



Loft Insulation Application

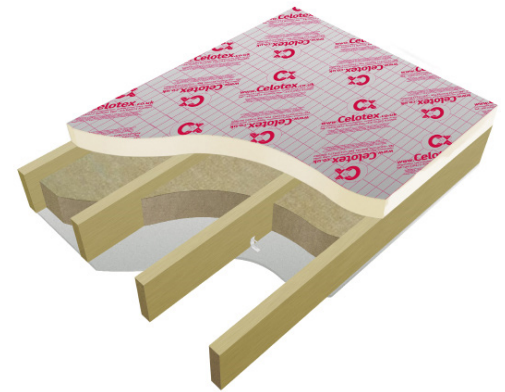
Pitched Roof Insulation

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 compliance with current regulations and legislation.

Use **Celotex GA3000**, **Celotex GA4000** or **Celotex XR4000** high performance thermal insulation in loft insulation applications to minimise insulation thickness and give the following benefits:

- Assist in 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 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	2.48
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 XR4000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
XR4120	110	5.00	4.08
XR4120	120	5.45	4.43
XR4130	130	5.90	4.78
XR4140	140	6.35	5.13
XR4150	150	6.80	5.48
XR4165	165	7.50	6.01
XR4200	200	9.05	7.23

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: 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 (Lambda = 0.040)		100	150
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 GA3000	60	-	0.16
Celotex GA3000	70	-	0.15
Celotex GA3000	75	-	0.15
Celotex GA3000	80	-	0.14
Celotex GA3000	90	0.16	0.13
Celotex GA4000	100	0.14	0.12
Celotex XR4000	110	0.13	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 TB3020 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.