FR5000 Between Rafter Applications

Pitched Roof Insulation Board

Celotex
Insulation Specialists

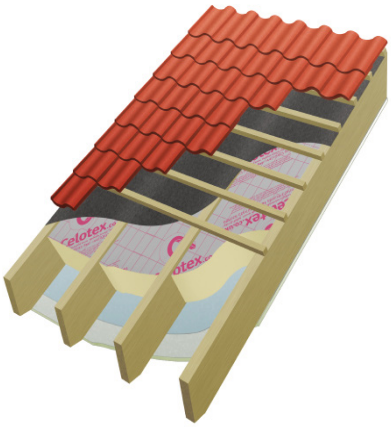
Introduction

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 premium performance thermal insulation in between rafter applications to minimise insulation thickness and give the following benefits:

- A thermal conductivity of 0.021W/mK offering enhanced thermal performance and even better U-values
- Super low emissivity with Celotex IQ, delivering some of the highest performing rigid board insulation solutions
- An A+ rating when compared to the BRE Green Guide
- Class O fire performance throughout the entire product
- Provides reliable long term energy savings for buildings
- Easy to dry line with plasterboard once installed
- Dimensionally stable
- No loss of internal headroom
- Ideal for loft conversions/room in roof applications



Celotex FR5000 between rafters

Celotex FR5000 Technical Data

Product Code	Thickness (mm)	R-value (m²K/W)	Weight (kg/m²)
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

celotex
zero carbon

iQ Super low emissivity

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Example U-value Calculation: Unventilated Between Rafters

Construction		200 deep rafters Thickness (mm)	175 deep rafters Thickness (mm)	150 deep rafters Thickness (mm)
Outside surface resistance		-	-	-
Tiling including batten space			-	- -
Breather membrane		-	-	-
Celotex IQ cavity, remainder of rafter depth			Various	Various Various
Variable layer (for between rafters)			See below	See below See below
Polythene 1000 gauge, VCL		-	-	-
Plasterboard		12.5	12.5	12.5
Inside surface resistance		-	-	-
Celotex Product - Variable layer	Thickness (mm)	U-value (W/m²K)	U-value (W/m²K)	U-value (W/m²K)
Celotex FR5000 @ 400 ctrs	150	0.18	0.19	0.20*
Celotex FR5000 @ 400 ctrs	150	0.16	0.17	0.18*

*Counter batten over membrane - see guidelines below

U-value

For U-values see **variable layer list**, or for more options, refer to our online U-value calculator at celotex.co.uk

Installation Guidelines

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

- Make sure there is enough rafter depth to accommodate not only the thickness of the Celotex insulation, but also a minimum 20mm drape space for the breathable membrane.
- Fix battens to the inside face of the rafters, to ensure that the drape space is maintained.
- Alternatively, counter battens can be fixed over the breathable membrane to provide a channel for moisture run off. The whole depth of the rafter can then be filled with insulation.
- All details are to be in accordance with the membrane manufacturer's details.
- Measure the space to be filled between the inside face of the rafter prior to cutting the board.
- Use the Celotex Insulation Saw to cut the boards at a slight angle, making the board width slightly oversized on one surface to achieve a 'friction it'.
- Push the boards into the void between the rafters until they are tight up to the battens or the membrane, ensuring that lateral joints are closely butted.
- Tightly fit the insulation to the ridge plate and carry over and tightly butt the wall plate at eaves.
- A vapour control layer (VCL) should be installed to the underside of the rafters. A polythene sheet of higher vapour resistance is recommended for high humidity areas such as kitchens or bathrooms.
- Complete the internal finish with plasterboard or other suitable sheet material.

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Certifications and Accreditations

Celotex FR5000 is covered by BBA Agrement Certificate No 95/3197. To download a copy of this certificate, visit the 'literature' pages of the website at celotex.co.uk

Further Information

If you wish to contact Celotex , please visit 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

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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