



## FR5000 Suspended Timber Floor Applications

Floor Insulation

**Celotex**  
Insulation Specialists

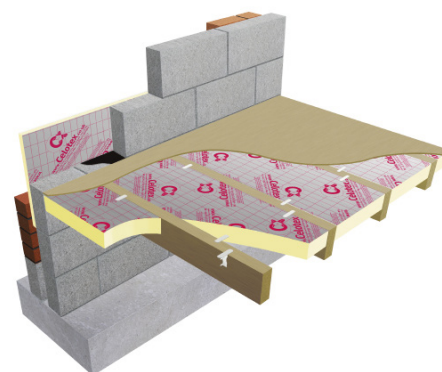
### Introduction

Celotex is the brand leading manufacturer of PIR insulation boards, with its range encompassing the thinnest and thickest boards available to the construction industry today. All of the Company's products are manufactured at its plant in Suffolk, from where the dedicated Celotex Technical Centre offers advice and calculations for compliance with current regulations and legislation.

Celotex: We know insulation inside and out.

Use **Celotex FR5000** high performance thermal insulation in suspended timber floor applications to minimise insulation thickness and give the following benefits:

- Low lambda value of 0.021W/mK
- Super low emissivity foil facers give improved thermal insulation performance within cavity air spaces
- Quick and easy to install insulation between joists in one layer
- Boards permanently retained by Celotex Insulation Clip
- Minimise air leakage by friction fitting the insulation
- Provides reliable long term energy savings for buildings



Celotex FR5000 in a suspended timber floor

### Celotex FR5000 Technical Data

| Product Code | Thickness (mm) | R-value (m <sup>2</sup> K/W) | Weight (kg/m <sup>2</sup> ) |
|--------------|----------------|------------------------------|-----------------------------|
| FR5025       | 25             | 1.15                         | 1.01                        |
| FR5040       | 40             | 1.90                         | 1.49                        |
| FR5050       | 50             | 2.35                         | 1.81                        |
| FR5060       | 60             | 2.85                         | 2.16                        |
| FR5070       | 70             | 3.30                         | 2.48                        |
| FR5075       | 75             | 3.55                         | 2.64                        |
| FR5080       | 80             | 3.80                         | 2.80                        |
| FR5090       | 90             | 4.25                         | 3.12                        |
| FR5100       | 100            | 4.75                         | 3.38                        |
| FR5120       | 120            | 5.70                         | 4.02                        |
| FR5150       | 150            | 7.10                         | 4.98                        |

### Sustainable Insulation

Celotex PIR insulation has been independently assessed by BRE Global and has been accredited with an A+ rating when compared to the BRE Green Guide.

The results also show that Celotex offers a lower environmental impact than other typical PIR manufacturers.

For further information about Celotex' sustainable insulation solutions, visit the sustainability pages of the website at [celotex.co.uk](http://celotex.co.uk)



**Super low  
emissivity**

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## U-value Ready Reckoner: Ground Floor - Suspended Timber

| Celotex Product<br>(Variable Layer) | Thickness<br>(mm) | Perimeter / Area Ratio |      |      |      |      |      |      |      |      |      |
|-------------------------------------|-------------------|------------------------|------|------|------|------|------|------|------|------|------|
|                                     |                   | 0.1                    | 0.2  | 0.3  | 0.4  | 0.5  | 0.6  | 0.7  | 0.8  | 0.9  | 1.0  |
| FR5000                              | 50                | 0.18                   | 0.25 | -    | -    | -    | -    | -    | -    | -    | -    |
| FR5000                              | 60                | 0.17                   | 0.23 | -    | -    | -    | -    | -    | -    | -    | -    |
| FR5000                              | 70                | 0.16                   | 0.21 | 0.24 | -    | -    | -    | -    | -    | -    | -    |
| FR5000                              | 75                | 0.16                   | 0.21 | 0.23 | 0.25 | -    | -    | -    | -    | -    | -    |
| FR5000                              | 80                | 0.16                   | 0.20 | 0.22 | 0.24 | 0.25 | -    | -    | -    | -    | -    |
| FR5000                              | 90                | 0.15                   | 0.19 | 0.21 | 0.22 | 0.23 | 0.24 | 0.24 | 0.25 | 0.25 | -    |
| FR5000                              | 100               | 0.14                   | 0.18 | 0.20 | 0.21 | 0.22 | 0.22 | 0.22 | 0.23 | 0.23 | 0.24 |
| FR5000                              | 120               | 0.13                   | 0.16 | 0.18 | 0.19 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 | 0.21 |
| FR5000                              | 150               | 0.12                   | 0.14 | 0.15 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |

Based on timber joists @ 400 ctrs

### U-value

For U-values see **variable layer list**, or for more options, refer to our online U-value calculator at [celotex.co.uk](http://celotex.co.uk)

## Installation Guidelines

Celotex insulation boards should not be installed when the temperature is at or below 4°C and falling.

- Install joists in the conventional manner, with solid or diagonal strut bracing as necessary. (N.B. diagonal bracing may lead to thermal bridging).
- The **Celotex Insulation Clip** is designed to allow insulation boards to be installed between timber joists quickly and without nails or screws.
- Either fit the clips at one metre maximum centres along the edge of the insulation (as described in the **Celotex Insulation Clip** datasheet) or fix battens to the sides of the joists to support the insulation.
- Use the **Celotex Insulation Saw** to cut the boards to achieve a tight fit, then push the boards firmly down between the joists. The insulation clip will ensure a friction fit.
- Insulate gaps between the joists and walls to prevent thermal bridging.
- Install either chipboard or softwood floor boarding directly onto the joists.
- Ensure that the void below the insulation is ventilated.

### Exposed floors (other than ground)

- For exposed or semi-exposed floors, e.g. garage or car port ceilings, it may be easier to insulate from below.
- Fix Celotex insulation boards directly to the underside of the joists with galvanised clout nails at 400mm maximum centres. Finish with an appropriate fire protection board fixed to the soffit.
- An additional layer of 100mm mineral wool insulation can be installed between the joists, supported by the soffit lining, to provide acoustic insulation.

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### Certifications and Accreditations

Celotex FR5000 is covered by BBA Agreement Certificate No 95/3197. To download a copy of this certificate, visit the 'literature' pages of the website at [celotex.co.uk](http://celotex.co.uk)

### Further Information

If you wish to contact Celotex, please visit [celotex.co.uk](http://celotex.co.uk) and click on the 'contact us' page.

For information regarding **storage, installation and handling** of Celotex products, or for **Health and Safety** advice, please refer to the 'literature' pages of the website at [celotex.co.uk](http://celotex.co.uk)

Celotex has a policy of continuous product development and reserves the right to alter product designs or specifications without prior notice.

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Information is correct at date of publication - August 2013  
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