

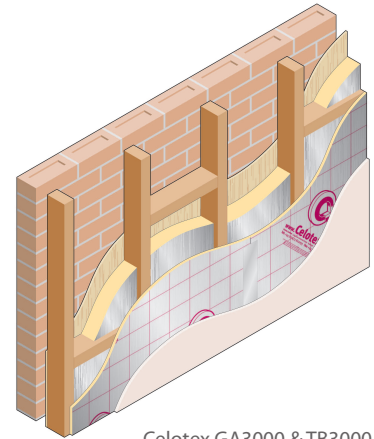
Timber frame wall lining applications

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 TB3000**, **Celotex GA3000** and **Celotex XR3000** 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
- Reduces thermal bridges through studs and rails, when used in a two-layer system
- Provides cavity for services



Celotex GA3000 & TB3000

Celotex TB3000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
TB3012	12	0.50	0.50
TB3020	20	0.85	0.72
TB3025	25	1.05	0.85
TB3030	30	1.30	0.98
TB3035	35	1.50	1.11
TB3040	40	1.70	1.26
TB3045	45	1.95	1.40

Celotex GA3000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
GA3050	50	2.15	1.55
GA3055	55	2.35	1.70
GA3060	60	2.60	1.88
GA3065	65	2.80	2.03
GA3070	70	3.00	2.17
GA3075	75	3.25	2.32
GA3080	80	3.45	2.46
GA3090	90	3.90	2.74
GA3100	100	4.30	3.28

Sustainable Insulation

Celotex PIR insulation has been independently assessed by BRE Global and has been accredited with an A+ rating in the 2008 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



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Celotex XR3000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
XR3110	110	4.75	3.59
XR3120	120	5.20	3.89
XR3130	130	5.65	4.20
XR3140	140	6.05	4.50
XR3150	150	6.50	4.81
XR3165	165	7.15	5.51
XR3200	200	8.65	6.63

Example U-value Calculation: timber frame wall lining

Construction	Thickness (mm)	
Outside surface resistance	-	
Brick	103	
Cavity (low emissivity)	50	
Plywood	9	
Variable layer	See below	
Cavity (low emissivity) between studs 15% brg	20.0 / 25.0	
Polythene 1000 gauge, VCL	-	
Plasterboard	12.5	
Inside surface resistance	-	
Celotex Product - Variable layer	Thickness (mm)	U-value (W/m²K)
Celotex XR3000 between 175 stud (15% brg)	150	0.19
Celotex XR3000 between 150 stud (15% brg)	130	0.21
Celotex GA3000 between 125 stud (15% brg)	100	0.26
Celotex GA3000 between 100 stud (15% brg)	80	0.30

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

Enhanced Performance Requirements

For enhanced performance requirements, use Celotex FR4000 or CG4000. Offering a consistent lambda of 0.022 W/mK throughout the range and with Class O fire performance these two products offer premium performance for higher specification projects. For more information visit the website at celotex.co.uk

Installation Guidelines

- 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.



Certifications and Accreditations

Celotex products TB3000, GA3000 and XR3000 are covered by BBA Agreement Certificate No 94/3080. 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 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.

Calls to the Celotex Technical Centre are charged at 30p per minute from a BT landline and lines are open Monday - Friday from 8.00am - 5.15pm. Details are correct at date of publication - January 2009.

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