



FR5000 Masonry Wall - External Applications

Wall Insulation

Celotex
Insulation Specialists

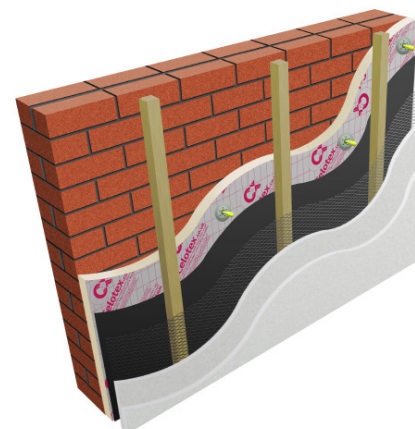
Introduction

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 external solid masonry wall applications to minimise insulation thickness and give the following benefits:

- Easy to fit between wall ties using cavity tie clips for retention
- Low emissivity foil facers give improved thermal insulation within cavity air spaces
- Provides reliable long term energy savings for buildings
- Excellent dimensional stability



Celotex FR5000

Celotex FR5000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
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	4.50	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



**Super low
emissivity**

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Example U-value Calculation: External Insulation

Construction	Thickness (mm)	
Outside surface resistance	-	
Softwood weatherboarding	19	
Cavity (ventilated)	-	
Breather membrane	-	
Variable layer	See below	
Brickwork	215	
Plaster, lightweight	13	
Inside surface resistance	-	
Variable layer	Thickness (mm)	U-value (W/m ² K)
Celotex FR5000	60	0.29
Celotex FR5000	70	0.25
Celotex FR5000	75	0.24
Celotex FR5000	80	0.23
Celotex FR5000	90	0.20
Celotex FR5000	100	0.19
Celotex FR5000	120	0.16
Celotex FR5000	150	0.13

U-value

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



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Installation Guidelines

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

- Prior to the installation of Celotex insulation boards, the substrate must be checked for soundness.
- Large, uneven projections should be removed and all holes filled and levelled. Loose material should be cleaned off to leave a sound, dry surface.
- Downpipes should be temporarily removed and, if necessary, relocated after completion of installation. Lengthening of overflow pipes should be allowed for, together with extensions to sills.
- Starter batten and drip (for render finish) should be located at least one half brick above the damp proof course and fixed directly to the substrate with plugs and screws.
- The Celotex insulation should be fixed to the substrate using proprietary fasteners, which are driven into pre-drilled holes.
- All insulation board joints should be tightly butted and end joints staggered.
- Fix a breather membrane over the insulation with minimum 100mm laps.
- Apply preservative-treated timber battens vertically over the face of the breather membrane and insulation, secured back to the underlying masonry.

Render finish

- Fix stainless steel expanded metal lathing to the battens. Proprietary systems are available with reinforcing ribs to allow for a full span of 600mm between battens.
- The render system should then be applied in accordance with manufacturer's guidelines.

Tile hanging

- Tilting fillets should be applied at horizontal junctions to suit the design requirements.
- Fix tile battens to vertical battens to suit tile gauge.
- Hang tiles in accordance with manufacturer's instructions.

Other cladding

Timber or other lightweight cladding systems can be fixed to the vertical battens (see example U-value calculation).

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.