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Agrément Certificate

14/5157

Product Sheet 6

ECOTHERM ECO RANGE FOR FLOORS, WALLS AND PITCHED ROOFS

ECOTHERM ECO-VERSAL FRAMING FOR WALLS

This Agrément Certificate Product Sheet⁽¹⁾ relates to Ecotherm Eco-Versal Framing for Walls, a rigid polyisocyanurate insulation for use between studding and/or as insulated sheathing over timber- or steel-frame buildings up to 18 metres in height, with an outer course of masonry.

(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.

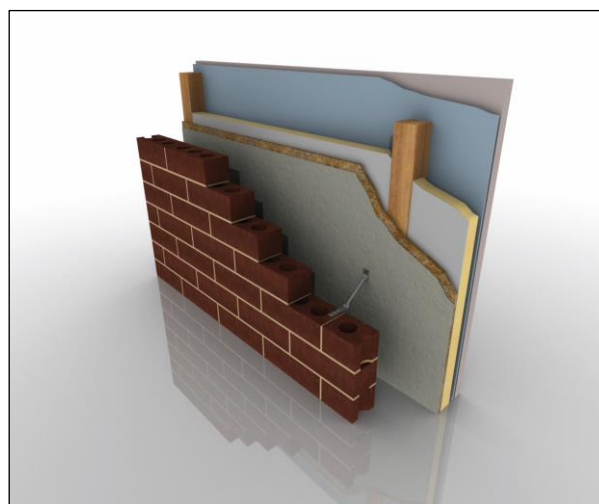
KEY FACTORS ASSESSED

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

Condensation risk — installation of the product must not be carried out until the moisture content of the timber frame is less than 20%. The product can contribute to minimising the risk of condensation (see section 8).

Behaviour in relation to fire — the product has a Class E reaction to fire classification (see section 9).

Durability — the product will have a life equivalent to that of the structure in which it is incorporated (see section 14).



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: 22 June 2017

John Albon – Head of Approvals
Construction Products

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.

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Regulations

In the opinion of the BBA, Ecotherm Eco-Versal Framing for Walls, 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(4)	Internal fire spread (structure)
Comment:		The product can contribute to satisfying this Requirement. See section 9.1 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See sections 8.1 and 8.3 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
Comment:		The product is 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 product 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 product is acceptable. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.4	Cavities
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 2.4.1 ⁽¹⁾⁽²⁾ and 2.4.2 ⁽¹⁾⁽²⁾ . See sections 9.1 and 9.3 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 2.6.1 ⁽¹⁾⁽²⁾ . See sections 9.1 and 9.3 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾ , 3.15.3 ⁽¹⁾ and 3.15.4 ⁽¹⁾ . See sections 8.2 and 8.3 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, 6.1.2 ⁽¹⁾ , 6.1.3 ⁽²⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.6 ⁽²⁾ , 6.2.7 ⁽²⁾ and 6.2.9 ⁽¹⁾⁽²⁾ to 6.2.12 ⁽¹⁾⁽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 6.1 of this Certificate.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for 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 14 and the <i>Installation</i> part of this Certificate.
Regulation:	29	Condensation
Comment:		The product can contribute to satisfying this Regulation. See section 8.3 of this Certificate.
Regulation:	35(1)(4)	Internal fire spread — structure
Comment:		The product can contribute to satisfying this Regulation. See section 9.1 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Comment:		The product can contribute to satisfying this Regulation. 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* (3.5) of this Certificate.

Additional Information

NHBC Standards 2017

Subject to a 50 mm minimum residual cavity being maintained, NHBC accepts the use of Ecotherm Eco-Versal Framing for Walls, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 6.2 *External timber framed walls*, specifically section 6.2.10(a) Table 2, and Chapter 6.10 *Light steel framed walls and floors*.

CE marking

The Certificate holder has taken the responsibility of CE marking the Ecotherm Eco-Versal Framing for Walls in accordance with harmonised European Standard BS EN 13165 : 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 Ecotherm Eco-Versal Framing for Walls is a rigid polyisocyanurate foam (PIR) board, faced on both sides with an aluminium foil/kraft/foil tri-laminate. The product is for use between studding and/or as insulated sheathing over timber or steel-frame buildings with a ventilated and drained cavity between the outer masonry leaf and the timber frame. The product is for use up to 18 metres in height.

1.2 The boards are available with the nominal properties of:

Length* (mm) ⁽¹⁾	2400
Width* (mm) ⁽¹⁾	1200
Thickness* (mm) ⁽¹⁾	20 to 140
Core density (kg·m ⁻³)	32
Edge detail	plain
Compressive strength* (kPa)	>140

(1) Other dimensions are available on request.

2 Manufacture

2.1 Raw materials are injected onto the lower foil-facer on a conveyor belt. The exothermic reaction expands the foam, which then comes into contact with the upper foil-facer. An automated process cures and cuts the product to the required size.

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 being operated by the manufacturer are being maintained.

2.3 The management systems of the manufacturer have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by the Loss Prevention Certification Board (LPCB) (Certificate 388).

3 Delivery and site handling

3.1 Boards are delivered to site in shrink-wrapped polythene. Each pack bears the manufacturer's trade name and the BBA logo incorporating the number of this Certificate.

3.2 Packs should be stored off the ground on a clean, level surface under cover to protect them from moisture and mechanical damage. Boards should ideally be stored indoors; however, covered packs stored outdoors should be sloped to ensure rainwater does not collect on the top. Snow and hail deposits must be removed as soon as possible.

3.3 Boards should not be stored in direct sunlight or in areas subject to elevated temperatures.

3.4 Care must be taken in handling individual boards to avoid crushing the edges or corners.

3.5 Boards must not be exposed to open flame or other ignition sources. Care must be taken to prevent contact with solvents and bitumen products.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Ecotherm Eco-Versal Framing for Walls.

Design Considerations

4 General

4.1 Ecotherm Eco-Versal Framing for Walls is effective in reducing the U value (thermal transmittance) of external walls of timber- or steel-frame buildings, with external masonry leaf and a residual cavity of 50 mm. It is essential that such walls are designed and constructed to incorporate the normal precautions against moisture ingress. This would include the application of a suitable breather membrane where appropriate.

4.2 Buildings subject to the national Building Regulations should be designed and constructed in accordance with the relevant recommendations 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 EN 351-1 : 2007
- BS EN 845-1 : 2013
- BS 8000-3 : 2001
- BS EN 1995-1-1 : 2004
- BS EN 1993-1-2 : 2005.

4.3 New buildings not subject to these Regulations should also be built in accordance with the Standards listed in section 4.2 of this Certificate.

4.4 Cavity wall ties with insulation-retaining fixings and, if required, any additional ties to BS EN 845-1 : 2013 should be used for structural stability in accordance with BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006.

4.5 Services which penetrate the dry lining (eg light switches, power outlets) must be kept to a minimum to limit damage to vapour checks. In addition, to preserve the fire resistance of the wall, any penetrations should be enclosed in plasterboard, stone mineral wool or a suitably-tested proprietary fire-rated system.

4.6 This application requires a vapour control layer (VCL) behind the internal finish, which should be a minimum thickness of 0.125 mm (500 gauge) polyethylene, or plasterboard backed with a vapour control membrane.

4.7 Installation must not be carried out until the moisture content of the timber frame is less than 20%.

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) of specific external wall constructions should be carried out in accordance with BS EN ISO 6946 : 1997 and BRE report BR 443 : 2006, using the declared thermal conductivity (λ_D) for the board of $0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$. The foil face has an emissivity value of 0.05.

6.2 The U value of a typical construction will depend on the cavity width, the insulating value of the internal block leaf and finish, and the board thickness. Example U values are given in Table 1.

Table 1 Wall U values (combined area method)⁽¹⁾

Target U value (W·m ⁻² ·K ⁻¹)	Insulation thickness (mm)			
	Between timber frame studs (140 mm)	Between timber frame studs and over studs – sheathing ⁽³⁾ (140 mm)	All over timber frame studs – sheathing ⁽³⁾ (140 mm)	All over steel frame system ⁽³⁾ (100 mm)
	System 1	System 2	System 3	System 4
0.18	90 + 55 ⁽²⁾	70 + 40	105	105
0.19	90 + 45 ⁽²⁾	60 + 40	95	95
0.25	95	— ⁽⁴⁾	65	65
0.26	85	— ⁽⁴⁾	65	65
0.27	80	— ⁽⁴⁾	60	60
0.28	75	— ⁽⁴⁾	55	55
0.30	70	— ⁽⁴⁾	50	50
0.35	50	— ⁽⁴⁾	40	40

(1) For system construction details, see section 8.2 of this Certificate.

(2) 200 mm-deep timber frame.

(3) Fixing for sheathing assumed to be 5.6 fully-penetrating steel ($\lambda = 50 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) fixings per square metre (300 mm centres), with a cross-sectional area of 9.6 mm² (3.5 mm diameter) and wall ties 18 mm² and 3.7 m⁻² ($\lambda = 50 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

(4) Can be achieved with Systems 1, 3 or 4.



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 Water resistance

7.1 Constructions incorporating the product, and built in accordance with the Standards listed in section 4.2, will resist the transfer of precipitation to the inner leaf and satisfy the requirements of the national Building Regulations:

England and Wales — Approved Document C, Section 5, and Volume 2, Section 8

Scotland — Mandatory Standard 3.10, clauses 3.10.1⁽¹⁾⁽²⁾, 3.10.3⁽¹⁾⁽²⁾ and 3.10.5⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet C, section 6.

7.2 In all situations, it is particularly important to ensure during installation that:

- wall ties are installed correctly and are thoroughly clean
- excess mortar is cleaned from the cavity face of the leading leaf and any debris removed from the cavity
- mortar droppings are cleaned from the exposed edges of installed slabs
- insulation boards are properly installed and butt-jointed
- installation is carried out to the highest level on each wall, or the top edge of the insulation is protected by a cavity tray
- at lintel level, a cavity tray, stop ends and weep holes are provided
- cavity battens and/or boards are used during construction to prevent bridging by mortar droppings
- dpc's at ground level do not project into the cavity as they can form a trap for mortar bridging
- raked or recessed mortar joints are avoided in very severe exposure areas.

8 Condensation risk

Surface condensation



8.1 Walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 0.7 W·m⁻²·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.



8.2 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, 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.

Interstitial condensation



8.3 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, and the relevant guidance.

8.4 For the purposes of assessing the risk of interstitial condensation, the insulation core has a vapour resistivity value exceeding $52 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$, with a resistance value of $111 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$ for the foil-facing.

8.5 If the product is to be used in 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.

9 Behaviour in relation to fire



9.1 The product has a reaction to fire classification of Class E to BS EN 13501-1 : 2007.

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

England and Wales — Approved Document B, Volume 1, Diagram 13, and Volume 2, Diagram 34

Northern Ireland — Technical Booklet E, Diagram 4.5.



9.3 For buildings subject to the Building Standards in Scotland, cavity barriers are not required to limit the area of a cavity or at junctions with other wall cavities. Cavity barriers are required around openings, penetrations and junctions with roof or floor cavities, with reference to clauses 2.4.1⁽¹⁾⁽²⁾, 2.4.2⁽¹⁾⁽²⁾, 2.6.5⁽¹⁾ and 2.6.6⁽²⁾.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

9.4 For constructions not covered by sections 9.2 and 9.3, cavity barriers must be provided to comply with:

England and Wales — Approved Document B, Volume 1, Section 6, and Volume 2, Section 9

Scotland — Mandatory Standard 2.4, clauses 2.4.1⁽¹⁾⁽²⁾, 2.4.2⁽¹⁾⁽²⁾, 2.4.7⁽¹⁾ and 2.4.9⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet E, Paragraphs 4.36 to 4.39.

9.5 Cavity walls should always have a cavity closer at the top of the cavity and around openings. The material must not be taken past fire stops. If fire does penetrate into an unventilated cavity, the amount of air present will be insufficient to support combustion and flame spread will be minimal.

10 Proximity of flues and appliances

When installing the product in close proximity to certain flue pipes and/or heat-producing appliances, the following provisions to the national Building Regulations are acceptable:

England and Wales — Approved Document J, sections 1 to 4
Scotland — Mandatory Standard 3.19, clauses 3.19.1⁽¹⁾⁽²⁾ to 3.19.9⁽¹⁾⁽²⁾

- (1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet L, section 2.

11 De-rating of electrical cables

As with other insulation products, it may be necessary in some cases to de-rate electrical cables buried in insulation. BS 7671 : 2008 suggests that, where wiring is completely surrounded by insulation, it may need to be de-rated to as low as half its free air current carrying capacity. Guidance must be sought from a qualified electrician.

12 Infestation

Use of the product does not in itself promote infestation. The creation of voids within the structure (for example, 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.

13 Maintenance

As the product is confined behind the wall lining and has suitable durability (see section 13), maintenance is not required.

14 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.

Installation

15 General

15.1 Installation of Ecotherm Eco-Versal Framing for Walls must be in accordance with the relevant clauses of BE EN 1995-1-1 : 2004 and BS EN 1993-1-2 : 2005 and their associated UK National Annexes and the Certificate holder's instructions.

15.2 The boards are light to handle, and cut easily but care must be taken to prevent damage, particularly at edges.

15.3 Damaged boards should not be used; small areas of damaged faces may be repaired with self-adhesive aluminium foil tape.

15.4 Where a plasterboard lining is used, it should be of the vapour check type, or a separate polythene vapour control layer can be introduced. A vapour control layer may not be required in all applications: reference should be made to BS 5250 : 2011.

15.5 The insulation may be installed between or over the studs of steel-frame constructions. Guidance should be sought from the Certificate holder.

15.6 Boards should be tight fitting against the structure. Gaps should be filled with an expanding urethane sealant.

Between studs

15.7 Boards should be fitted so that their edges are flush with the outer faces of the studs and bottom and top plates, and restrained by nailed battens.

Timber-frame sheathing (over stud installation)

15.8 The boards should be fixed to the external surface of the timber-frame structure (outside any OSB or plywood sheathing) and restrained using temporary fixings in the form of large-headed galvanized clout nails, prior to being tied into the brickwork with an appropriate timber-frame wall tie. The boards must be tightly butted and any requirements of the timber-frame manufacturer met.

15.9 The outer leaf of brickwork may be constructed in the conventional manner using appropriate wall ties to restrain the two wall skins together. The ties should be inserted whilst constructing the outer leaf, ensuring a slight offset is achieved, sloping the tie downwards towards the outer leaf.

Steel frame

15.10 Similarly fixed as for timber-frame, the boards should be restrained to the outside of the steel-frame construction, ensuring vertical board joints coincide with a vertical member. Fixings should be in accordance with the steel-frame manufacturer's recommendations.

15.11 Advice should also be sought from the appropriate steel-frame manufacturer for recommendations for suitable wall tie specifications.

Technical Investigations

The following is a summary of the technical investigations carried out on Ecotherm Eco-Versal Framing for Walls.

16 Investigations

An examination was made of data relating to:

- dimensional accuracy
- bending strength
- dimensional stability with temperature
- thermal conductivity (initial and aged)
- fire resistance
- U value calculations
- water vapour resistance/resistivity
- effect of wall ties.

17 Other investigations

17.1 An assessment of the thermal and hygrothermal properties of the two types of application of the product was made, including condensation risk calculations.

17.2 Assessments were made of the product's structural adequacy, durability and behaviour in fire.

17.3 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

- BRE Report (BR 262 : 2002) *Thermal insulation : avoiding risks*
- BRE Report (BR 443 : 2006) *Conventions for U-value calculations*
- BS 5250 : 2011 *Code of practice for control of condensation in buildings*
- BS 5268-2 : 2002 *Structural use of timber — Code of practice for permissible stress design, materials and workmanship*
- BS 7671 : 2008 *Requirements for electrical installations. IEE Wiring Regulations. Seventeenth Edition*
- 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 845-1 : 2013 + A1 : 2016 *Specification for ancillary components for masonry — Wall ties, tension straps, hangers and brackets*
- BS EN 1993-1-2 : 2005 *Eurocode 3 — Design of steel structures — General rules — Structural fire design*
- BS EN 1995-1-1 : 2004 + A2 : 2014 *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 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 — Classification using test data from reaction to fire tests*
- BS EN ISO 6946 : 1997 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*
- BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

18 Conditions

18.1 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 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.

18.2 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.

18.3 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.

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

18.5 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.

18.6 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.