



Timber Frame Wall Lining Applications

Wall Insulation

Celotex
Insulation Specialists

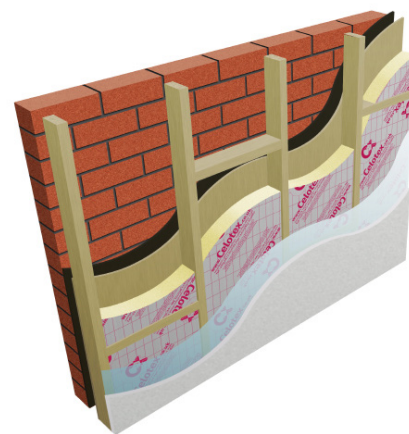
Introduction

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 GA4000** or **Celotex XR4000** high performance thermal insulation in timber frame wall lining applications to minimise insulation thickness and give the following benefits:

- Offers the thinnest solution available
- Provides reliable long term energy savings for buildings
- Low emissivity foil facers give improved thermal insulation performance within cavity air spaces
- Provides cavity for services



Celotex GA4000

Celotex GA4000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
GA4050	50	2.25	1.55
GA4055	55	2.50	1.74
GA4060	60	2.70	1.90
GA4065	65	2.95	2.05
GA4070	70	3.15	2.19
GA4075	75	3.40	2.34
GA4080	80	3.60	2.48
GA4085	85	3.85	2.62
GA4090	90	4.05	2.76
GA4100	100	4.50	3.27

Celotex XR4000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
XR4110	110	5.00	3.58
XR4120	120	5.45	3.88
XR4130	130	5.90	4.19
XR4140	140	6.35	4.49
XR4150	150	6.80	4.79
XR4165	165	7.50	5.43
XR4200	200	9.05	6.53

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



For premium performance including Class O fire performance Celotex FR5000 is suitable for this application.

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Example U-value Calculation: Timber Frame Wall Lining

Construction	Thickness (mm)	
Outside surface resistance	-	
Brick	103	
Cavity	50	
Plywood	9	
Variable layer	See below	
Cavity (low emissivity) between studs 15% brg	5.0 / 10.0 / 15.0 / 20.0 / 25.0	
Polythene 1000 guage, VCL	-	
Plasterboard	12.5	
Inside surface resistance	-	
Celotex Product - Variable layer	Thickness (mm)	U-value (W/m ² K)
Celotex GA4000 between 125 stud (15% brg)	100	0.25
Celotex GA4000 between 125 stud (15% brg)	110	0.25
Celotex GA4000 between 125 stud (15% brg)	120	0.24
Celotex XR4000 between 150 stud (15% brg)	130	0.21
Celotex XR4000 between 150 stud (15% brg)	140	0.21
Celotex XR4000 between 175 stud (15% brg)	150	0.19
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 all studs and rails are flush, with no projections, and that services are correctly installed.
- Insert insulation into framing and push back to plywood sheathing. Fit services into cavity if required.
- Use the Celotex Insulation Saw to cut the boards to fit tightly between all studs and rails.
- For optimum thermal performance, the unprinted foil surface should face the air cavity.
- Use the Celotex Insulation Saw to cut the boards for infill panels, using off-cuts where possible, making sure there are no gaps at wall abutments.
- Ensure that the wall insulation is continuous with the floor perimeter insulation.
- A vapour control layer (VCL) should be installed over the warm side of the studwork.
- Fix plasterboard lining over the VCL using plasterboard nails or screws.

Some building insurance companies may require additional third party approval when using insulation in timber frame applications. Advice should be sought from the relevant parties prior to specifying the insulation required. Celotex insulation is covered by BBA certificate number 09/4667.

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Certifications and Accreditations

Celotex products GA4000 and XR4000 are covered by BBA Agreement Certificate No 09/4667. 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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