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Agrément Certificate

17/5405

Product Sheet 1

CELOTEX INSULATION

CELOTEX TB4000, GA4000 AND XR4000 PIR INSULATION BOARDS FOR DRY LINING

This Agrément Certificate Product Sheet⁽¹⁾ relates to Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining, comprising rigid polyisocyanurate (PIR) foam boards with foil-facings, for use as insulation within a dry lining system to improve the thermal insulation of new and existing external masonry walls of domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Thermal performance — the products have a declared thermal conductivity (λ_D) of $0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ (see section 6).

Condensation risk — the products can contribute to limiting the risk of condensation (see section 7).

Durability — the products are durable, rot proof and sufficiently stable to remain effective as insulation for the life of the building (see section 14).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Claire Curtis-Thomas

Date of Fourth issue: 20 November 2018

John Albon – Head of Approvals
Construction Products

Claire Curtis-Thomas
Chief Executive

Originally certificated on 20 March 2017

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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Regulations

In the opinion of the BBA, Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	C2(c)	Resistance to moisture
Comment:		The products can contribute to satisfying this Requirement. See sections 7.1 and 7.6 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The products can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The products are acceptable. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new dwellings (applicable to England only)
Regulation:	26A	Primary energy consumption rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The products are acceptable. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.15	Condensation
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See sections 7.1 and 7.7 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to satisfying this Standard with reference to clauses or parts of clauses 6.1.1 ⁽¹⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽¹⁾⁽²⁾ , 6.2.5 ⁽¹⁾⁽²⁾ , 6.2.6 ⁽¹⁾⁽²⁾ , 6.2.7 ⁽¹⁾ , 6.2.8 ⁽²⁾ , 6.2.9 ⁽¹⁾⁽²⁾ , 6.2.10 ⁽¹⁾ , 6.2.11 ⁽¹⁾⁽²⁾ , 6.2.12 ⁽²⁾ and 6.2.13 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the products can contribute to a construction meeting a higher level of sustainability as defined in this Standard with reference to clauses 7.1.4 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾], 7.1.6 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾] and 7.1.7 ⁽¹⁾⁽²⁾ [Aspect 1 ⁽¹⁾⁽²⁾]. See section 6.1 of this Certificate.

Regulation:	12	Building standards applicable to conversions
Comment:		Comments made in relation to these products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23	Fitness of materials and workmanship
Comment:		The products are acceptable. See section 14 and the <i>Installation</i> of this Certificate.
Regulation:	29	Condensation
Comment:		The products can contribute to satisfying this Regulation. See section 7.1 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 3 *Delivery and site handling* (3.4) and 15 *General* (15.8) of this Certificate.

Additional Information

NHBC Standards 2018

In the opinion of the BBA, Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 6.1 *External masonry walls* and 9.2 *Wall and ceiling finishes*.

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard BS EN 13165 : 2012. An asterisk (*) appearing in this Certificate indicates that data shown is given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining comprise rigid polyisocyanurate (PIR) foam boards with foil-facings. The nominal characteristics of the products are given in Table 1 of this Certificate.

Table 1 Nominal characteristics

Product	Facings	Board size (mm)	Thickness range (mm)	Edge profile
Celotex TB4000	Composite foil-facing both sides (printed on one side only) ⁽¹⁾	1200 x 2400	12 to 45	square edge
Celotex GA4000	Composite foil-facing both sides (printed on one side only) ⁽¹⁾	1200 x 2400	50 to 100	square edge
Celotex XR4000	Composite foil-facing both sides (printed on one side only) ⁽¹⁾	1200 x 2400	110 to 200	square edge

(1) See sections 4.10 and 15.7.

2 Manufacture

2.1 Celotex PIR insulation is manufactured by a lamination process, formed between aluminium foil-facings that are glued together in a continuous laminator, where the adhesive is a mixture of two primary chemicals, polyol and MDI. An added blowing agent causes the adhesive to expand into foam that hardens, which is then cut to its finished board size and packed.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the Certificate holder/manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Celotex has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 and BS EN ISO 14001 : 2015 by SGS UK Ltd (Certificates GB91/504 and GB11/83526).

3 Delivery and site handling

3.1 The products are delivered to site in polythene-wrapped packs. Each pack of boards contains a label with the manufacturer's name, board dimensions and the BBA logo incorporating the number of this Certificate.

3.2 The products must be protected from prolonged exposure to sunlight, and stored dry, flat and raised above ground level (to avoid contact with ground moisture). Where possible, packs should be stored inside. If stored outside, they should be under cover, or protected with opaque polythene sheeting.

3.3 The products are light and easy to handle and care should be exercised to avoid crushing the edges or corners. If damaged, the products should be discarded.

3.4 The products must not be exposed to open flame or other ignition sources, or to solvents or other chemicals.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining.

4 Use

4.1 Celotex TB4000, GA4000 and XR4000 PIR Insulation Boards for Dry Lining are suitable for use as insulation within a dry-lining system, and are effective in improving the insulation of solid or cavity masonry walls of new and existing domestic and non-domestic buildings. The boards should be installed in accordance with the Certificate holder's instructions.

4.2 The boards may be installed on masonry construction including clay and calcium silicate bricks, concrete blocks, and natural and reconstituted stone blocks.

4.3 Walls should be designed and constructed in accordance with the relevant clauses of:

- BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006, and their respective UK National Annexes
- BS 8000-3 : 2001.

4.4 All walls must be in a good state of repair without evidence of rain penetration, damp or frost damage, and be at least two bricks or 200 mm in thickness.

4.5 The surfaces of masonry walls should be sound and free from loose material; large projections should be removed and holes filled and levelled. A survey of the wall may be required to establish the extent of any packing that may be required to ensure the support battens provide a uniform plane for the boards to be fixed.

4.6 The installation of insulated dry lining systems requires careful detailing around doors and windows to achieve a satisfactory surface for finishing. In addition, every attempt should be made to minimise the risk of thermal bridging at reveals and where heavy separating walls are attached to the external wall. In new work, the construction must be designed to accommodate the thickness of the dry lining, particularly at reveals, heads and sills and in relation to ceiling height. On existing walls, consideration should be given to lining the reveals with a thinner layer of insulation and lining board.

4.7 Services can be incorporated in the void formed between the insulation and the lining boards, making chasing of the wall unnecessary. Where the services have a greater depth than the void, the wall should be chased in preference to the insulation. It is recommended that services penetrating the insulation or any vapour check lining board, eg light switches and power outlets, are kept to a minimum to limit damage to vapour checks.

4.8 When the products are to be installed in existing buildings, it should be realised that a small reduction in room size will occur and that permanent fixtures, eg baths, will present difficulties.

4.9 If present, mould or fungal growth should be treated prior to commencement of the installation of the products.

4.10 For optimum thermal performance, the boards must be installed with the correct orientation of their printed foil-facings. See section 15.7.

5 Practicability of installation

The products are designed to be installed by a competent general builder, or a contractor, experienced with these types of products.

6 Thermal performance



6.1 Calculations of the thermal transmittance (U value) of specific external wall constructions should be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2006, using the following values:

- PIR insulation core — declared thermal conductivity (λ_D)* of $0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$
- composite foil-facings both sides, printed on one side only — for unprinted facing, an aged emissivity (ε) (to BS EN 15976 : 2011) of 0.05.

6.2 The U value of a completed wall will depend on the insulation thickness, number and type of fixings, the insulating value of the substrate masonry and its internal finish. Calculated U values for example constructions are given in Tables 2 and 3.

Table 2 Example U values — dry lining to 215 mm solid brickwork wall

Target U value ($\text{W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$)	Insulation thickness (mm)
	Celotex TB4000, GA4000 and XR4000 ⁽¹⁾
0.18	100 ⁽²⁾
0.19	95 ⁽²⁾
0.25	65 ⁽²⁾
0.26	65 ⁽²⁾
0.27	60 ⁽²⁾
0.28	55 ⁽²⁾
0.30	50 ⁽²⁾
0.35	40 ⁽³⁾

(1) Minimum available thickness (110 mm) of XR4000 satisfies all of the above U values

(2) GA4000

(3) TB4000

Construction comprises 215 mm thick external brickwork solid wall ($\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$), Celotex insulation board, 22 mm deep timber battens (11.8%, $\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$), 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$). Timber battens fixed through Celotex boards using 3.4 mm diameter stainless steel fixings — 4.17 fixings per m^2 (12 fixings per board).

Table 3 Example U values — dry lining to existing uninsulated masonry cavity wall

Target U value ($\text{W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$)	Insulation thickness (mm)
	Celotex TB4000, GA4000 and XR4000 ⁽¹⁾
0.18	95 ⁽²⁾
0.19	90 ⁽²⁾
0.25	65 ⁽²⁾
0.26	60 ⁽²⁾
0.27	55 ⁽²⁾
0.28	55 ⁽²⁾
0.30	50 ⁽²⁾
0.35	40 ⁽³⁾

(1) Minimum available thickness (110 mm) of XR4000 satisfies all of the above U values

(2) GA4000

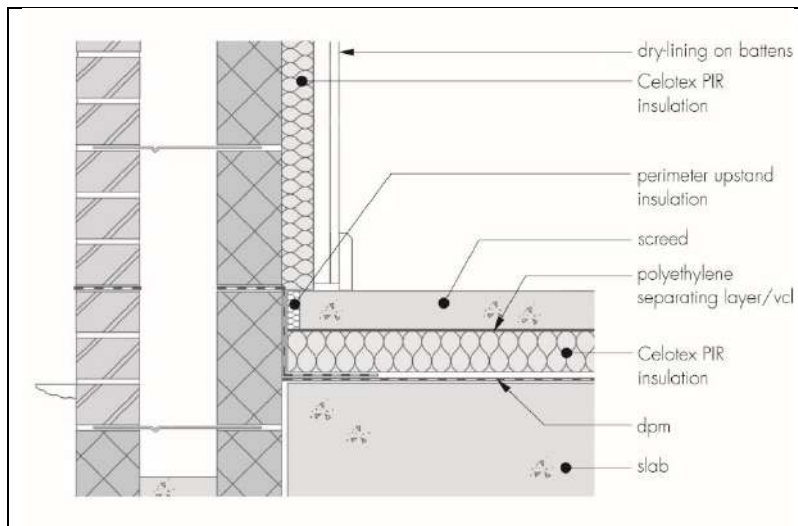
(3) TB4000

Existing construction comprises 103 mm thick external brickwork ($\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$), 50 mm clear cavity, 100 mm thick dense blockwork ($\lambda = 1.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$), Celotex insulation board, 22 mm deep timber battens (11.8%, $\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$), 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$). Timber battens fixed through Celotex boards using 3.4 mm diameter stainless steel fixings — 4.17 fixings per m^2 (12 fixings per board).

Junctions

6.3 Care must be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration. Detailed guidance can be found in the documents supporting the national Building Regulations. An example of an acceptable junction detail is shown in Figure 1.

Figure 1 Junction between the wall and the floor



7 Condensation risk

Interstitial condensation



7.1 Walls will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2011, Annexes D and G.

7.2 The risk of summer condensation on the foil component must be considered for solid masonry walls, orientated from ESE through south to WSW, in accordance with BRE Report BR 262 : 2002, section 3.10.

7.3 The foil-facings have a water vapour resistance of $1000 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$ and the insulation core has a water vapour resistivity of $300 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$ and, therefore, will provide a significant resistance to water vapour transmission.

7.4 Where calculations to Annex D of BS 5250 : 2011 indicate a risk of persistent condensation, a site-specific dynamic analysis to BS EN 15026 : 2007 should be considered.

7.5 Provided all joints between the products are sealed (see section 4.5 and *Installation* part of this Certificate) in accordance with the Certificate holder's instructions, the system can offer a significant resistance to water vapour transmission.

Surface condensation



7.6 Walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $0.7 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the junctions with floors, roofs and openings are designed in accordance with section 6.3 of this Certificate.



7.7 Walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point. Guidance may be obtained from BS 5250 : 2011, Annex G. Further guidance may be obtained from BRE Report BR 262 : 2002 and section 6.3 of this Certificate.

8 Behaviour in relation to fire

8.1 The Certificate holder has declared a reaction to fire classification* to EN 13501-1 : 2007 of Class E for the products.

8.2 When properly installed, the insulation will be contained between the wall and internal lining board until one is compromised. Therefore, the insulation will not contribute to the development of a fire.

9 Infestation

The use of the products does not in itself promote infestation. The creation of voids within the structure, ie gaps between the wall lining and the boards, may provide habitation for insects or vermin in areas already infested. Care should be taken to ensure, wherever possible, that all voids are sealed, as any infestation may be difficult to eradicate. There is no food value in the materials used.

10 Proximity of flues and appliances

When installing the products in close proximity to certain flue pipes and/or heat-producing appliances, the relevant provisions of the national Building Regulations are applicable:

England and Wales — Approved Document J, sections 1 to 4

Scotland — Mandatory Standard 3.19, clauses 3.19.1⁽¹⁾⁽²⁾ to 3.19.4⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet L, section 2.

11 Materials in contact – wiring installations

11.1 As with any other forms of insulation, de-rating of electrical cables should be considered where the insulation restricts the air cooling of cables.

11.2 Electrical cables that are likely to come into contact with the insulation are required to be protected by a suitable conduit or PVC-U trunking. The installation of electrical services must be carried out in accordance with BS 7671 : 2018.

12 Wall-mounted fittings

The Certificate holder's instructions must be followed. Any objects fixed to the wall, other than lightweight items, are outside the scope of this Certificate.

13 Maintenance

As the products are confined within the wall construction and have suitable durability (see section 14), maintenance is not required.

14 Durability



14.1 The durability of the products is satisfactory. Provided the products are fixed to satisfactory stable and durable backgrounds, the products will have a life equal to the building in which they are installed.

14.2 Under normal conditions of occupancy, the products are unlikely to suffer damage but if damage does occur the product can be repaired or replaced.

Installation

15 General

15.1 A qualified plumber is required to make alterations to heating systems. A qualified electrician must be used to make good the electrical wirings and services.

15.2 The building should be examined for the following:

- suitability of substrate
- detailing around windows and doors
- position and number of electrical sockets and switches
- wall fittings and fixtures – including coving and skirting
- areas where flexible sealants must be used
- ventilation plates.

15.3 Before starting to fit the product, the position of all main service cable and pipe runs must be clearly marked on the walls to avoid damage. All plaster coving, skirting board and laminate floor angle beads must be removed.

15.4 Before fixing the product, sufficient time must be allowed for damp-proofing treatments, where applied, to dry out (for information, see BS 6576 : 2005 for dry-lining in conjunction with a chemical damp-proof course application).

15.5 Care must be taken when exposing electrical cables (see section 11).

15.6 All insulated dry lining installations require careful planning and setting out. Installation should be in accordance with BS 8212 : 1995, good dry lining practice and the Certificate holder's instructions. Typical installation methods are shown in Figures 2 and 3.

15.7 The products have printed logos applied to the outer foil-facing on one side only. To ensure optimum thermal performance, the boards must be installed with the unprinted foil-face always facing the cavity side.

15.8 The boards can be cut using a sharp knife or fine-toothed saw, to fit around windows, doors and air bricks. It is essential that cut pieces completely fill the spaces for which they are intended and are adequately secured. Appropriate Personal Protective Equipment (PPE) must be used when cutting the boards, and cutting should be done in a ventilated space, outside or in an area with dust extraction.

15.9 To avoid thermal bridging, the boards should be used to line window reveals. Thinner boards are available to suit door and window reveal conditions. Suitable provisions will also need to be adopted at junctions and other details such as separating floors. Further guidance can be obtained from BRE Report BR 262 : 2002.

16 Procedure

16.1 The wall is surveyed to establish its flatness and suitability for receiving the dry-lining system. This system may be used on any stable, dry wall capable of taking the fixings for the timber battens.

16.2 The insulation boards are cut to fit and placed against the wall; joints and perforations are sealed with self-adhesive aluminium foil-tape. The insulation boards are temporarily secured in place. Permanent fixing of the internal lining board is carried out using suitable mechanical fixings into the timber battens (see Figures 2 and 3). The timber battens are placed against the insulation boards and mechanically fixed through the top, centre and bottom of the insulation into the wall substrate.

Figure 2 General configuration

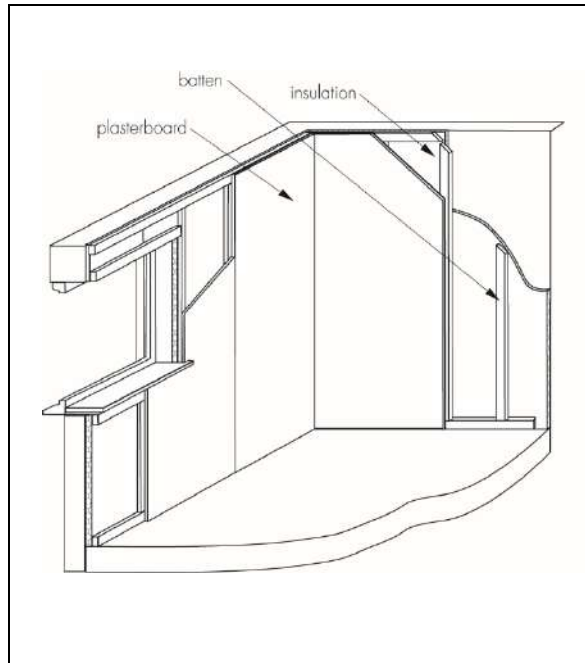
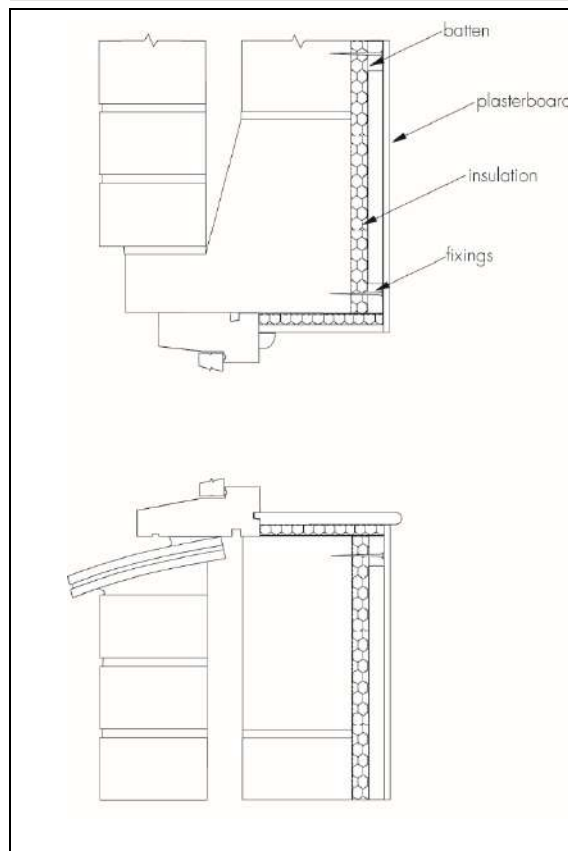


Figure 3 Opening detail



16.3 The battens must be of sufficient thickness and spacing (up to 600 mm) to provide adequate grounds to which the lining board can be fixed, and provide for any services that are to be incorporated into the void between the insulation board and lining board. Horizontal battens should be fitted at the top and bottom of walls and openings.

16.4 It is recommended that the timber battens are treated with a suitable wood preservative.

16.5 Jointing and finishing of the lining is carried out in the appropriate manner. Timber skirting can be fixed into the horizontal batten at floor level.

17 Tests

Results of tests were assessed to determine:

- thermal conductivity.

18 Investigations

18.1 An examination was made of data to analyse:

- dimensional accuracy
- density
- compressive strength
- thermal conductivity
- vapour resistance.

18.2 A condensation risk analysis was carried out.

18.3 A series of U value calculations was carried out.

18.4 A calculation was undertaken to confirm the declared thermal conductivity.

18.5 The manufacturing process was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

- BS 5250 : 2011 + A1 : 2016 *Code of practice for control of condensation in buildings*
- BS 6576 : 2005 + A1:2012 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*
- BS 7671 : 2018 *Requirements for electrical installations – IEE Wiring Regulations – Seventeenth Edition*
- BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*
- BS 8212 : 1995 *Code of practice for dry lining and partitioning using gypsum plasterboard*
- BS EN 1996-1-1 : 2005 + A1 : 2012 *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*
NA to BS EN 1996-1-1 : 2005 + A1 : 2012 *UK National Annex to Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*
- BS EN 1996-1-2 : 2005 BS EN 1996-1-2 : 2005 *Eurocode 6 : Design of masonry structures — General rules — Structural fire design*
NA to BS EN 1996-1-2 : 2005 *UK National Annex to Eurocode 6 : Design of masonry structures — General rules — Structural fire design*
- BS EN 1996-2 : 2006 *Eurocode 6 : Design of masonry structures — Design considerations, selection of materials and execution of masonry*
NA to BS EN 1996-2 : 2006 *UK National Annex to Eurocode 6 : Design of masonry structures — Design considerations, selection of materials and execution of masonry*
- BS EN 1996-3 : 2006 *Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*
NA to BS EN 1996-3 : 2006 *UK National Annex to Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*
- BS EN 13165 : 2012 + A2 : 2016 *Thermal insulation products for buildings — Factory made rigid polyurethane foam (PU) products — Specification*
- BS EN 13501-1 : 2007 + A1 : 2009 *Fire Classification of construction products and building elements. Part 1. Classification using data from reaction to fire tests*
- BS EN 15026 : 2007 *Hygrothermal performance of building components and building elements — Assessment of moisture transfer by numerical simulation*
- BS EN 15976 : 2011 *Flexible sheets for waterproofing — Determination of emissivity*
- BS EN ISO 6946 : 2017 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*
- BS EN ISO 9001 : 2015 *Quality management systems — Requirements*
- BS EN ISO 14001 : 2015 *Environmental Management systems — Requirements with guidance for use*
- BRE Report (BR 262 : 2002) *Thermal insulation : avoiding risks*
- BRE Report (BR 443 : 2006) *Conventions for U-value calculations*

19 Conditions

19.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

19.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

19.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

19.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

19.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

19.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.