

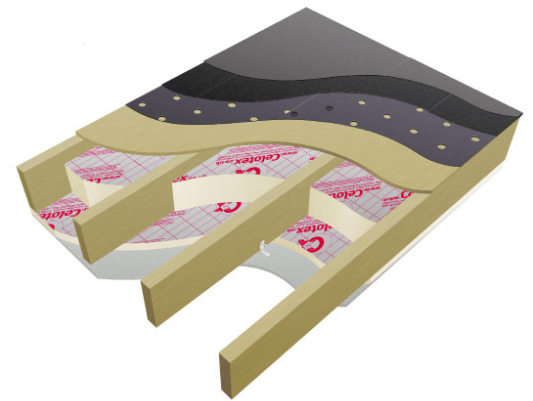


Introduction

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 a combination of **Celotex GA3000**, **Celotex GA4000** or **Celotex XR4000** with **Celotex PL3000** high performance plasterboard thermal laminate in flat roof between and under joist applications to minimise insulation thickness and give the following benefits:

- Assist in achieving compliance to Building Regulations whilst ensuring thin solutions
- Create additional, highly thermal efficient living space
- A perfect solution to upgrade older buildings
- Can be used to provide reliable long term energy savings for buildings
- Garage conversions deliver multiple energy efficient measures within one project



Celotex XR4000 & PL3000

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)
XR4110	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

cont...



Celotex PL3000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
PL3015	15 + 12.5	0.70	8.78
PL3025	25 + 12.5	1.15	9.06
PL3040	40 + 12.5	1.80	9.52
PL3050	50 + 12.5	2.20	9.83
PL3060	60 + 12.5	2.65	10.15
PL3065	65 + 12.5	2.85	10.30

Example U-value Calculation: Cold Flat Roof - Between and Under Joists

Construction	125 deep joists Thickness (mm)	150 deep joists Thickness (mm)	175 deep joists Thickness (mm)	
Outside surface resistance	-	-	-	
Weather-proofing system	n/a	n/a	n/a	
Plywood	19	19	19	
Ventilated cavity	50	50	55	
Celotex between joists @ 400 ctrs (11.7% brg)	GA3075	GA4100	XR4120	
Variable layer (for below joists)	See below	See below	See below	
Inside surface resistance	-	-	-	
Celotex Product - Variable layer	Thickness (mm)	U-value (W/m ² K)	U-value (W/m ² K)	U-value (W/m ² K)
Celotex PL3000	15 + 12.5	-	-	-
Celotex PL3000	25 + 12.5	-	-	0.19
Celotex PL3000	40 + 12.5	-	0.19	0.17
Celotex PL3000	50 + 12.5	0.21	0.17	0.16
Celotex PL3000	60 + 12.5	0.19	0.16	0.15
Celotex PL3000	65 + 12.5	0.18	0.16	0.14

cont...



Installation Guidelines

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

- Make sure that there is enough joist depth to accommodate not only the thickness of the Celotex insulation, but also a 50mm ventilated airspace above the boards.
- Fix battens to the inside face of the joists so that the bottom of the batten is 50mm below the decking.
- Measure the space to be filled between the inside face of the joists prior to cutting the board.
- The Celotex Insulation Clip is designed to allow insulation boards to be installed between timber joists quickly and without nails or screws.
- Fit the clips at one metre maximum centres along the insulation.
- Push the boards into the void between the joists until they are tight up to the underside of stop battens, ensuring that the lateral joints are tightly butted.
- Secure Celotex PL3000 to the underside of the joists.
- Joints between the boards must be tightly butted, taped and jointed using appropriate tape and jointing material to create the vapour control layer.

Composite systems can be used to combine Celotex insulation under joist lining with quilt type insulant between the joists which will provide acoustic, as well as thermal insulation. This option is particularly useful when upgrading to modern acoustic insulation standards.

When updating an existing ceiling, Celotex PL3000 can be fitted directly underneath the ceiling, providing there is no vapour check layer such as gloss paint or foil backed plasterboard. Always ensure that there is a 50mm minimum ventilation gap above any original insulation.

Ventilation must be provided above an insulated ceiling directly through the cold void. Failure to do so could result in serious condensation problems that may lead to decay and possible failure.

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.