



## Rainscreen Cladding Applications

Premium Rainscreen Cladding Board  
 (suitable for buildings above 18 metres in height)

**Celotex**  
 Insulation Specialists

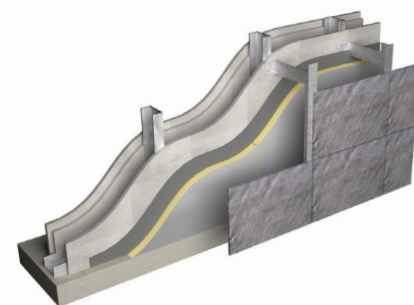
### Introduction

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 RS5000** PIR insulation in rainscreen cladding applications to minimise insulation thickness and give the following benefits:

- A thermal conductivity value of 0.021W/mK offering enhanced thermal performance and even better U-values
- Is the first PIR insulation board to successfully test to BS 8414-2:2005, meets the criteria set out in BR 135 and therefore is acceptable for use in buildings above 18 metres in height
- Has Class O fire performance throughout the entire product in accordance with BS 476
- Achieves an A+ rating when compared to the BRE Green Guide
- Supported by LABC approval



Celotex RS5000 in a rainscreen cladding application

### Celotex RS5000 Technical Data

Product Code	Thickness (mm)	R-value (m <sup>2</sup> K/W)	Weight (kg/m <sup>2</sup> )
RS5050	50	2.35	1.81
RS5060	60	2.85	2.16
RS5070	70	3.30	2.48
RS5075	75	3.55	2.64
RS5080	80	3.80	2.80
RS5090	90	4.25	3.12
RS5100	100	4.75	3.38
RS5120	120	5.70	4.02
RS5150	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)



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## Example U-value Calculation: Rainscreen Cladding

Masonry substrate with overcladding		SFS - Insulation sheathing frame		SFS - Insulation sheathing frame and mineral wool / glass fibre between frame	
200mm concrete Celotex RS5000 Drained and vented cavity Proprietary rainscreen cladding		2 x 12.5mm plasterboard Vapour control layer 150mm SFS 12mm sheathing board Breathable membrane Celotex RS5000 Drained and vented cavity Proprietary rainscreen cladding		2 x 12.5mm plasterboard Vapour control layer 150mm SFS filled with 150mm mineral wool - lambda = 0.040 W/mK 12mm sheathing board Breathable membrane Celotex RS5000 Drained and vented cavity Proprietary rainscreen cladding	
Product Code	U-value (W/m <sup>2</sup> K)	Product Code	U-value (W/m <sup>2</sup> K)	Product Code	U-value (W/m <sup>2</sup> K)
Celotex RS5075	0.29	Celotex RS5075	0.28	Celotex RS5050	0.24
Celotex RS5080	0.28	Celotex RS5080	0.27	Celotex RS5075	0.21
Celotex RS5090	0.26	Celotex RS5090	0.25	Celotex RS5080	0.21
Celotex RS5100	0.24	Celotex RS5100	0.23	Celotex RS5090	0.20
Celotex RS5120	0.21	Celotex RS5120	0.21	Celotex RS5100	0.19
Celotex RS5150	0.18	Celotex RS5150	0.18	Celotex RS5120	0.17
				Celotex RS5150	0.16

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## Installation Guidelines

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

Rainscreen cladding systems are subject to specialist design and should be installed in line with the manufacturer's guidelines.

### Fixing of insulation boards

- Secure Celotex RS5000 securely to the substrate with an appropriate fixing details.
- Insulation boards should be closely butted and installed break bonded.
- A minimum of 9 fasteners per 1200mm x 2400mm board should be provided.
- Fasteners should be positioned no less than 50mm and no greater than 150mm from board edges.

### Selection of fasteners

- Fixings should be suitable for the specified substrate and thickness of insulation board.
- Guidance on the selection of fixings should be sought from a fixings manufacturer.

## Certification

Celotex RS5000 is a premium performance solution and is the first PIR board to meet the performance criteria set out in BR 135 for rainscreen cladding systems.

The system tested was as follows:

12mm Fibre Cement Panels

Supporting aluminium brackets and vertical rails

100mm Celotex RS5000

12mm Non-combustible sheathing board

100mm SFS System

2 x 12.5mm plasterboard

The fire performance and classification report issued only relates to the components detailed. Any changes to the components listed will need to be considered by the building designer.

## Further Information

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

Health and Safety information can be found by visiting the 'Resources' 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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