



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 to assist in achieving compliance with current regulations and legislation.

Use Celotex GA3000 or GA4000 high performance thermal insulation in timber frame wall sheathing applications to minimise insulation thickness and give the following benefits:

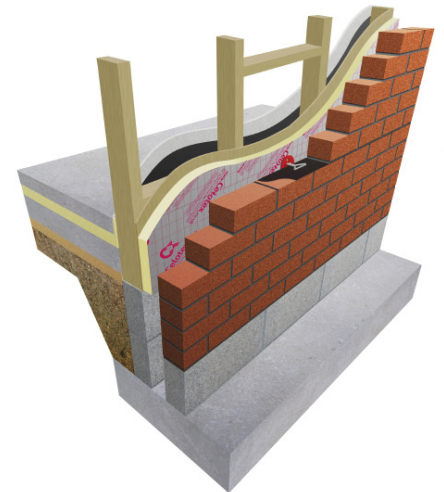
- Eliminates thermal bridging of timber
- Can be used to provide reliable long term energy savings for buildings
- Low emissivity foil facers give improved thermal insulation performance within cavity air spaces
- Sheathing encapsulates the timber frame
- No threat of interstitial condensation
- Voids between studs free for services

Celotex GA3000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
GA3050	50	2.15	1.55
GA3060	60	2.60	1.90
GA3070	70	3.00	2.19
GA3075	75	3.25	2.34
GA3080	80	3.45	2.482
GA3090	90	3.90	2.76

Celotex GA4000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
GA4100	100	4.50	3.73



Celotex GA3000

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.

For further information about Celotex' sustainable insulation solutions, visit the sustainability pages of the website at celotex.co.uk

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Example U-value Calculation: Timber Frame Wall Sheathing

Construction	Thickness (mm)	
Outside surface resistance	-	
Brick	103	
Cavity (low emissivity)	50	
Variable layer	See below	
Plywood	9	
Cavity between studs	89	
Polythene 1000 guage, VCL	-	
Plasterboard	12.5	
Inside surface resistance	-	
Celotex Product - Variable layer	Thickness (mm)	U-value (W/m ² K)
Celotex GA3000	50	0.29
Celotex GA3000	60	0.25
Celotex GA3000	70	0.23
Celotex GA3000	75	0.22
Celotex GA3000	80	0.21
Celotex GA3000	90	0.10
Celotex GA4000	100	0.18

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.
- Fix sheet of Celotex GA3000 or GA4000 to the external sheathing using galvanised clout nails at 400mm centres in the centre of the board and at 300mm centres around the perimeter.
- For optimum thermal performance, the unprinted foil surface should face the air cavity.
- Care must be taken to align the fixings with underlying studs, sole plates and head rails.
- Tightly butt boards together and use off-cuts to fill in around waist rails.
- Brickwork should be tied back to the timber framing using helical stainless steel wall ties, driven through the Celotex insulation into the studs.
- Insert ties approximately 10mm to 20mm above the brick course so that a slight 'crank' can be applied. This ensures that the tie slopes downward from the sheathing to the outer brickwork.
- Where cavity fire barriers are required by national building regulations, they should be installed in line with the manufacturer's instructions and the requirements of the Building Regulations. You should consult your building designer and building control officer regarding compliance with the relevant provisions of the Building Regulations.

NB: 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.

Gable walls

At gable walls, it is recommended that the insulation be taken up to the underside of the roof verges. However, if a cold roof construction is intended, the cavity insulation should extend at least 250mm above the ceiling. The top edge of the insulation should be protected with a cavity tray.

Other cladding

Tile hanging, render types are all suitable for this type of application. In this situation, Celotex boards can be protected with a breather membrane. However, advice and information on the installation of these cladding systems should be sought from the manufacturer or provider of the cladding system.

Certifications and Accreditations

Celotex product GA3000 and GA4000 is covered by BBA Agreement Certificate No 17/5405 & 16/5352. 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.