



Masonry Full Fill Cavity Wall Applications

Full Fill Cavity Wall Insulation

Celotex
SAINT-GOBAIN

IMPORTANT: On 1 September 2017, this product (among others) was temporarily suspended while we investigate the results of recent tests (Parts 6 and 7 of British Standard 476). In addition, we have recently identified a compliance issue relating to our calculation and testing of the declared lambda value of products in the 4000 and 5000 ranges and the Crown-Bond and Crown-Fix products within the Crown Flat Roofing range. Materials relating to this product are for information only.

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.

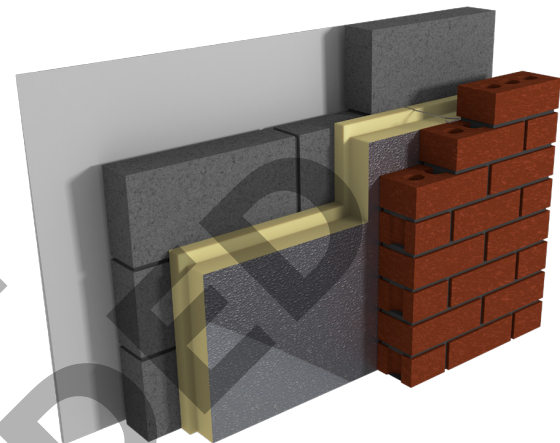
Celotex CF5000 is the latest addition to our cavity wall product range extending our '5000' series to six premium performance products. Designed for use in full-fill cavity wall applications, CF5000 helps you achieve compliance to UK Building Regulations achieving a U-value within the wall of 0.18 W/m²K. This maximises thermal performance without the need to widen the cavity.

With Celotex CF5000 you are specifying an insulation board that:

- Is certified under BBA certificate number 16/5343
- Has a thermal conductivity of 0.021 W/mK offering enhanced thermal performance and even better U-values
- Achieves an A+ rating when compared to the BRE Green Guide as well as class 0 fire performance throughout the entire product
- Is a 97mm board suitable for application within 100mm cavities
- Makes installation easy with dimensions to fit with standard cavity wall tie spacing. Foil facings either side make CF5000 easy to cut.
- Takes away the requirement to widen the cavity, improving plot efficiencies
- Minimises heat loss through gaps with a mechanically engineered rebated edge

Celotex CF5000 Technical Data

Product Code	Thickness (mm)	R-value (m ² K/W)	Weight (kg/m ²)
CF5097	97	4.60	3.25



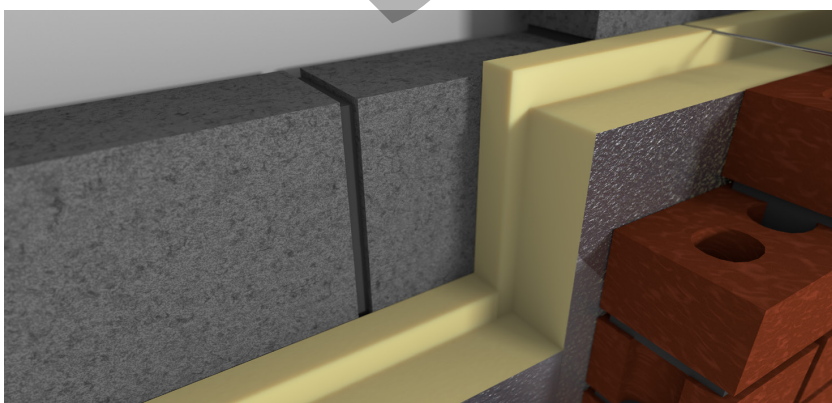
Celotex CF5000

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



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Installation Guidelines

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

1. Build up the first section of the leading leaf to a course above the next row of wall ties. It is desirable that the outer leaf is constructed first to help minimise the number of brick cuts around openings and to clean mortar snots to reduce thermal bridging and contaminated wall ties. The use of a cavity board is important to prevent mortar build up at the bottom of the cavity.

2. The first row of wall ties are positioned at a maximum of 600mm centres horizontally and provide a minimum support of two ties per 1200mm board.

3. The first row of insulation is fitted against the leading leaf on to the first row of wall ties, so the rise of the thinner rebated edge faces away from the external leaf pointing upwards (see figure 1). These should be installed to a minimum depth of 150mm below the damp proof course (DPC) to provide edge insulation to the floor and reduce thermal bridging at this junction.

4. The next board is then fitted tightly to the previous board by slotting the rebated edges together in a jigsaw effect. This is repeated for the first row of boards.

* **Best Practice Tip** – Ensure that all exposed areas of insulation are protected with a weatherproof material or board when work is suspended or during rain.

5. Wall ties are then laid on to the top surface of the boards. A small cut should be made in to the top surface of the board to recess the wall tie so that it is sloping downwards to the outer leaf. The cut made should be no more than the depth of the rebated edge. Where a wall tie has a drip it can be positioned centrally. Care is taken to avoid damage to the board.

* **Best Practice Tip** – Do not pierce the centre of the insulation board with the wall tie. This is a potential point of moisture ingress.

6. The inner leaf is built up to the same level as the insulation. Continue to construct the cavity wall and install insulation following previous steps ensuring excess mortar is removed from the cavity face and a cavity board is used to prevent mortar dropping on the top edge of the insulation.

* **Best Practice Tip** – Do not push insulation down in to the cavity as the rebated jigsaw effect between boards cannot be ensured.

Openings

7. Where the boards are required to be fitted around openings the rebated edge should be trimmed using a sharp blade. It is important that the rebated edge is cut accurately so that a tight butt edge is formed at the opening interfaces. Suitable damp proofing should be used around openings. Care should be taken when fitting the extra wall ties around openings in to the rebated edge.

* **Best Practice Tip** – Cut the insulation using a sharp knife and straight edge to ensure an accurate butt edge.

Corners

8. At corner junctions the boards should be butt jointed by removing the rebated edge. It is important that the rebated edge is cut accurately ensuring all edges are butted tightly with no air gaps, thus achieving continuity of the thermal envelope around the corners. All corner details incorporate a vertical dpc with a 100 mm overlap beyond the board ends (at all courses). It is critical all works are detailed in accordance to BBA 16/5343 which is available on our website.

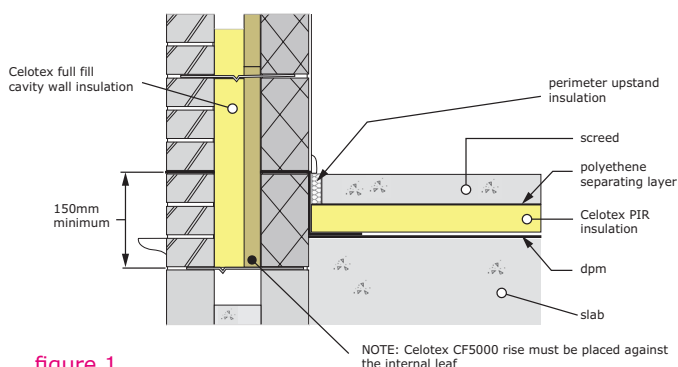


figure 1

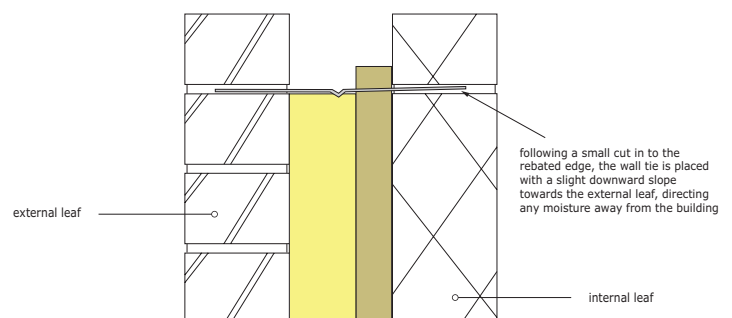


figure 2

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Wall to Floor Junctions

Where insulation is installed under a screed or concrete slab, perimeter upstand insulation should be provided at all exposed edges as shown in Figure 2. The distance maintained between the top of the perimeter upstand insulation and the bottom of the cavity wall insulation should be a minimum of 150mm.

Gable Walls

At gable walls it is recommended that Celotex CF5000 is taken up to the underside of the roof verges. In cold roof constructions, the product should extend at least 250mm above the ceiling insulation. The top edge of the insulation should be protected with a cavity tray.

Cavity fire barriers

The requirements of the Building Regulations relating to the fire spread in cavity walls can be met in buildings of all purpose groups without the need for fire barriers provided the construction complies with the provision detailed in:

England and Wales, Approved Doc B, volume 1, Diagram 13 and Vol2, Diagram 34. Northern Ireland Technical booklet E Diagram 3.5.

Scotland: Technical Handbook 2 (Domestic and Non-Domestic) – Mandatory standard 2.4, clause 2.4.1, 2.4.2, 2.4.7 and 2.4.9. For further information please refer to BBA 16/5343.

Cavity obstructions

Unavoidable projections into the cavity, such as floor edge beams and steel columns will interrupt the continuity of Celotex CF5000. Extra care is required to both weatherproof the detail and address thermal bridging.

Where Celotex CF5000 stops below and above the projection, the rebated edge should be trimmed using a sharp blade. It is important the rebated edge is cut accurately so that a tight butt edge is formed with the obstruction. The use of a cavity tray with weep holes is recommended.

Where the continuity of Celotex CF5000 is interrupted, a flexible fibre insulation material suitable for full fill can be used around the projection to ensure the thermal envelope is continuous.

Where buildings are subject to a building warranty such as NHBC standards, the requirements of the warranty provider must be met.

Certifications and Accreditations

Celotex product CF5000 is covered by BBA Agreement Certificate No 16/5343 & 16/5357. 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.

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