



# Celotex FI5000 Concrete Slab Floor Applications

Premium Flooring Insulation Board



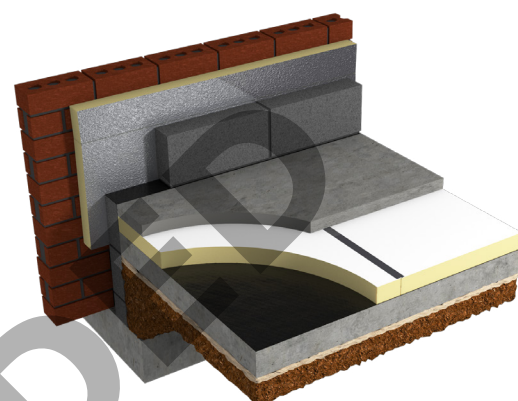
**IMPORTANT: We have recently identified a compliance issue relating to our calculation and testing of the lambda value of products in our 4000 and 5000 range and the Crown-Bond and Crown-Fix products within Crown Flat Roofing range. Due to this issue, the suspension of the 5000 range will continue and now includes the FI5000 and GD5000 products. Materials relating to this product are for information only.**

## 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 FI5000** premium performance thermal insulation in concrete slab floor applications to minimise insulation thickness and give the following benefits:

- A lower thermal conductivity value (0.021 W/mK) compared with other typical PIR insulation boards providing enhanced thermal performance
- Ensures minimal downward heat loss into structure
- Has an enhanced compressive strength value of  $\geq 175$  kPa
- Has an innovative composite facer featuring a built-in vapour control layer (VCL), enabling direct screed, without the need for an additional separating layer.
- Is easy to cut and install
- Future proofs the energy performance of new and existing buildings



Celotex FI5000 over slab with screed

## Celotex FI5000 Technical Data

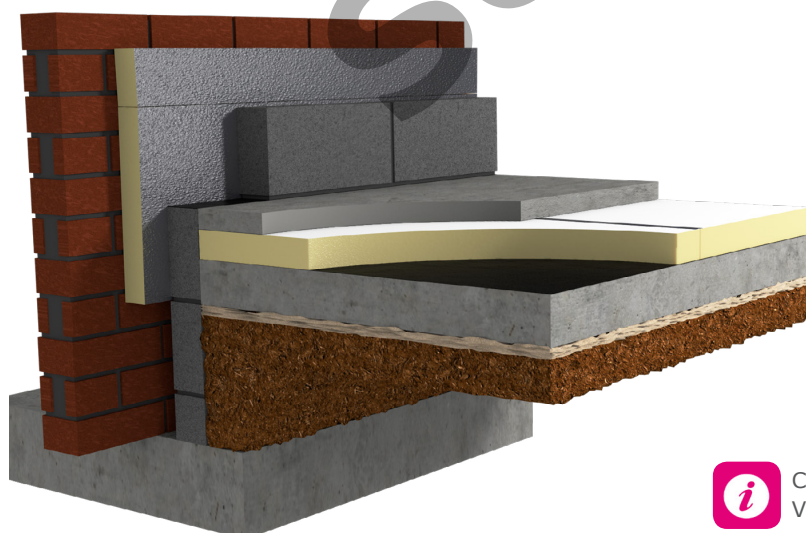
Product Code	Thickness (mm)	R-value (m <sup>2</sup> K/W)	Weight (kg/m <sup>2</sup> )
FI5075	75	3.55	3.36
FI5100	100	4.75	4.32
FI5125	125	5.95	5.28

## 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)



Celotex US4000, insulation upstand, available now!  
 Visit [celotex.co.uk](http://celotex.co.uk) for more information

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## U-value Ready Reckoner: Ground Floor - Concrete Slab

Celotex Product	Thickness (mm)	Perimeter / Area Ratio									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
FI5000	75	0.11	0.15	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.21
FI5000	100	0.09	0.12	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.17
FI5000	125	0.08	0.11	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14

Based on insulation below 65mm screed  
or  
insulation under 100mm slab and 50mm screed

## Installation Guidelines

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

### Over slab installation guidelines

- Install a damp proof membrane below the Celotex. This can either be over the top or below the slab. The damp proof membrane must provide continuity with the damp proof course in the surrounding walls.
- Level the surface of the slab; it should be smooth and free of projections.
- If required, use a thin layer of sand blinding on a rough, tamped slab to ensure that the insulation boards are continuously supported.
- Use the **Celotex Insulation Saw** to cut and fit Celotex US4025 upstand to floor perimeter. The upstand depth should be equal to the sum of the slab insulation and the screed thickness. The upstand thickness should not exceed the combined thickness of the wall lining.
- Lay the insulation boards directly onto the prepared slab with all joints tightly butted. In order to ensure a continuous separating layer across the insulation facer, board joints must be taped.
- Apply a sand/cement or self levelling screed over the Celotex insulation boards to a minimum thickness of 65mm.
- Compact the cement/screed solidly when laid.
- Allow the cement/screed to dry thoroughly before an impermeable surface, such as a vinyl finish, is applied. (Consult a specialist flooring contractor).

Use scaffold boards or other protection to prevent wheelbarrows and other traffic damaging the insulation.

These recommendations are suitable for normal domestic floor loadings. If higher loadings are required, it may be necessary to increase the screed thickness and provide reinforcement within the screed. Consult a structural engineer or a specialist flooring contractor.

### Under slab installation guidelines

- Level hardcore and blind with sand
- Install damp proof membrane and lap into damp proof course
- Use the **Celotex Insulation Saw** to cut and fit insulation, thickness to achieve required U-value
- Insulation joints must be tightly butted and taped ensuring a continuous separating layer is maintained
- Use the **Celotex Insulation Saw** to cut and fit insulation upstand to floor perimeter (i.e. Celotex US4025). Height of insulation to coincide with required finished floor level.
- Lay concrete to required finished floor level and smooth over with float finish.

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**Celotex**  
SAINT-GOBAIN

### Installation Guidelines (cont)

#### Chipboard floor finish

The chipboard must be minimum 18mm tongued and grooved flooring grade type C4 to BS 5669. Lay the chipboard with staggered joints, glued with a woodworking adhesive.

Provide a 10mm–12mm gap at all perimeters and abutments to allow for expansion. This can be achieved by the use of temporary wedges.

Where chipboard is butted together without a tongued and grooved joint and at all external doorways (for the width of the threshold), a treated timber batten must be used in lieu of the insulation boards.

### 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.

PRODUCT  
SUSPENDED