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Agrément Certificate

20/5846

Product Sheet 2

ICYNENE H₂ FOAM LITE E (LD-C-50 v8E) INSULATION

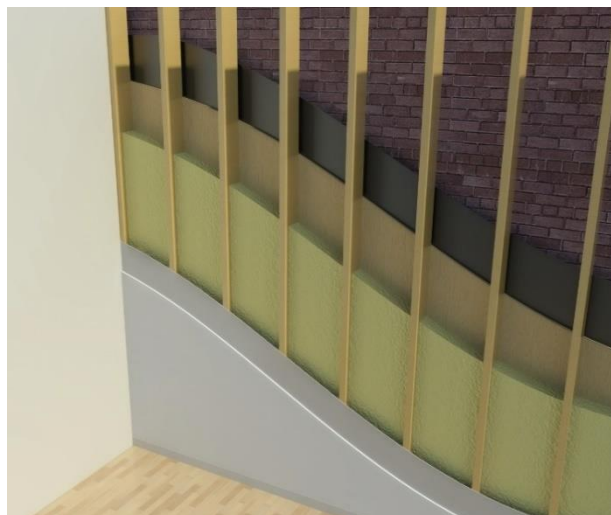
H₂ FOAM LITE E (LD-C-50 v8E) FOR EXTERNAL WALLS

This Agrément Certificate Product Sheet ⁽¹⁾ relates to H₂ Foam Lite E (LD-C-50 v8E) For External Walls, a spray-applied in-situ thermal insulation for external walls, in new or existing domestic buildings. The product may be installed between the inner leaf studs of conventional timber-frame cavity walls with a masonry outer skin or applied to the internal surface of external solid masonry walls in combination with a dry-lining system.

(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 $0.039 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ (see section 6).

Condensation risk — the product can contribute to limiting the risk of surface condensation. The risk of interstitial condensation will depend on the wall construction and should, therefore, be assessed for each project. A vapour control layer (VCL) should also be used (see section 7).

Behaviour in relation to fire — the product has a Class E reaction to fire to EN 13501-1 : 2007 and its use is restricted in some cases (see section 8)

Durability — the product is durable, rot proof and sufficiently stable to remain effective as an insulation for the life of the building in which it is installed (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: 16 February 2021

Hardy Giesler
Chief Executive Officer

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 MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

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, H₂ Foam Lite E (LD-C-50 v8E) For External 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:	B4(1)	External fire spread
Comment:		The product is restricted by this Requirement. See sections 8.1 and 8.2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See sections 7.1 and 7.4 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The product can contribute to satisfying this Requirement. See sections 6.1 and 6.2 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The product is restricted under this Regulation. See sections 8.1 and 8.2 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; however, compensating fabric/services measures may be required. See sections 6.1 and 6.2 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 <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾ , 3.15.4 ⁽¹⁾ , 3.15.5 ⁽¹⁾ and 3.15.7 ⁽¹⁾ ; however, compensating fabric/services measures may be required. See sections 7.1 and 7.5 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Comment:		The product can contribute to satisfying this Standard, with reference to clauses, or parts of, 6.1.1 ⁽¹⁾ , 6.1.3 ⁽¹⁾ , 6.1.4 ⁽¹⁾ and 6.1.6 ⁽¹⁾ . See sections 6.1 and 6.2 of this Certificate.
Standard:	6.2	Building insulation envelope
Comment:		The product can contribute to satisfying this Standard, with reference to clauses, or parts of, 6.2.1 ⁽¹⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽¹⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾ , 6.2.9 ⁽¹⁾ , 6.2.10 ⁽¹⁾ , 6.2.11 ⁽¹⁾ and 6.2.13 ⁽¹⁾ . See sections 6.1 and 6.2 of this Certificate.

Standard: Comment:	7.1(a)(b) Statement of sustainability The product can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting at least a bronze level of sustainability as defined in this Standard. See section 6.1 of this Certificate.
Regulation: Comment:	12 Building standards applicable to conversions 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⁾ and Schedule 6 ⁽¹⁾ .
	(1) Technical Handbook (Domestic).



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

Regulation: Comment:	23 Fitness of materials and workmanship The product is acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation: Comment:	29 Condensation The product can contribute to satisfying this Regulation. See section 7.1 of this Certificate.
Regulation: Regulation: Comment:	39(a)(i) Conservation measures 40(2) Target carbon dioxide emission rate The product can contribute to satisfying these Regulations. See sections 6.1 and 6.2 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*, and **14** *Precautions* of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, H₂ Foam Lite E (LD-C-50 v8E) For External Walls, 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 6.2 *External timber framed walls*.

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 14315-1 : 2013.

Technical Specification

1 Description

1.1 H₂ Foam Lite E (LD-C-50 v8E) For External Walls is an in-situ formed spray-applied, open-cell, water-blown, low-density semi-rigid polyurethane foam insulation.

1.2 The product is prepared from two liquid components, isocyanate and resin, and is yellow in colour.

1.3 The product is applied with a fixed ratio (1:1) volumetric displacement pump in layers, until the final design thickness (not exceeding 200 mm) is achieved.

1.4 Ancillary items used with this product, but outside the scope of this Certificate, include:

- vapour control layer (VCL)
- fire-resistant lining board
- timber studs
- spray equipment.

2 Manufacture

2.1 The two components of the product are manufactured in a conventional batch blending process and mixed on site via a spray-gun.

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 system of Icynene has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by The Registrar Company (TRC) (Certificate TRC 00714).

3 Delivery and site handling

3.1 The isocyanate and resin components are delivered to site in drums (of up to 250 kg capacity) bearing the product name, batch number and BBA Certificate number.

3.2 Drums should be stored in a well-ventilated area, between 15 and 32°C, and away from possible ignition sources. The drums must be protected from frost.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the product under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheets.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on H₂ Foam Lite E (LD-C-50 v8E) For External Walls.

Design Considerations

4 Use

4.1 H₂ Foam Lite E (LD-C-50 v8E) For External Walls is satisfactory for use in reducing the thermal transmittance (U value) of external walls of new and existing domestic buildings.

4.2 The product can be used as insulation:

- between the inner leaf studs of conventional timber-frame cavity walls with a clear cavity and a masonry outer skin, or
- applied to the internal surface of solid masonry walls in between timber battens, and finished with a fire-resistant lining board, as a dry-lining system.

4.3 In all applications, the product must be covered by a fire-resistant lining board manufactured in accordance with the requirements of BS EN 520 : 2004 (see section 8.3).

4.4 Masonry and timber framed wall constructions must be designed and constructed in accordance with the relevant recommendations of:

- BS 5250 : 2011
- BS 8000-3 : 2001
- BS EN 351-1 : 2007
- BS EN 1995-1-1 : 2004 and its UK National Annex
- BS EN 1996-1-1 : 2005 and its UK National Annex
- BS EN 1996-1-2 : 2005 and its UK National Annex
- BS EN 1996-2 : 2006 and its UK National Annex
- BS EN 1996-3 : 2006 and its UK National Annex

4.5 It is essential that construction elements are designed and constructed to incorporate the normal precautions against moisture ingress before the application of the product.

4.6 Existing constructions must be in a good state of repair, with no evidence of rain penetration or damp. Defects must be made good prior to installation.

4.7 In addition, if present, mould, or fungal growth must be treated. The Certificate holder can advise on suitable treatments.

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

4.9 The product must not come into direct contact with flue pipes, chimneys, or other heat-producing appliances (see section 9).

4.10 The product forms a strong bond with clean, dry substrates. This should be taken into account when specifying the product or anticipating future alterations.

4.11 To satisfy the requirements of NHBC, a VCL of a type specified in their Standards must be applied behind the fire-resistant lining in all wall applications.

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

External solid masonry walls (insulated dry lining)

4.13 Insulated dry lining systems require careful detailing during installation 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. New work must be designed to accommodate the thickness of the dry lining, particularly at reveals, heads and sills, and in relation to ceiling height. Where the dimensions of fixtures are critical (eg bathrooms), these should be checked before installation.

5 Practicability of installation

The product should only be installed by installers who have been trained and approved by the Certificate holder (see section 13).

6 Thermal performance



6.1 Calculations of the thermal transmittance (U value) of a wall should be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2006, using the declared thermal conductivity (λ_D) of $0.039 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

6.2 The U value of a completed wall will depend on the insulation thickness, the insulating value of the wall components and the internal finish. Example constructions are given in Tables 1 and 2. For improved energy or carbon savings, designers should consider appropriate fabric and/or services measures.

Table 1 U values — external masonry wall with timber frame inner skin⁽¹⁾

Design U value ($\text{W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$)	H ₂ Foam Lite E (LD-C-50 v8E) thickness (mm)
0.18	—
0.19	—
0.25	140 mm between studs + 25 mm between battens
0.26	140 mm between studs + 20 mm between battens
0.27	140 mm between studs + 15 mm between battens
0.28	140 mm between studs + 10 mm between battens
0.30	130 mm between studs
0.35	105 mm between studs

(1) Wall construction — 102.5 mm thick external brickwork ($\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); 50 mm clear cavity; breather membrane; 11 mm OSB sheathing board ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); 140 mm thick timber frame bridging at 600 mm centres (15%) with variable thickness of insulation ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); additional 47 mm timber battens where required ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ at 11.8 %, remaining thickness is air cavity); VCL; and 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

Table 2 U values — external masonry wall with internal dry lining⁽¹⁾

Design U value ($\text{W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$)	H ₂ Foam Lite E (LD-C-50 v8E) thickness (mm)
0.18	—
0.19	—
0.25	170 mm between studs
0.26	160 mm between studs
0.27	155 mm between studs
0.28	150 mm between studs
0.30	135 mm between studs
0.35	115 mm between studs

(1) Wall construction — 215 mm thick external brickwork ($\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ at 82.7%), bridged with mortar ($\lambda = 0.94 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ at 17.3%); 13 mm dense plaster ($\lambda = 0.57 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); variable thickness of insulation between same size timber studs ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) at 600 mm centres (11.8%); VCL; and 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

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 limit the risk of interstitial condensation adequately when they are designed and constructed in accordance with the relevant parts of BS 5250 : 2011. Further guidance may be obtained from BRE Report BR 262 : 2002. A VCL must be used.

7.2 For the purposes of assessing the risk of interstitial condensation, a water vapour resistance factor (μ) of 3.3 should be taken for the product.

External solid masonry walls (insulated dry lining)

7.3 The risk of seasonal condensation on the VCL must be considered for solid masonry walls orientated from ESE through south to WSW, in accordance with section 3.10 of BRE Report BR 262 : 2002. An assessment of the risk of interstitial condensation should be carried out in accordance with BS EN ISO 13788 : 2012. If a risk of condensation has been identified, then an assessment should also be carried out to BS EN 15026 : 2007.

Surface condensation



7.4 Walls will limit the risk of surface condensation adequately where 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 other elements are designed in accordance with the guidance referred to in section 6.3 of this Certificate.



7.5 For buildings in Scotland, constructions will be acceptable where the thermal transmittance (U value) of the wall does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the walls are designed and constructed in accordance with the relevant parts of BS 5250 : 2011, Annexes D and 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 product is classified as Class E reaction to fire to EN 13501-1 : 2007⁽¹⁾.

(1) Centrum stavebního inženýrství a.s., report ref PK-18-060, issue number 1/2, 13 April 2018. Copies can be obtained from the Certificate holder.

8.2 In England and Wales, the product is unrestricted in terms of proximity to a boundary and may be used in buildings with no storey more than 18 metres above the ground.

8.3 Once installed, the product must be contained by a fire-resistant lining board manufactured in accordance with BS EN 520 : 2004, with all joints fully sealed and supported by timber studs or battens.

8.4 Designers should refer to the relevant national Building Regulations and guidance for alternative approaches and detailed conditions of use, particularly in respect of requirements for cavity closers and barriers, fire stopping of service penetrations and combustibility limitations for other materials and components used in the overall wall construction.

9 Proximity of flues and appliances

Detailed guidance can be found in the documents supporting the national Building Regulations for the provisions that are applicable when the system is installed in close proximity to certain flue pipes and/or heat-producing appliances.

10 Materials in contact — wiring installations

10.1 The product is compatible with PVC materials in contact.

10.2 De-rating of electric cables should be considered in areas where the product restricts the flow of air. The use of suitable conduit or trunking is recommended.

10.3 Where recessed lighting is used, provision should be made to prevent the fitting overheating, or ventilated fittings must be used.

11 Maintenance

Once installed, the product does not require any regular maintenance and has suitable durability (see section 12), provided the waterproof layers are maintained in a weathertight condition.

12 Durability



The product is durable, rot proof and sufficiently stable to remain effective as an insulation for the life of the building.

Installation

13 Approved installers

The Certificate holder operates an Approved Installer Scheme for this product, under which the installers are approved, registered and regularly reviewed by the Certificate holder to demonstrate that they are competent to carry out installation of the product in accordance with their instructions and this Certificate. Details of Approved Installers are available from the Certificate holder.

14 Precautions

14.1 To comply with the requirements of Section 4 of the *Health and Safety at Work Act 1974*, it is essential that there is an exchange of information between the client and the installer before spray operations commence on any site. Existing health hazards and those brought into the premises by the installer should be discussed, and measures agreed to deal with them effectively.

14.2 The process for the installation of the product may produce a build-up of harmful vapours. The requirements of the *Icynene Installer Training Manual* and the product safety data sheets issued to installers, must be followed at all times.

14.3 The building should be well ventilated during the spraying process as some vapours may sink to lower parts of the building.

14.4 If vapour levels need to be measured, methods should be those recommended by the Health and Safety Executive. Certain applications (eg confined spaces) require the use of extractor fans as recommended by the Certificate holder.

14.5 Whilst spraying, care should be taken to minimise the degree of 'overspray', a fine mist of particles that can travel considerable distances and adhere strongly to surfaces it lands on.

14.6 To minimise the hazards of spraying, the following points should be observed:

- the installer must wear appropriate protective gear, including a full-face NIOSH-approved fresh air respirator, protective overalls, gloves and boots
- other than the installer, individuals must be kept away from the application area. No unprotected individuals should be in the structure where the application is being conducted
- the spray gun should never be left unattended
- the spray gun should only be pointed at the surface or, when not in use, at the floor
- the product should not be installed if wind is a concern – tarpaulins or other measures should be used to block it
- cleaning the spray gun requires use of a solvent to break down and/or remove the reacted components; therefore, to prevent exposure to the components and the solvent, proper protection should be worn.

15 Procedure

General

15.1 Building elements to be insulated must be assessed for suitability and any necessary repairs carried out. Elements must be weathertight before application of the product. The positioning and access to services should also be considered.

15.2 The product should be stored, handled and applied in accordance with the Certificate holder's instructions and this Certificate.

15.3 The product should be spray-applied to clean and dry substrates and built up in layers, up to a maximum thickness of 200 mm.

15.4 Care must be taken not to apply the product to flue pipes or electrical cables that are not contained within a suitable conduit or trunking.

15.5 After completion, a survey should be performed to check that electrical cables and flues are not obstructed. Corrective measures must be taken to clear any such obstruction.

15.6 If required, once cured, the product is trimmed flat with care using a saw and covered with a fire-resistant lining board.

Timber frame

15.7 The product is sprayed into the cavity formed by the studs and the sheathing board. When cured, if the cavity is fully filled, the excess foam is trimmed flush with the studs, with care, and the lining board installed with a VCL with lapped and sealed joints.

Masonry external walls

15.8 Installation should be in accordance with good dry lining practice and the Certificate holder's literature.

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

15.10 This system may be used on any stable, dry wall capable of taking the fixings for the timber battens.

15.11 Wallpaper, skirting, picture rails, gloss paint and projecting window boards are removed.

15.12 Pre-treated horizontal timber battens of sufficient thickness are mechanically fixed to the wall substrate at maximum 600 mm centres. Vertical battens are then fitted, with additional battens used around openings and to support heavy horizontal items. The product is sprayed into the cavity formed by the battens.

15.13 Alternatively, a free-standing stud wall with pre-treated timber studs of sufficient thickness at maximum 600 mm centres may be positioned a maximum distance of 100 mm from the masonry wall. The product is sprayed into the cavity formed between the studs and the masonry wall and between the studs.

15.14 When cured, if the cavity is fully filled, the excess foam is trimmed flush with the battens/studs, with care, and the lining board installed with a VCL with lapped and sealed joints.

Technical Investigations

16 Tests

Results of tests were assessed, to determine:

- adhesion to timber substrates after heat ageing and water immersion
- thermal conductivity
- density
- corrosion-developing capacity
- water absorption
- release of dangerous substances
- tensile strength
- compressive strength
- dimensional stability
- water vapour permeability.

17 Investigations

17.1 Existing data on durability and properties in relation to fire were evaluated.

17.2 The Certificate holder's training arrangements were evaluated.

17.3 An assessment of the practicability of installation was carried out.

17.4 A calculation was undertaken to confirm the declared thermal conductivity (λ_D).

17.5 A condensation risk analysis was carried out.

17.6 A series of U value calculations was carried out.

17.7 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 + 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 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 520 : 2004 + A1 : 2009 *Gypsum plasterboards — Definitions, requirements and test methods*
- 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 to BS EN 1996-3 : 2006 + A1 : 2014 UK National Annex to *Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*
- BS EN 14315-1 : 2013 *Thermal insulating products for buildings — In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products — Specification for the rigid foam spray system before installation*
- BS EN 15026 : 2007 *Hygrothermal performance of building components and building elements — Assessment of moisture transfer by numerical simulation*
- 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 13788 : 2012 *Hygrothermal performance of building components and building elements — Internal surface temperature to avoid critical surface humidity and interstitial condensation — Calculation methods*
- EN 13501-1 : 2007 + A1 : 2013 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

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 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.

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.