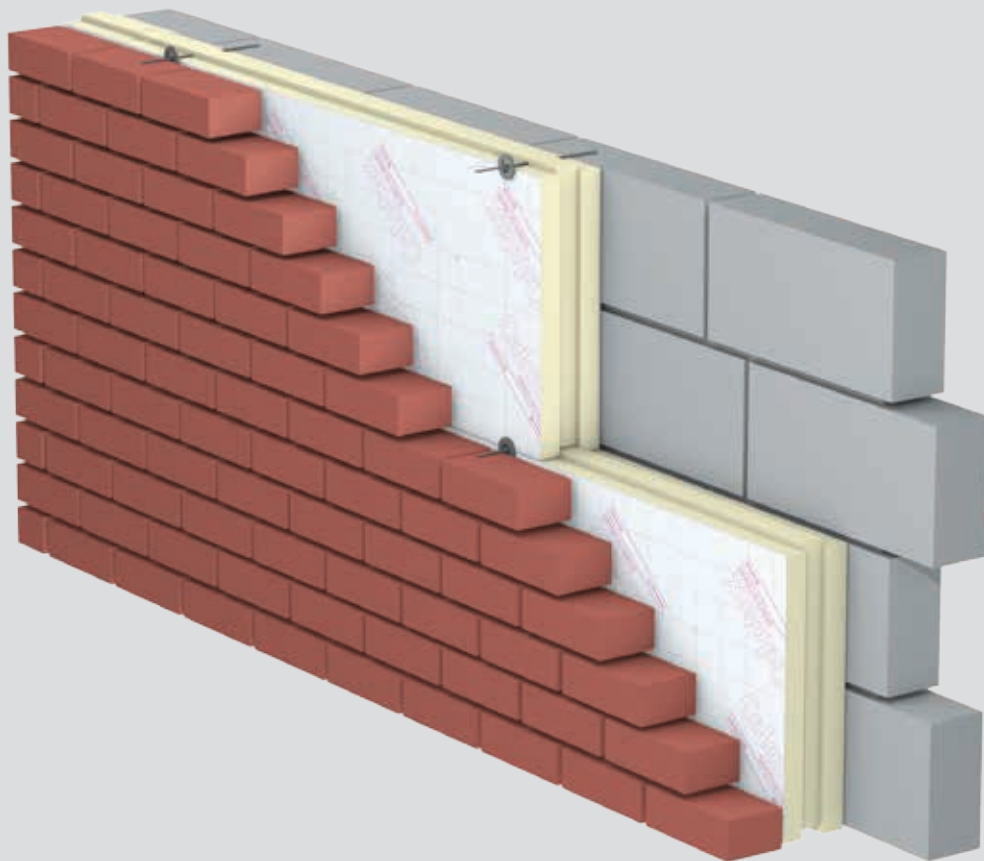


Thermaclass

Cavity Wall 21

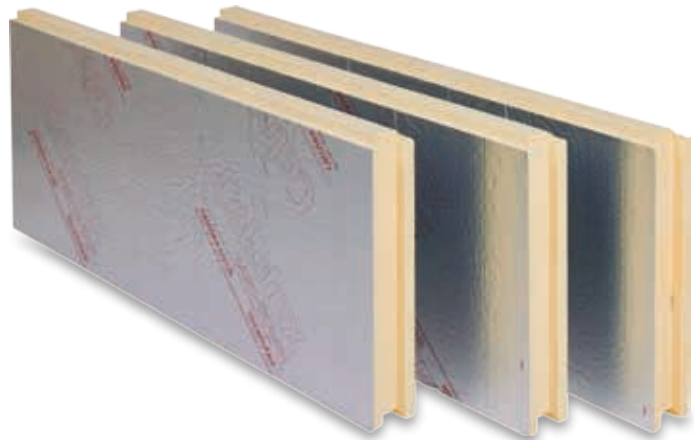


Product Brochure

Thermaclass Cavity Wall 21

Thermaclass Cavity Wall 21 is an easy to install, high thermal performance polyisocyanurate (PIR) insulation board for full fill cavity wall applications, with a thermal conductivity of 0.021 W/m.K. It can be installed with up to a 10mm residual cavity (to support ease of installation and accommodate mortar squeeze) or as a full fill solution with no residual cavity.

The boards have a low emissivity foil facing to each side and feature an engineered tongue and groove joint profile, helping to ensure a continuous layer of insulation to maximise thermal performance and provide protection from wind driven rain.



Features and Benefits

- **Thermal performance** - excellent thermal performance with a thermal conductivity of 0.021 W/m.K, reducing the thickness of insulation required to hit the target U-value.
 - **Tongue and groove engineered profile** - helping to ensure a continuous layer of insulation and minimise gaps between boards, maximising thermal performance and providing protection from wind driven rain. When installed according to our Installation Guide (available at insulation-uk.com/thermaclass), the tongue and groove profile also removes the requirement to tape the joints between the boards to prevent water ingress.
 - **Lightweight and easy to install** - the boards are sized to fit standard cavity wall tie spacing. They are light and rigid, assisting with ease of transportation, handling and fitting.
 - **BBA certified** - Thermaclass Cavity Wall 21 has been assessed by the British Board of Agrément for use in a full fill cavity application if installed, used and maintained as set out in the certificate. Please view or download the certificate at insulation-uk.com/BBA for details of the application and relevant restrictions.
 - **High performance facer** - Low emissivity foil facing provides improved thermal performance in sealed cavity air spaces, improving the achievable U-value*.
*Based on a residual cavity of 10mm
 - **Sustainability** - All Celotex products are manufactured under Environmental Management System - ISO 14001:2015. Thermaclass Cavity Wall 21 is manufactured with a blowing agent that is CFC/HCFC free and has zero Ozone Depletion Potential (ODP) with a low Global Warming Potential (GWP).
- All Celotex products are manufactured under Quality Management Standard - ISO 9001:2015. Thermaclass Cavity Wall 21 is manufactured in accordance with BS EN 13165 for factory made rigid polyurethane foam (PU) products.

Key Considerations

When using Thermaclass Cavity Wall 21, you need to satisfy yourself that use of the product meets all relevant national Building Regulations and guidance as well as local, national and other applicable standards relevant for your construction or application, including requirements in relation to fire and applicable height restrictions.

Please refer to the following product documents which are available at insulation-uk.com/thermaclass (product properties) and insulation-uk.com/healthandsafety (safety properties):

- BBA certificate
- Product datasheet
- Declaration of Performance
- Health & safety datasheet

Thermaclass Cavity Wall 21 should not be used in the external walls of buildings over 18 metres in height (England and Wales) or 11 metres in height (Scotland). Recent changes to Building Regulations mean that only non-combustible insulation or insulation of limited combustibility can be used in buildings of that height.

Design Considerations

You and your building designer should refer to the relevant Building Regulations and guidance applicable to your particular construction or application. You should also consult with warranty providers and local authority building control before building works commence. For information on certified usage of Thermaclass Cavity Wall 21, please refer to BBA certificate 16/5343 (available at insulation-uk.com/BBA) for detailed conditions of use, particularly in respect of behaviour in relation to fire and related restrictions.

Thermal bridging

It is important to consider detailing at junctions to minimise the effects of thermal bridging and the associated risk of condensation.

When designed into a building, the right junction details offer a significant contribution to the improvement of the fabric energy efficiency.

Moisture tolerance

The tongue and groove edges of Thermaclass Cavity Wall 21 help increase protection from wind driven rain. Moisture from the ground will not pass through to the inner leaf when

the DPC and insulation are installed in the cavity wall in accordance with appropriate Building Regulations, standards and warranty requirements.

For information on usage of Thermaclass Cavity Wall 21 within a particular exposure zone, please refer to the 'Additional Information' section of BBA certificate 16/5343 for Thermaclass Cavity Wall 21 Insulation for Full Fill Cavity Walls alongside Building Regulations Approved Document C. You should also consult with third party warranty providers and local authority building control for any additional requirements before building works commence.

Product Specification

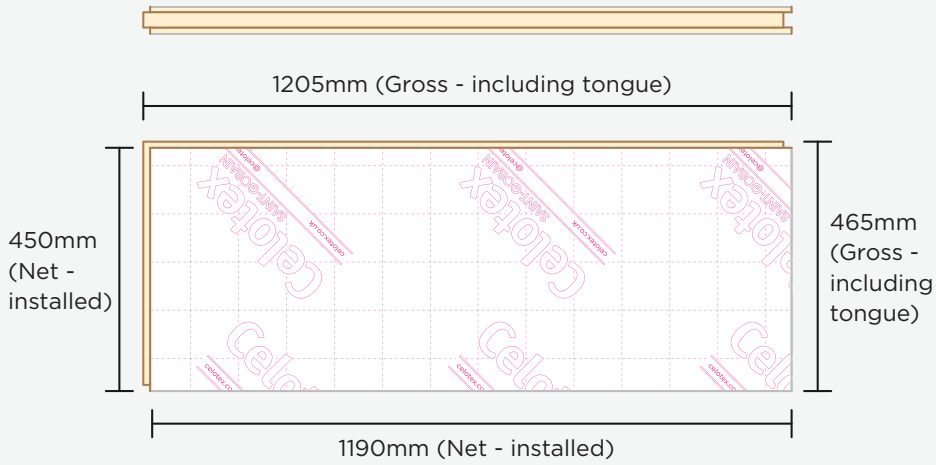


FIGURE 1A - BOARD DIMENSIONS

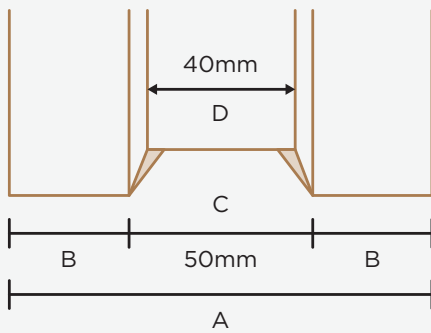


FIGURE 1B - GROOVE PROFILE

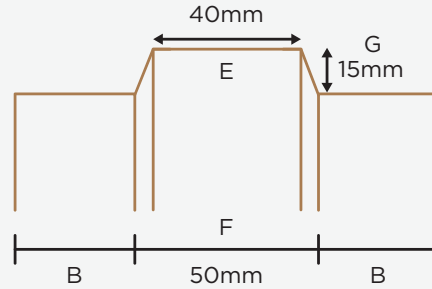


FIGURE 1C - TONGUE PROFILE

Edge Profile Dimensions

Board thickness mm (A)	90	115	140	Top of tongue mm (E)	40	40	40
Outer edges mm (B)	20	32.5	45	Base of tongue mm (F)	50	50	50
Outer groove mm (C)	50	50	50	Tongue height mm (G)	15	15	15
Inner groove mm (D)	40	40	40				

Stocked Thickness	Lambda Value (W/m.K)	R-Value (m ² .K/W)	Length (mm)		Width (mm)		Weight (kg/m ²)	Boards per Pallet
			Gross (including tongue)	Net (installed)	Gross (including tongue)	Net (installed)		
90mm	0.021	4.25	465	450	1205	1190	2.80	96
115mm	0.021	5.45	465	450	1205	1190	3.55	80
140mm	0.021	6.65	465	450	1205	1190	4.30	64

Reaction to Fire

Euroclass E Reaction to Fire classification, according to BS EN 13501-1. Products with this level of classification are not provided with a rating for smoke emission.

Indicative U-value Tables

Brick outer leaf, fair-faced block inner leaf*				
Product thickness (mm)	Block type & lambda			
	Dense (1.13 W/m.K)	Medium Dense (0.59 W/m.K)	Lightweight concrete (0.28 W/m.K)	Aircrete (0.15 W/m.K)
90mm	0.20	0.20	0.19	0.18
115mm	0.16	0.16	0.15	0.15
140mm	0.13	0.13	0.13	0.13

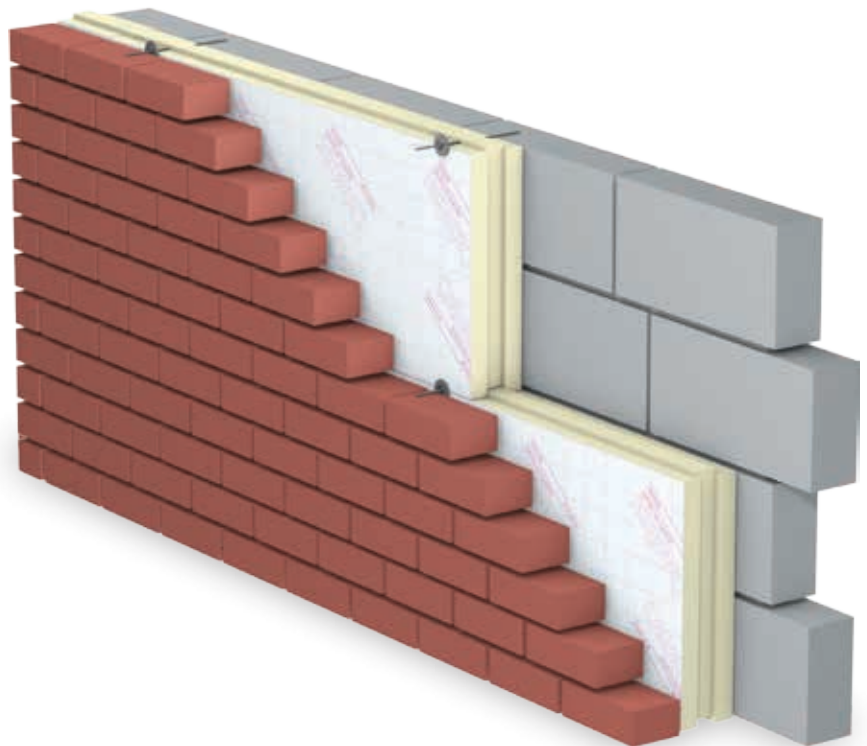
Brick outer leaf, block inner leaf, plasterboard on dabs internal finish with skim*				
Product thickness (mm)	Block type & lambda			
	Dense (1.13 W/m.K)	Medium Dense (0.59 W/m.K)	Lightweight concrete (0.28 W/m.K)	Aircrete (0.15 W/m.K)
90mm	0.19	0.19	0.18	0.18
115mm	0.16	0.15	0.15	0.14
140mm	0.13	0.13	0.13	0.12

Rendered dense block outer leaf, fair-faced block inner leaf*				
Product thickness (mm)	Block type & lambda			
	Dense (1.13 W/m.K)	Medium Dense (0.59 W/m.K)	Lightweight concrete (0.28 W/m.K)	Aircrete (0.15 W/m.K)
90mm	0.20	0.20	0.19	0.18
115mm	0.16	0.16	0.16	0.15
140mm	0.14	0.13	0.13	0.13

Rendered dense block outer leaf, block inner leaf, plasterboard on dabs internal finish with skim*				
Product thickness (mm)	Block type & lambda			
	Dense (1.13 W/m.K)	Medium Dense (0.59 W/m.K)	Lightweight concrete (0.28 W/m.K)	Aircrete (0.15 W/m.K)
90mm	0.19	0.19	0.18	0.18
115mm	0.16	0.15	0.15	0.15
140mm	0.13	0.13	0.13	0.12

*Based on 10mm residual cavity, U-value calculations in W/m².K

To obtain a bespoke U-value calculation for your project, please contact our Technical Support Centre on 01473 820850 or e-mail technicalsupport@saint-gobain.com. Alternatively, indicative U-value calculations are available at: insulation-uk.com/member/u-value-calc



The building detail is for illustrative purposes only. It does not constitute advice and should not be relied upon.



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Celotex reserves the right to amend or revise product specification without notice. The information in this publication is correct at the time of publication. The information herein should not be read in isolation as it is meant only as guidance for the user, who should always ensure that they are fully conversant with the products and systems being used and their subsequent installation prior to the commencement of work.

For an up-to-date library of product information, users should visit the website at insulation-uk.com

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