



Loft Insulation Application

Pitched Roof Insulation

Celotex
Insulation Specialists

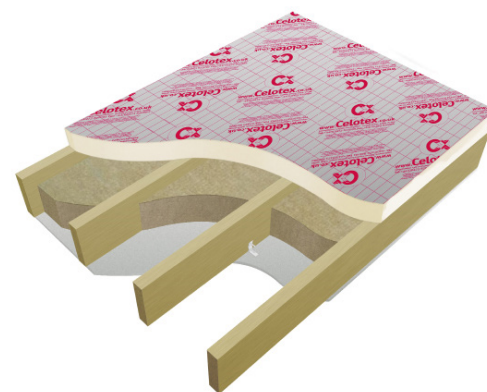
Introduction

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 loft insulation applications to minimise insulation thickness and give the following benefits:

- Upgrading existing roof spaces to current Building Regulation compliance levels
- Provides energy efficient insulation measures without impacting on internal living space
- Insulating over joists provides a lightweight storage solution when insulation is fixed onto joists
- Minimal load added to the structure due to lightweight boards



Celotex XR4000

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: Loft Insulation

Construction		100 deep joists Thickness (mm)	150 deep joists Thickness (mm)
Outside surface resistance		-	-
Tiling including batten space		-	-
Loft space		-	-
Variable layer over joists		-	-
Mineral wool between joists @400 ctrs		100	100
Polythene VCL		-	-
Plasterboard		12.5	12.5
Inside surface resistance		-	-
Variable layer Celotex Product	Thickness (mm)	U-value (W/m ² K)	U-value (W/m ² K)
Celotex GA4000	60	-	0.16
Celotex GA4000	65	-	0.16
Celotex GA400	70	-	0.15
Celotex GA4000	75	-	0.15
Celotex GA4000	80	-	0.14
Celotex GA4000	85	0.16	0.14
Celotex GA4000	90	0.15	0.13
Celotex GA4000	100	0.14	0.13
Celotex XR4000	110	0.14	0.12
Celotex XR4000	120	0.13	0.11
Celotex XR4000	130	0.12	0.11

VCL = Vapour control layer

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Installation Guidelines

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

- Celotex can be used to top up insulation levels in a horizontal ceiling when mineral wool exists between the joists.
- Ensure the loft void is ventilated and eaves vents are left clear.
- Ensure ceilings are strong enough to withstand loadings associated with installation.
- To minimise air leakage and heat loss around the loft hatch, seal the edges with draught seals and mechanically fix Celotex TB4020 to the inside of the hatch.
- Ensure existing insulation between joists is in good condition, with no signs of sagging.
- Celotex is laid directly over the joists as a continuous layer.
- For maximum strength Celotex should be laid in the opposite direction to that of the ceiling joists. Ensure boards are laid across a minimum of two joists.
- Board joints are tightly butted together correctly supported by the joists.
- Celotex is then mechanically fixed to the joists with suitable fixings.

For light storage only

- Lay 18mm of plywood over the Celotex and secure into the ceiling joists with suitable fixings.

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.