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Agrément Certificate
08/4598
Product Sheet 1

THE ICYNE NE INSULATION SYSTEM

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to The Icynene Insulation System, a spray-applied, low-density open-cell, soft insulation foam for use in timber-frame stud walling, in pitched roofs incorporating timber sarking board, and for internal new and remedial work on masonry walls in combination with a dry-lining system. The product can also be used in suspended timber ground floors where loading is not applied to the product.

AGRÉMENT 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 typical thermal conductivity (λ value) of $0.039 \text{ Wm}^{-1}\text{K}^{-1}$ and can be used to improve the thermal performance of walls, floors and roofs (see section 5).

Condensation risk — the product will contribute to minimising the risk of surface condensation and interstitial condensation driven by convection, but has a low μ value (between 2 and 5) and should be used with a vapour control layer unless an assessment to BS 5250 : 2002 shows that it is not needed (see section 6).

Properties in relation to fire — building elements incorporating the product can be designed to meet the regulatory requirements (see section 7).

Durability — the durability of the product is satisfactory and will give a service life equivalent to the that of the structure in which it is incorporated (see section 11).



The BBA has awarded this Agrément 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

Chris Hunt
Head of Approvals — Physics

Greg Cooper
Chief Executive

Date of First issue: 14 November 2008

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, The Icynene Insulation System, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2000 (as amended) (England and Wales)

Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to elements meeting this Requirement. See sections 6.1 to 6.4 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The product can contribute to a building meeting the Target Emission Rate. See sections 5.2 to 5.6 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
In addition to the contribution which the product can make to meeting relevant requirements, the following should be noted:		
Requirement:	B3(1)	Internal fire spread (structure)
Comment:		The product can be used in suitably designed elements. See sections 7.4, 7.6 and 7.7 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		The product can be used in suitably designed elements. See section 7.8 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The use of the product satisfies the requirements of this Regulation. See sections 10, 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards — construction
Standard:	3.15	Condensation
Comment:		Elements incorporating the product can satisfy this Standard, with reference to the control of interstitial condensation and clauses 3.15.1 ⁽¹⁾ , 3.15.3 ⁽¹⁾ , 3.15.5 ⁽¹⁾ and 3.15.7 ⁽¹⁾ . See sections 6.1 to 6.3 of this Certificate. The product can also contribute to satisfying this Standard, with reference to the control of surface condensation clause 3.15.4 ⁽¹⁾ . See section 6.5 of this Certificate.
Standard:	6.1(a)(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		Walls and roofs incorporating the product can contribute to satisfying these Standards, with reference to clauses 6.1.2 ⁽¹⁾⁽²⁾ , 6.1.3 ⁽¹⁾⁽²⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽¹⁾⁽²⁾ , 6.2.5 ⁽¹⁾⁽²⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾⁽²⁾ , 6.2.8 ⁽²⁾ , 6.2.9 ⁽¹⁾ , 6.2.10 ⁽²⁾ , 6.2.11 ⁽¹⁾⁽²⁾ and 6.2.12 ⁽²⁾ . See sections 5.2 to 5.6 of this Certificate.
Regulation:	12	Building standards — conversions
Comment:		All comments given for this product under Regulation 9, 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).
In addition to the contribution which the product can make to meeting relevant requirements, the following should be noted:		
Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Standard:	2.3	Structural protection
Standard:	2.6	Spread to neighbouring buildings
Comment:		The product can be used in suitably designed elements. See sections 7.4, 7.6 and 7.7 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		The product can be used in suitably designed elements. See section 7.8 of this Certificate.



The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	B3(2)	Suitability of certain materials
Comment:		The product does not normally require maintenance. See section 10 of this Certificate.
Regulation:	C5	Condensation
Comment:		Elements incorporating the product can satisfy this Regulation. See sections 6.1 to 6.3 of this Certificate.
Regulation:	F2(a)(i)	Conservation measures
Regulation:	F3	Target carbon dioxide Emissions Rate
Comment:		The product can contribute to satisfying these Regulations. See sections 5.2 to 5.6 of this Certificate.
In addition to the contribution which the product can make to meeting relevant requirements, the following should be noted:		
Regulation:	E4(1)	Internal fire spread — Structure
Comment:		The product can be used in suitably designed elements. See sections 7.4, 7.6 and 7.7 of this Certificate.
Regulation:	E5(a)(b)	External fire spread
Comment:		The product can be used in suitably designed elements. See section 7.8 of this Certificate.

Construction (Design and Management) Regulations 2007 Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See sections: 2 *Delivery and site handling* (2.3) and 12 *Precautions* (12.1 to 12.6).

Non-regulatory Information

NHBC Standards 2008

NHBC accepts the use of Icynene, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 5.2 *Suspended ground floors*, clause D23, Chapter 7.2 *Pitched roofs*, clauses D10 and D11, and Chapter 8.2 *Wall and ceiling finishes*.

Zurich Building Guarantee Technical Manual 2007

In the opinion of the BBA, Icynene, when installed and used in accordance with this Certificate, satisfies the requirements of the *Zurich Building Guarantee Technical Manual*, Section 3 *Substructure*, Sub-section *Floors*, Section 4 *Superstructure*, Sub-section *Pitched roofs*, and Section 5 *Internal/external works, services & finishes*.

General

Icynene is a spray-applied, low-density, open-cell, soft insulation foam for use in timber-frame stud walling, pitched roofs and suspended timber ground floors, and for internal work on new and existing masonry walls, and is 100% water blown.

The product is to be covered in all situations by suitable internal lining boards. The product is suitable for use in pitched roof situations where timber sarking sheets are in place. The acoustic performance of the product and the use of the product sprayed against roof tile underlays has not been assessed by the BBA and is outside the scope of this Certificate.

The product contributes to the airtightness of the building envelope.

Technical Specification

1 Description

1.1 Icynene⁽¹⁾ is a spray-applied, low-density, (typically 7 kgm⁻³) open-cell, soft insulation foam.

1.2 The foam is prepared from two liquid components, Base Seal⁽¹⁾ (isocyanate) and Gold Seal⁽¹⁾ (polyol), which are mixed within the nozzle of the spray gun during the application process.

1.3 Quality control arrangements on site include checks for density and appearance.

(1) Icynene, Base Seal and Gold Seal are registered trademarks of Icynene Inc.

2 Delivery and site handling

2.1 The two components, Base Seal and Gold Seal, are delivered to site in drums of up to 250 kg net capacity bearing the product name, batch number and the BBA identification mark incorporating BBA Certificate number.

2.2 Drums should be stored in a well-ventilated area, away from possible ignition sources. The drums must be protected from frost and conditioned at temperatures of between 15°C and 32°C prior to use.

2.3 The isocyanate and polyol are classified as 'harmful' and 'irritant' respectively under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002* (CHIP3) and the packaging bears the appropriate hazard warning labels. When fully cured, Icynene does not constitute a hazard, under normal conditions.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on The Icynene Insulation System⁽¹⁾.

(1) The Icynene Insulation System is a registered trademark of Icynene Inc.

Design Considerations

3 Use

3.1 Icynene is satisfactory for use in reducing the U value (thermal transmittance) and contributing to the airtightness of walls, roofs and floors of dwellings or buildings of similar occupancy, type and condition when used in accordance with the relevant requirement of BS 5250 : 2002 and:

- between the studs of conventional timber-frame wall constructions

- for internal new and remedial work on masonry walls utilising timber battens and dry-lining boards
- between timber rafters in pitched roofs, in situations where the rafters have been covered by timber sarking sheet
- between joists in suspended timber ground floors provided these situations are non-loadbearing.

3.2 In all situations the product must be covered by suitable internal lining boards.

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

3.4 New constructions⁽¹⁾ must be designed in accordance with the relevant requirements of BS 5268-6.1 : 1996, BS 5268-3 : 1998, BS 5268-6.2 : 2001, BS 8103-3 : 1996 and BS 5250 : 2002.

(1) Further information is given in BRE report No (BR 262 : 2002) *Thermal insulation : avoiding the risks*.

3.5 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 installing the product.

3.6 The product forms a sound bond with clean and dry substrates. This should be taken into account when specifying the product or anticipating future alterations.

4 Practicability of installation


Installation must be carried out by the Certificate holder's own installers or agents, whose operatives have received the appropriate training (see also section 12).

5 Thermal performance

General

5.1 Calculations of the thermal transmittance (U value) of specific constructions should be carried out in accordance with BS EN ISO 6946 : 2007 and BRE⁽¹⁾ report (BR 443 : 2006) *Conventions for U-value calculations*, using the 'typical' thermal conductivity (λ value) for the product of $0.039 \text{ Wm}^{-1}\text{K}^{-1}$.

(1) Building Research Establishment.

 5.2 The U value of a construction will depend on the materials used and the design. Example U values for pitched roofs, walls and floors are given in Tables 1 to 3.

5.3 Walls, floors and roofs incorporating the appropriate product thickness can achieve, or contribute to achieving the design U values shown in Table 4.

5.4 Where a proposed wall, floor or roof U value is not better than the relevant 'notional' value in Table 4, additional energy saving measures will be required in the building envelope and/or services to achieve the required overall carbon dioxide emissions rate reduction of about 20% in dwellings (18% to 25% in Scotland) and 23% to 28% in buildings other than dwellings.

5.5 The product can contribute to maintaining continuity of thermal insulation at junctions between elements and around openings. Guidance in this respect, and on limiting heat loss by air infiltration, can be found in:

England and Wales — *Limiting thermal bridging and air leakage : Robust constructions details for dwellings and similar buildings* TSO 2002 or BRE Information Paper IP 01/06 *Assessing the effects of thermal bridging at junctions and around openings*.

Scotland — Accredited Construction Details (Scotland)

Northern Ireland — Accredited Construction Details (version 1.0).

5.6 Compliance with the guidance referred to in section 5.5 will allow the use of the default psi values from Table 3 of BRE Information Paper IP/06 and Table K1 of *The Government's Standard Assessment Procedure for Energy Rating of Dwellings* (SAP 2005), in Target Emission Rate calculations to SAP 2005 or the Simplified Building Energy Model (SBEM).

Table 1 Typical U values ($\text{Wm}^{-2}\text{K}^{-1}$) — pitched roofs

Thickness of insulation (mm)	U value ($\text{Wm}^{-2}\text{K}^{-1}$)
100	0.39
150	0.28
200	0.21

Note:

Assuming construction of roof (external to internal):
OSB — 18 mm
Foam insulation (91%)/timber rafters (9%)
Plasterboard — 12.5 mm

Table 2 Typical U values ($\text{Wm}^{-2}\text{K}^{-1}$) — walls

Thickness of insulation (mm)	U value ($\text{Wm}^{-2}\text{K}^{-1}$)
89	0.41
115	0.34
140	0.29
200	0.22

Note:

Assuming construction of wall (external to internal):
Outer leaf brick — 102 mm
Unventilated air cavity — 50 mm
OSB — 15 mm
Foam insulation (85%)/timber framing (15%)
Plasterboard — 12.5 mm

Table 3 Typical U values at 150 mm insulation thickness ($Wm^{-2}K^{-1}$) – suspended timber floors

P/A (perimeter/area)	U value ($Wm^{-2}K^{-1}$)
0.2	0.17
0.4	0.20
0.6	0.22
0.8	0.23
1.0	0.23

Note:

Assuming construction of floor (external to internal):
 Foam insulation (89%)/timber joists (11%) – 150 mm
 Chipboard – 22 mm

Table 4 Design U values ($Wm^{-2}K^{-1}$)

Wall	Floor	Roof	Comment
England and Wales and Northern Ireland			
0.35	0.25	0.25	required for 'notional' buildings in SAP and SBEM calculations, Table 2 Approved Document L1A and Table 4 Approved Document L2A, Table 2.2 Technical Booklet F1 and Table 2.4 Technical Booklet F2
0.70	0.70	0.35	limit for an individual element, Table 2 Approved Document L1A Approved Document L1A and Table 4 Approved Document L2A, Table 2.2 Technical Booklet F1 and Table 2.4 Technical Booklet F2
Scotland			
0.20	0.20	0.16	simplified approach, 'notional' dwellings using fuel package 6 (clause 6.1.6) ⁽¹⁾
0.25	0.20	0.16	simplified approach, 'notional' dwellings using fuel package 3 (clause 6.1.6) ⁽¹⁾
0.25	0.22	0.16	simplified approach, 'notional' dwellings using fuel packages 1, 2, 4 and 5 (clause 6.1.6) ⁽¹⁾
0.30	0.25	0.20	limit average (clause 6.2.1) ⁽¹⁾⁽²⁾
0.70	0.70	0.35	limit for an individual element (clause 6.2.1) ⁽¹⁾⁽²⁾
0.30	0.25	0.16	required for 'notional' buildings in SBEM calculations, (clause 6.1.3) ⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

6 Condensation risk

Interstitial condensation



6.1 When tested, the product had a μ value between 2 and 5. A vapour control layer is required on the warm side of the insulation unless an assessment to BS 5250 : 2002 using the least favourable μ value indicates that it is not necessary for a particular construction (see section 14.9).

6.2 Care should be taken to provide adequate ventilation, particularly in rooms expected to experience high humidities, and to ensure the integrity of vapour control layers (where installed) and linings, against vapour ingress.

6.3 For unventilated (non-habitable) roof spaces with insulation in the pitch of the roof it is essential that the movement of moisture from the occupied space below by diffusion and by convection is restricted, as follows:

- providing the means to remove it at source
- providing a well-sealed ceiling in accordance with BS 5250 : 2002
- installing an effective sealed vapour control layer
- covering of water tanks in the loft space.

Surface condensation



6.4 Walls, floors and roofs will adequately limit the risk of surface condensation where the thermal transmittance (U value) does not exceed $0.7 Wm^{-2}K^{-1}$, for walls and floors and $0.35 Wm^{-2}K^{-1}$ for roofs at any point, and openings and junctions with other elements are designed in accordance with the relevant guidance referred to in section 5.5.



6.5 Walls, floors and roofs will adequately limit the risk of surface condensation where the thermal transmittance (U value) does not exceed $1.2 Wm^{-2}K^{-1}$ at any point and design is in accordance with the relevant requirements of BS 5250 : 2002, Section 8. Openings and junctions with other elements designed in accordance with the relevant guidance referred to in section 5.5 of this Certificate are acceptable.

7 Properties in relation to fire

General

7.1 The product is combustible and must be protected from naked flames and other ignition sources during and after installation.

7.2 The product achieved a rating of B-s1, d0 when tested to BS EN 13823 : 2002 in a construction consisting of timber boxes 100 mm deep, filled with spray-applied Icynene foam and faced with 12 mm thick, gypsum plasterboard class A2 and density $800 \pm 100 \text{ kgm}^{-3}$.

7.3 Once installed, the product must be contained by a suitable lining boards, eg 12.5 mm plasterboard, with joints fully sealed and supported by rafters or studs. Therefore, it will not contribute to the development stages of a fire or present a smoke or toxic hazard until the lining is compromised.

7.4 Care must be taken to ensure continuity of fire resistance at junctions with fire-resisting elements, in accordance with the relevant provisions of the national Building Regulations.

7.5 Elements must incorporate cavity barriers at edges, around openings, at junctions with fire-resisting elements and in extensive cavities in accordance with the relevant provisions of the national Building Regulations. The design and installation of cavity barriers must take into account any anticipated differential movement.

Walls

7.6 The product can be added to the void between studwork, or used as a substitute for glass mineral wool or combustible insulation material, in any loadbearing, timber-framed inner leaf to a double leaf wall system providing that:

- the outer leaf is masonry, and
- the existing inner leaf system has been shown to satisfy the loadbearing capacity performance criterion of BS 476-21 : 1987 or BS EN 1365-1 : 1999 for the required fire resistance period.

7.7 The suitability of constructions other than those described in section 7.6 should be demonstrated by an appropriate test or assessment.

Roofs

7.8 The use of the product in a tiled pitched roof will not affect it's external rating when evaluated by assessment or test to BS 476-3 : 2004.

7.9 The product must not be applied over junctions between roofs and walls required to provide a minimum period of fire resistance.

8 Proximity of flues and appliances

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

England and Wales — Approved Document J

Scotland — Mandatory Standard 3.19

Northern Ireland — Technical Booklet L.

8.2 The product must not be installed within 50 mm of heat emitting devices, where the temperature is in excess of 93°C.

9 Materials in contact — wiring installations

9.1 The product is compatible with materials in contact.

9.2 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.

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

10 Maintenance



As the product is confined within a roof, floor or wall structure and, has suitable durability (see section 11), maintenance is not required.

11 Durability



The durability of the product is satisfactory and will have a life equivalent to that of the structure in which it is incorporated.

Installation

12 Approved installer

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 this Certificate. Details of Approved Installers are available from the Certificate holder. Approved Installers are responsible for each installation of the product that they undertake.

13 Precautions

13.1 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 at the premises and those likely to be brought into the client's environment by the Certificate holder should be discussed and measures agreed to deal with them effectively.

13.2 The process for the installation of The Icynene Insulation System may produce a build-up of harmful vapours. Applicators must wear full personal protection equipment when working with the product, including full-face fresh-air supplied respirators, protective clothing and gloves. Other trades and personnel must be kept at least four metres away from the applicator while spraying is taking place. The requirements of the Icynene Installer Training Manual must be followed at all times.

13.3 Vapours given off by certain components of the system, eg 4,4' diphenylmethane diisocyanate (MDI), are generally heavier than air and will tend to move to lower parts of the dwelling. These parts should be ventilated by opening windows and doors to prevent the build-up of toxic vapours.

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

13.5 Care should be taken to minimise the degree of overspray generated whilst spraying. This is in the form of a fine mist of polyisocyanate particles that can travel considerable distances and will adhere strongly to surfaces they land on.

13.6 To prevent the product from entering the occupied space, during installation in the loft area, the loft hatch/cover must be kept closed during the spraying process. Protective covers must be placed over water tanks to prevent contamination during application, and should not be removed until sufficient time has elapsed for potentially harmful vapours to be ventilated from the roof space.

14 Procedure

General

14.1 Building elements to be insulated must be assessed for suitability and any necessary repairs carried out. The positioning and access to services should also be considered.

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

14.3 The product should be spray applied to clean and dry substrates and built up in layers of up to 300 mm in thickness.

14.4 The product contains no organic blowing agents. The polyol component contains water which vaporises due to the exothermic reaction to create the cell structure. The resulting solid foam is fully-reacted (cured) in seconds and contains no appreciable residual water.

14.5 Once cured, the product is trimmed flat using a saw and covered with lining board.

Timber-frame walls

14.6 The product is sprayed into the cavity formed by the studs and the sheathing board. When cured, the excess foam is trimmed flush with the studs and the lining board installed.

Masonry walls

14.7 Timber battens should be installed on the masonry walls at typically 600 mm centres and the product sprayed into the cavity formed by the battens and the wall. When cured, the excess foam is trimmed flush with the battens and the lining board installed.

14.8 The product is sprayed into the cavity formed by the rafters and the sheathing board. When cured, the excess foam is trimmed flush with the studs and the lining board installed.

Pitched roof constructions

14.9 To satisfy the requirements of *NHBC Standards* and the *Zurich Building Guarantee Technical Manual*, a vapour control layer must be installed behind the plasterboard lining.

14.10 Where there is no provision made for ventilation of the space, care should be taken to ensure that ingress of moisture vapour from the dwelling space below is restricted (see also section 6.3).

Suspended timber ground floors

14.11 A barrier (such as thin plywood or a vapour permeable membrane) must be fixed to the underside of the joists to contain the foam. The product is then sprayed from above into the cavity formed by the barrier and the joists. When cured, the excess foam is trimmed flush with the joists and the flooring board installed.

14.12 An air gap of at least 150 mm must be left between the joists and the ground to allow for sub-floor ventilation.

15 Tests

Tests were carried out by the BBA to determine:

- adhesion to timber substrate after heat ageing and water immersion
- density
- dimensional stability
- water vapour resistivity
- thermal conductivity.

16 Investigations

16.1 An examination was made of independent data relating to:

- thermal conductivity
- density
- fire properties
- dimensional stability.

16.2 A visit was made to a site in progress to assess the methods of application and the material's behaviour in use.

16.3 A theoretical analysis of the hygrothermal behaviour of various constructions incorporating the product was carried out.

16.4 An opinion was sought from a UKAS-accredited fire authority concerning the fire resistance of the product when used between studs in a conventional timber-frame construction.

16.5 The manufacturing process and quality control procedures were examined.

Bibliography

- BS 476-3 : 2004 *Fire tests on building materials and structures — Classification and method of test for external fire exposure to roofs*
- BS 476-21 : 1987 *Fire tests on building materials and structures — Methods for determination of the fire resistance of loadbearing elements of construction*
- BS 476-22 : 1987 *Fire tests on building materials and structures — Methods for determination of the fire resistance of non-loadbearing elements of construction*
- BS 5250 : 2002 *Code of practice for control of condensation in buildings*
- BS 5268-3 : 1998 *Structural use of timber — Code of practice for trussed rafter roofs*
- BS 5268-6.1 : 1996 *Structural use of timber — Code of practice for timber frame walls — Dwellings not exceeding four storeys*
- BS 5268-6.2 : 2001 *Structural use of timber — Code of practice for timber frame walls — Buildings other than dwellings not exceeding four storeys*
- BS 8103-3 : 1996 *Structural design of low-rise buildings — Code of practice for timber floors and roofs for housing*
- BS EN 1365-1 : 1999 *Fire resistance tests for loadbearing elements — Walls*
- BS EN 13823 : 2002 *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*
- BS EN 13501-1 : 2007 *Fire classification of construction products and building elements. Classification using test data from reaction to fire tests*
- BS EN ISO 6946 : 2007 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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 References in this Certificate to any Act of Parliament, Statutory Instrument, Directive or Regulation of the European Union, British, European or International Standard, Code of Practice, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

17.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date 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. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.

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