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Whitehouse Industrial Estate Runcorn Cheshire WA7 3DP



**Agrément Certificate** 

19/5672

Product Sheet 1

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# **POLTERM MAX PLUS**

# POLTERM MAX PLUS FOR USE IN RAINSCREEN CLADDING SYSTEMS

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Polterm Max Plus for use in Rainscreen Cladding Systems, a mineral wool insulation slab for use as thermal insulation on new and existing timber- or steel-frame walls or masonry walls, in domestic and non-domestic buildings. The product is used in conjunction with ventilated cladding systems.

(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 product has a declared thermal conductivity ( $\lambda_D$ ) of 0.035 W·m<sup>-1</sup>·K<sup>-1</sup> (see section 6).

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

Behaviour in relation to fire — the product is classified as Class A1 in accordance with BS EN 13501-1: 2007 (see section 8).

Durability — the product will have a life equivalent to that of the wall structure in which it is incorporated (see section 12).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 24 June 2019 John Albon

Chief Scientific Officer

Claire Curtis- Monas.

Claire Curtis-Thomas Chief Executive

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, Polterm Max Plus for use in Rainscreen Cladding Systems, 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: B3(1)(4) Internal fire spread (structure)

Comment: The use of the product is unrestricted by this Requirement. See section 8 of this

Certificate.

Requirement: B4(1) External fire spread

Comment: In England, the use of the product is unrestricted by this Requirement. See section 8 of

this Certificate.

Requirement: C2(c) Resistance to moisture

Comment: The product can contribute to satisfying this Requirement. See sections 7.1 and 7.5 of

this Certificate.

Requirement: L1(a)(i) Conservation of fuel and power

Comment: The product can contribute to satisfying this Requirement. See section 6 of this Certificate.

Regulation: 7 Materials and workmanship (applicable to Wales only)
Regulation: 7(1) Materials and workmanship (applicable to England only)

Comment: The product is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation: 7(2) Materials and workmanship (applicable to England only)

Comment: The product is unrestricted by this Regulation. See section 8 of this Certificate.

Regulation: 26 CO<sub>2</sub> 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 product can contribute to satisfying these Regulations, but compensating fabric and/or services measures may need to be taken. See section 6 of this Certificate.



# The Building (Scotland) Regulations 2004 (as amended)

Regulation: 8(1) Durability, workmanship and fitness of materials

Comment: The product is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation: 9 Building standards applicable to construction

Standard: 2.4 Cavities

Standard: 2.6 Spread to neighbouring buildings

Comment: The use of the product is unrestricted by these Standards, with reference to clauses

 $2.4.4^{(1)}$ ,  $2.4.6^{(2)}$ ,  $2.6.5^{(1)}$  and  $2.6.6^{(2)}$ . See section 8 of this Certificate.

Standard: 3.15 Condensation

Comment: The product 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 7.6 of this Certificate.

Standard: 6.1(b) Carbon dioxide emissions
Standard: 6.2 Building insulation envelope

Comment: The product can contribute to satisfying clauses, or parts of, 6.1.1<sup>(1)</sup>, 6.1.3<sup>(2)</sup>, 6.1.5<sup>(2)</sup>,

 $6.1.6^{(1)}$ ,  $6.2.1^{(1)}$ ,  $6.2.3^{(1)}$ ,  $6.2.4^{(1)}$ ,  $6.2.5^{(1)(2)}$  and  $6.2.10^{(2)}$  of these Standards. See section 6

of this Certificate.

Standard: 7.1(a)(b) Statement of sustainability

Comment: The product 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 product 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 of this Certificate.

Regulation: 12 Building standards applicable to conversions

Comment: Comments in relation to the product 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 product is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation: 29 Condensation

Comment: The product can contribute to satisfying this Regulation. See section 7.1 of this

Certificate.

Regulation: 35(1)(4) Internal fire spread – structure

Comment: The use of the product is unrestricted by this Regulation. See section 8 of this Certificate.

Regulation: 39(a)(i) Conservation measures

Regulation: 40(2) Target carbon dioxide emission rate

Comment: The product is acceptable. 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 section: 3 *Delivery and site handling* (3.3) of this Certificate.

# **Additional Information**

#### **NHBC Standards 2019**

In the opinion of the BBA, Polterm Max Plus for use in Rainscreen Cladding Systems, 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 6.2 External timber framed walls, 6.9 Curtain walling and cladding and 6.10 Light steel framed walls and floors. Current NHBC guidance precludes the use of façade systems not utilising a drained cavity.

# **CE** marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13162: 2012. An asterisk (\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

# **Technical Specification**

# 1 Description

1.1 Polterm Max Plus for use in Rainscreen Cladding Systems comprises slabs of rigid stone mineral wool (MW) treated with a water-repellent additive, with a black glass tissue facer on one face. The slabs have the nominal characteristics shown in Table 1.

Table 1 Nominal characteristics		
Length (mm)	1200	
Width (mm)	600	
Thickness (mm) <sup>(1)</sup>	50, 60, 75, 80, 100, 120, 125, 150, 160, 180, 200	
Edge profile	Square	

<sup>(1)</sup> Other slab thicknesses within the above range are available on request.

- 1.2 Ancillary items for use with the product, but outside the scope of this Certificate:
- rainscreen cladding panel and subframe
- insulation fasteners/fixings
- sheathing and lining board
- breather membranes
- vapour control layer (vcl).

#### 2 Manufacture

- 2.1 Raw materials, mixed to a controlled formulation, are melted in a furnace to produce molten stone. Stone fibres are produced from the molten stone using a rotary spinning process. The fibres are treated with a resin and formed into a continuous length of insulation to the required thickness. The insulation then passes into an oven which cures the resin. The insulation is then cut to the required dimensions to form the slabs.
- 2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:
- agreed with the 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 systems of Saint-Gobain Construction Products Polska sp. z o.o. have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 and BS EN ISO 14001 : 2015 by SGS (Certificates PL 18/0695 and PL 18/0696 respectively).

#### 3 Delivery and site handling

- 3.1 Slabs are delivered to site compression-wrapped in polythene. Each pack carries a label bearing the Certificate holder's name, product description and the BBA logo incorporating the number of this Certificate.
- 3.2 The slabs should be stored clear of the ground, on a clean, level surface, and preferably under cover to protect them from prolonged exposure to moisture or mechanical damage.
- 3.3 It is recommended that dust masks, gloves and long-sleeved clothing are worn when cutting and handling the slab.
- 3.4 Damaged, contaminated or wet slabs must not be used.

# **Assessment and Technical Investigations**

The following is a summary of the assessment and technical investigations carried out on Polterm Max Plus for use in Rainscreen Cladding Systems.

### **Design Considerations**

#### 4 Use

- 4.1 Polterm Max Plus for use in Rainscreen Cladding Systems is effective in reducing the U value (thermal transmittance) of external walls of timber-frame, steel-frame or masonry buildings. It is essential that such walls are designed and constructed to incorporate the normal precautions against moisture ingress, including the use of a breather membrane over the timber sheathing in framing board applications.
- 4.2 Certain rainscreen systems, such as those with open joints, may require the addition of a breather membrane incorporated into the system. The requirement for a membrane is determined by the system designer and is outside the scope of this Certificate.
- 4.3 Care must also be taken in the overall design and construction of elements incorporating the product to ensure appropriate:
- sheathing or bracing for frame elements. The product must not be relied on to provide any structural contribution, eg racking strength
- fire resistance, for both elements and junctions
- continuity of insulation to minimise thermal bridging
- resistance to the ingress of precipitation and moisture from the ground.
- 4.4 The wall and sub-frame should be structurally sound, and should have been designed and constructed in accordance with the following Standards and, where appropriate, their UK National Annexes:
- BS 8000-3: 2001
- BS EN 351-1: 2007
- BS EN 1993-1-3: 2006
- BS EN 1995-1-1 : 2004
- BS EN 1996-1-1 : 2005
- BS EN 1996-1-2 : 2005
- BS EN 1996-2 : 2006
- BS EN 1996-3 : 2006.
- 4.5 The designer should select a construction appropriate to the local wind-driven rain index to BS EN 1996-2 : 2006 and its UK National Annex, paying due regard to the design detailing, quality of work and materials to be used.
- 4.6 The air gap between the face of the insulation and the back of the rainscreen panels should be of sufficient width to allow any water passing the joints to run down the back of the rainscreen panels and be discharged externally without wetting the insulation or the backing wall. The minimum width for air gaps required by NHBC is:
- 50 mm for panels with open joints
- 38 mm for panels with baffled or labyrinth (rebated) joints.
- 4.7 The construction should be made weathertight as soon as is practically possible to ensure maximum protection of the product.

# 5 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

# 6 Thermal performance



6.1 Calculations of the thermal transmittance (U value) should be carried out in accordance with BS EN ISO 6946: 2017 and BRE Report BR 443: 2006, using the insulation's declared thermal conductivity\* ( $\lambda_D$ ) of 0.035 W·m<sup>-1</sup>·K<sup>-1</sup>.

6.2 The U value of a completed wall construction will depend on the insulation thickness, number and type of fixings, the insulating value of the substrate and its internal finish. Calculated U values for example constructions are given in Tables 2 to 4.

Table 2 Example U values — timber frame rainscreen system<sup>(1)(2)</sup>

U value (W·m <sup>-2</sup> ·K <sup>-1</sup> )	Polterm Max Plus thickness (clear 140 mm timber frame) (mm) <sup>(3)</sup>	Polterm Max Plus thickness (fully filled 140 mm timber frame) (mm) <sup>(4)</sup>
0.18	(5)	(5)
0.19	(5)	(5)
0.25	(5)	120
0.26	200	100
0.27	200	80
0.28	180	75
0.30	160	60
0.35	125	50

- (1) Construction, external to internal:
  - 10 mm rainscreen cladding, fully ventilated 50 mm clear cavity, Isover Polterm Max Plus, breather membrane, 9 mm OSB (oriented strand board) sheathing board ( $\lambda = 0.13 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$ ), 140 mm timber frame ( $\lambda = 0.13 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$ ) (15% fraction), vcl and 15 mm plasterboard ( $\lambda = 0.25 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$ ).
- (2) A fixing correction factor (ΔUf) of 0.1 W·m<sup>-1</sup>·K<sup>-1</sup> has been applied, to allow for the thermal bridging of the rainscreen brackets.
- (3) Insulation installed against the sheathing board with no insulation in the timber frame.
- (4) Insulation installed against the sheathing board with 140 mm of insulation in the timber frame (λ = 0.035 W·m<sup>-1</sup>·K<sup>-1</sup>) with a 15% timber frame fraction.
- (5) Additional insulation required.

Table 3 Example U values — steel frame rainscreen system<sup>(1)(2)</sup>

U value (W·m <sup>-2</sup> ·K <sup>-1</sup> )	Polterm Max Plus thickness (clear 90 mm steel frame) (mm) <sup>(3)</sup>	Polterm Max Plus thickness (fully filled 90 mm steel frame) (mm) <sup>(4)</sup>
0.18	(5)	(5)
0.19	(5)	(5)
0.25	(5)	160
0.26	200	160
0.27	200	125
0.28	180	120
0.30	160	100
0.35	120	75

- (1) Construction, external to internal:
  - 10 mm rainscreen cladding, fully ventilated 50 mm clear cavity, Isover Polterm Max Plus, breather membrane, 9 mm OSB sheathing board ( $\lambda$  = 0.13 W·m<sup>-1</sup>·K<sup>-1</sup>), 90 mm light steel frame (0.2% fraction), vcl and 15 mm plasterboard ( $\lambda$  = 0.25 W·m<sup>-1</sup>·K<sup>-1</sup>).
- (2) A fixing correction factor ( $\Delta$ Uf) of 0.1 W·m<sup>-1</sup>·K<sup>-1</sup> has been applied, to allow for the thermal bridging of the rainscreen brackets.
- (3) Insulation installed against the sheathing board with no insulation in the steel frame.
- (4) Insulation installed against the sheathing board with 90 mm of insulation in the steel frame ( $\lambda = 0.038 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$ ) with a 0.2% steel frame fraction.
- (5) Additional insulation required.

Table 4 Example U values — solid concrete rainscreen system <sup>(1)(2)</sup>				
U value	Polterm Max Plus thickness			
(W·m <sup>-2</sup> ·K <sup>-1</sup> )	(mm)			
0.18	(3)			
0.19	(3)			
0.25	(3)			
0.26	200			
0.27	200			
0.28	180			
0.30	160			
0.35	125			

- (1) Construction, external to internal:
  - 10 mm rainscreen cladding, open fully ventilated 50 mm clear cavity, Isover Polterm Max Plus, 150 mm reinforced concrete (1% steel), 15 mm cavity (20% adhesive bridge) and 15 mm plasterboard ( $\lambda$  = 0.25 W·m<sup>-1</sup>·K<sup>-1</sup>).
- (2) A fixing correction factor (ΔUf) of 0.1 W·m<sup>-1</sup>·K<sup>-1</sup> has been applied, to allow for the thermal bridging of the rainscreen brackets.
- (3) Additional insulation required.

#### **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.

#### 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 For the purpose of calculations, the water vapour diffusion resistance factor ( $\mu$ ) of the individual components may be taken as:
- stone mineral wool insulation 1
- glass tissue facer 0.15.
- 7.3 If the product is to be used on the external walls of rooms expected to have high humidity, care must be taken to provide adequate permanent ventilation to avoid possible problems from the formation of interstitial condensation in the internal wall leaf.
- 7.4 A vcl should be used in steel and timber constructions, should the condensation risk analysis show this is necessary.

#### **Surface condensation**



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



7.6 In Scotland, walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 1.2 W·m<sup>-2</sup>·K<sup>-1</sup> at any point, and the junctions with other elements are designed in accordance with the guidance referred to in 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



The product is classified\* as A1 in accordance with BS EN 13501-1: 2007<sup>(1)</sup>. It is therefore non-combustible as defined in the national Building Regulations and is not subject to any restriction on building height or proximity to boundaries.

(1) Exova Warrington fire. Report No WF 401343, 25 July 2018. Copies can be obtained from the Certificate holder.

# 9 Strength and stability

- 9.1 Although the product will not be directly exposed to wind load, it will experience substrate movement and therefore each installation should be designed to withstand, without damage or permanent deformation, the pressures imposed by wind forces.
- 9.2 The wall and sub-frame to which the product is fixed, or which it is installed between, should be structurally sound and constructed in accordance with section 4.3 of this Certificate. However, when designing the wall for strength, stability and racking, no contribution from the insulation should be assumed.
- 9.3 Wind loads should be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-4: 2005 and its UK National Annex. The higher pressure coefficients applicable to corners of buildings should be used.
- 9.4 The adequacy of fixing to the structural frame or substrate for specific installations is outside the scope of this Certificate and must be verified by a suitably experienced and qualified individual. Particular care is required around window and door openings to ensure that the structure is capable of sustaining the additional weight of reveal/frame details.
- 9.5 The cladding must be fixed to the frame or masonry substrate, and must be designed by a suitably qualified and experienced individual in accordance with relevant Standards and Requirements.

#### 10 Resistance to moisture

- 10.1 External walls should be in good condition and must resist the ingress of rain (see section 4.4).
- 10.2 Care must be taken to ensure that the types of façades and wall finishes, and the design and detailing around openings, are appropriate for the anticipated exposure conditions and, if appropriate, resist the movement of the frame.
- 10.3 The product should be kept dry until the cladding is applied.
- 10.4 To resist the passage of moisture from the ground, adequate damp-proof courses and membranes must be provided in accordance with conventional good practice.
- 10.5 Weather resistance is provided by an external cladding system (outside the scope of this Certificate).

# 11 Maintenance

As the product is confined between the wall and the cladding and has suitable durability (see section 12), and provided the integrity of the cladding is maintained throughout the life of the system, maintenance is not required.

# 12 Durability



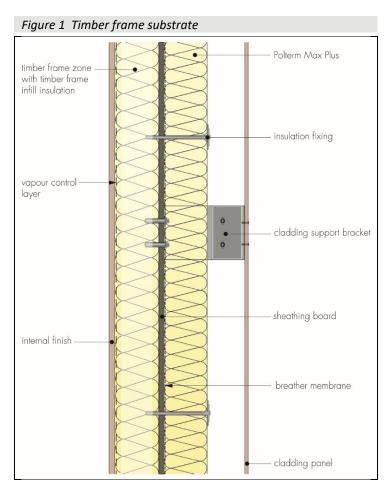
The product is unaffected by the normal conditions in a wall and is durable, rot proof, water resistant and sufficiently stable to remain effective as insulation for the life of the building.

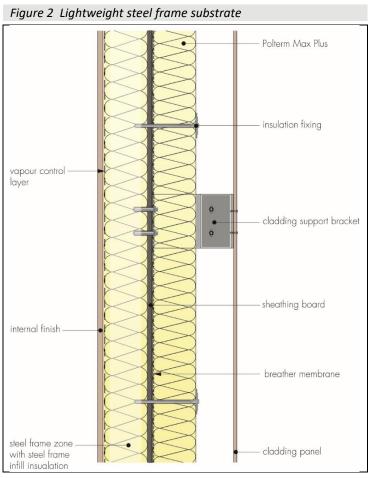
#### 13 General

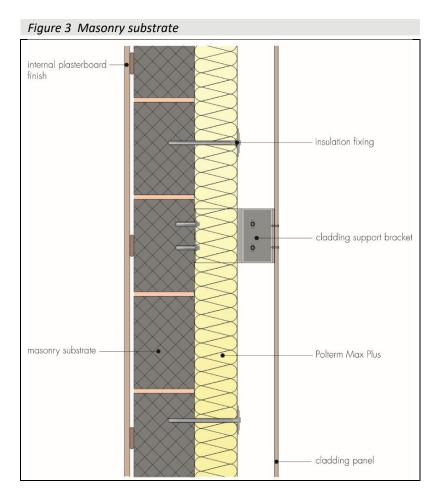
- 13.1 Installation of Polterm Max Plus for use in Rainscreen Cladding Systems should be in accordance with this Certificate, the Certificate holder's instructions and current good building practice.
- 13.2 The slab can be cut using a fine-toothed saw or sharp knife, but care must be taken to prevent damage, particularly to edges.
- 13.3 Cavity barriers should be provided at the junction of the external wall and roof space.
- 13.4 It is important to ensure a tight fit between slabs. Trimming must be accurate, to achieve close-butted joints and continuity of insulation.
- 13.5 The slabs are fixed against the external face of the sheathing board or against the external face of masonry substrates, in conjunction with masonry cladding or weathertight rainscreen cladding<sup>(1)</sup>, maintaining a cavity to ensure drainage.
- (1) Rainscreen cladding systems are proprietary and utilise various mechanisms for attaching cladding panels to the wall structure. Site work guidance should be sought from the system manufacturer.

#### 14 Procedure

- 14.1 The product should be applied with the black glass tissue facing outwards (that is, into the ventilated cavity).
- 14.2 Slabs should be close-butted at all vertical and horizontal joints. The horizontal joints of the insulation should be staggered in accordance with good practice.
- 14.3 Fixings should have a minimum head diameter of 70 mm. A typical fixing pattern has three fixings per square metre, with one metal fixing at the centre of every slab (see section 9.4 of this Certificate).
- 14.4 The product should be cut and tightly fitted around wall brackets where these occur.
- 14.5 For a typical installation, a breathable membrane is placed between the sheathing board and the product (see Figures 1 and 2). A VCL is placed between the plasterboard and the frame (see Figures 1 to 3).







#### Technical Investigations

# 15 Tests

Results of tests were assessed, to determine:

- thermal conductivity
- dimensional stability
- slab dimensions.
- reaction to fire
- short-term water absorption

# 16 Investigations

- 16.1 Existing data on durability and properties in relation to fire were evaluated.
- 16.2 A calculation was undertaken to confirm the declared thermal conductivity ( $\lambda_D$ ).
- 16.3 A series of U value calculations was carried out.
- 16.4 A condensation risk analysis was carried out.
- 16.5 The manufacturing process was evaluated, 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 8000-3: 2001 Workmanship on building sites — Code of practice for masonry

BS EN 351-1 : 2007 Durability of wood and wood-based products — Preservative-treated solid wood — Classification of preservative penetration and retention

BS EN 1991-1-4 : 2005 + A1 : 2010 Eurocode 1: Actions on structures — General actions — Wind actions

NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to Eurocode 1: Actions on structures — General actions —

Wind actions

BS EN 1993-1-3: 2006 Eurocode 3: Design of steel structures — General rules — Supplementary rules for cold-formed members and sheeting

NA to BS EN 1993-1-3 : 2006 UK National Annex to Eurocode 3 — Design of steel structures — General rules — Supplementary rules for cold-formed members and sheeting

BS EN 1995-1-1: 2004 + A2: 2014 Eurocode 5: Design of timber structures — General — Common rules and rules for buildings

NA to BS EN 1995-1-1 : 2004 + A1 : 2008 UK National Annex to Eurocode 5: Design of timber structures — General — Common rules and rules for buildings

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 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 + A1: 2014 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 13162 : 2012 + A1 : 2015 Thermal insulation products for buildings — Factory made mineral wool (MW) products — Specification

BS EN 13501-1 : 2007 + A1 : 2009 Fire classification of construction products and building elements — Classification using test data from reaction to fire tests

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

# **Conditions of Certification**

#### 17 Conditions

#### 17.1 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.
- 17.2 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.
- 17.3 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.
- 17.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.
- 17.5 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.

17.6 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.