0.20 0.22 0.24 0.25 0.26 0.27 0.27</td>
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<td>100</td>
<td>0.11 0.15 0.17 0.18 0.19 0.20 0.21 0.21 0.22</td>
</tr>
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Floor Build-up:
22mm Chipboard.
Insulation as listed between battens.
Existing slab.

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

High Performance Insulated Suspended floor system to achieve extremely low U-values

The Platinum Beamshield Plus system provides a simple and cost effective way to achieve very low ground floor U-values making it ideal for Part L 2013 and Section 6 2015 compliance.

- BBA Certified System
- U-Values as low as 0.08W/m²K achievable
- Complete solution with whole floor coverage including insulated perimeter details
- Simple and quick installation
- Insulation/formwork in one
- ODP = Zero
- GWP = Less than 5

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/m²K
- Technical Handbook Section 6 2015 (Scotland) - 0.18W/m²K
- Approved Doc. Part L 2014 (Wales) - 0.18W/m²K

All calculations assume beams at a ratio of 4 to 1 at nominal 600mm and nominal 300mm centres.

Other block sizes are available to achieve the required U-value.
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

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

High performance, BBA certified cavity wall insulation and rain water barrier. Used by major house builders across the UK.

Extremely cost effective, dry lining insulation system for refurbishment applications.

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

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

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

Acoustic Solutions

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

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

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

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

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

Independently tested for wear and lifting.

Technical Services

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

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.

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