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Agrément Certificate

23/6845

Product Sheet 2 Issue 1

THERMOFOAM SUCRASEAL 0.5 INSULATION

THERMOFOAM SUCRASEAL 0.5 FOR EXTERNAL WALLS

This Agrément Certificate Product Sheet⁽¹⁾ relates to ThermoFoam Sucraseal 0.5 for External Walls, an in-situ spray-applied thermal insulation for use in external walls of new or existing domestic buildings. It is 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'.

The assessment includes

Product factors:

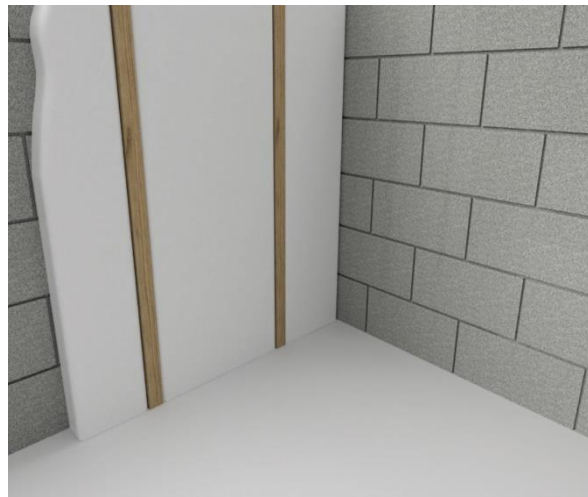
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

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 issue: 6 April 2023

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 3537).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

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

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that ThermoFoam Sucraseal 0.5 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 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 2 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		The product is restricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The product can contribute to satisfying this Requirement; However, compensating fabric measures may be required. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
Regulation:	25B	Nearly zero-energy requirements for new buildings
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)
Regulation:	26C	Target primary energy rates for new buildings (applicable to England only)
Regulation:	26C	Minimum energy efficiency rating (applicable to Wales only)
Comment:		The product can contribute to satisfying these Regulations; however, compensating fabric/services measures may be required. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.4	Cavities
Comment:		Use of the product is restricted by this Standard, with reference to clauses 2.4.2 ⁽¹⁾ and 2.4.4 ⁽¹⁾ . See section 2 of this Certificate.

Standard:	2.6	Spread to neighbouring buildings
Comment:		The product is restricted by this Standard in some cases, with reference to clause 2.6.5 ⁽¹⁾ . See section 2 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾ , 3.15.4 ⁽¹⁾ and 3.15.5 ⁽¹⁾ . See section 3 of this Certificate.
Standard:	6.1(b)(c) (d)	Energy demand and carbon dioxide emissions
Comment:		The product can contribute to satisfying this Standard, with reference to clause 6.1.1 ⁽¹⁾ , however, compensating fabric/services measures may be required. See section 6 of this Certificate.
Standard:	6.2	Building insulation envelope
Comment:		The product can contribute to satisfying this Standard, with reference to clauses, 6.2.1 ⁽¹⁾ , 6.2.3 ⁽¹⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾ , 6.2.8 ⁽¹⁾ , 6.2.9 ⁽¹⁾ , 6.2.10 ⁽¹⁾ , 6.2.11 ⁽¹⁾ and 6.2.12 ⁽¹⁾ ; however, compensating fabric measures may be required. See section 6 of this Certificate.
Standard:	7.1(a)	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 at least 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⁾ , 7.1.6 ⁽¹⁾ and 7.1.7 ⁽¹⁾ . See section 6 of this Certificate.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments in relation to the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾ and Schedule 6 ⁽¹⁾ .

(1) Technical Handbook (Domestic).



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

Regulation:	23(1)(a)	Fitness of materials and workmanship
Comment:	(i)(iii)(b) (i)(ii)	The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	23(2)	Fitness of materials and workmanship
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
Regulation:	29	Condensation
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	35(4)	Internal fire spread - structure
Comment:		The product is restricted by this Regulation in some cases. See section 2 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The product is restricted by this Regulation in some cases. See section 2 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Comment:		The product can contribute to satisfying this Regulation, however, compensating fabric measures may be required. See section 6 of this Certificate.

Regulation:	40(2)	Target carbon dioxide emission rate
Regulation:	43(1)(2)	Renovation of thermal elements
Regulation:	43B	Nearly zero-energy requirements for new buildings
Comment:	The product can contribute to satisfying these Regulations, however, compensating fabric/services measures may be required. See section 6 of this Certificate.	

NHBC Standards 2023

In the opinion of the BBA, ThermoFoam Sucraseal 0.5 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 wall*.

Fulfilment of Requirements

The BBA has judged ThermoFoam Sucraseal 0.5 for External Walls to be satisfactory for use as described in this Certificate. The product has been assessed for installation 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.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. ThermoFoam Sucraseal 0.5 for External Walls is an in-situ formed spray-applied, open-cell, water-blown, low-density, semi-rigid polyurethane foam insulation, consisting of:

- component A — isocyanate
- component B — resin.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of ThermoFoam Sucraseal 0.5

Characteristic (unit)	Method	Value
Mixing ratio	—	1:1 by volume
Colour	—	Yellow
Maximum thickness (mm)	BS EN 823 : 2013	200
Density (kg·m ⁻³)	BS EN 1602 : 2013	12-24

The product is intended for use as insulation in the following applications, on new and existing domestic buildings:

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

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessments are shown below. Conclusions relating to Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 The product was tested for adhesion to the substrates given in Table 2.

Table 2 Adhesion to substrates

Product assessed	Assessment method	Substrate	Result (kPa)
ThermoFoam Sucraseal 0.5	BS EN 14315 : 2013 Annex F	Concrete	43
		Softwood	39
		OSB	38

1.2 On the basis of data assessed, the product has adequate adhesion to the substrates intended for use in this Certificate, provided they are clean and dry prior to application. See also Section 9 of this Certificate.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The Certificate holder has not declared a reaction to fire classification for the product to BS EN 13501-1 : 2018.

2.1.2 The product is classified as Class 1 surface spread of flame to BS 476 : Part 7 : 1997⁽¹⁾

⁽¹⁾Warringtonfire, report ref 508786, dated 25th October 2021. Copies can be obtained from the Certificate holder.

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

2.1.4 On the basis of data assessed, the product will be restricted in use under the documents supporting the national Building Regulations, in some cases. The product must be contained by a fire-resistant lining board manufactured in accordance with BS EN 520 : 2004, with joints fully sealed and supported by timber studs or battens.

2.1.5 In England, the product must not be used on residential buildings with a storey 11 m or more above the ground, or on any other building with a storey 18 m or more above the ground.

2.1.6 In Wales and Northern Ireland, the product must not be used on buildings with a storey 18 m or more above ground level.

2.1.7 In Scotland, the product should not be used on buildings with a storey at a height of 11 m or more above the ground or within 1 metre of a boundary.

2.1.8 Designers must 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.

2.1.9 Where the product is incorporated in a wall construction where fire resistance is required by the documents supporting the national Building Regulations, the fire resistance should be confirmed by a suitably qualified and experienced individual.

3 Hygiene, health and the environment

Data were assessed for the following characteristic.

3.1 Water vapour permeability

The product was tested for water vapour permeability to establish a water vapour resistance factor (μ). The results are given in Table 3.

Table 3 Water vapour resistance factor (μ)

Product assessed	Assessment method	Requirement	Result
ThermoFoam Sucraseal 0.5	BS EN 12086 : 2013, method A	Declared value	8.8

3.2 Condensation

3.2.1 The BBA has assessed the product for the risk of interstitial condensation and the following factors must be implemented.

3.2.1.1 An assessment of the risk of interstitial condensation for the specific construction must be carried out in accordance with BS EN ISO 13788 : 2012 using a declared water vapour resistance factor (μ) of 8.8.

3.2.1.2 To limit the risk of interstitial condensation, walls must be designed and constructed in accordance with the relevant parts of BS 5250 : 2021. An air and vapour control layer (AVCL) must be used.

3.2.1.3 Adequate ventilation must be provided, particularly in rooms expected to experience high humidity, and to ensure the integrity of AVCLs and linings against vapour ingress.

3.2.1.4 Wall design, construction, and maintenance limit opportunities for vapour migration by diffusion and by convection through gaps, cracks and laps in AVCLs and through penetrations.

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

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Thermal conductivity

The product was tested for thermal conductivity and the results are given in Table 4

Product assessed	Thickness (mm)	Assessment method	Requirement	Result
ThermoFoam Sucraseal 0.5	< 100	BS EN 14315-1 : 2013	Declared conductivity (λ_D) values ($W \cdot m^{-1} \cdot K^{-1}$)	0.039
	100 to 200			0.040

6.2 Thermal performance

6.2.1 The U value of a completed wall will depend on the insulation thickness, its structure, and its internal finish. Example U-values are given in Tables 5 and 6 of this Certificate.

Table 5 U values — external timber framed wall

Design U value (W·m ⁻² ·K ⁻¹)	ThermoFoam Sucraseal 0.5 thickness
0.13	(1)
0.15	(1)
0.17	(1)
0.18	(1)
0.21	(1)
0.26	140 mm between timber frame + 25 mm between battens ⁽²⁾
0.30	135 mm between timber frame ⁽³⁾

(1) See section 6.2.3

(2) 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 ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); insulation bridged at 15% with 140 mm thick timber frame, including additional timber battens where required ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); AVCL; and 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

(3) 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 ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); insulation bridged at 15% with 140 mm thick timber frame ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); remaining thickness is air cavity; AVCL; and 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

Table 6 U values – external solid masonry wall⁽¹⁾

Design U value (W·m ⁻² ·K ⁻¹)	ThermoFoam Sucraseal 0.5 thickness
0.13	(2)
0.15	(2)
0.17	(2)
0.18	(2)
0.21	(2)
0.26	165 mm between studs
0.30	140 mm between studs

(1) Wall construction — 215 mm thick external brickwork ($\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$); 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 ($\lambda = 0.13 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) (11.8%); AVCL; and 12.5 mm plasterboard ($\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$).

(2) See section 6.2.3

6.2.2 The product can contribute towards a construction satisfying the national Building Regulations in respect of energy economy and heat retention.

6.2.3 For improved energy or carbon savings, designers must consider appropriate fabric and/or services measures.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in this product were assessed.

8.2 Data were assessed for the following characteristics:

Table 7 Dimensional stability and water absorption

Product assessed	Assessment method	Requirement	Result
ThermoFoam Sucraseal 0.5	Dimensional stability to BS EN 1604 : 2013 (70°C and 90-100% RH for 48 hours)	Length and width \leq 4 % change Thickness \leq 1 % change	PASS
ThermoFoam Sucraseal 0.5	Dimensional stability to BS EN 1604 : 2013 (-20°C for 48 hours)	Length and width \leq 2 % change Thickness \leq 1 % change	PASS
ThermoFoam Sucraseal 0.5 50 mm thickness	Water absorption to BS EN 1609 : 2013 (Method B)	Declared value	9.3 kg·m ²

8.3 Service life

Under normal service conditions, the product will have a life equivalent to the structure in which it is incorporated, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors.

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance assessed in this Certificate.

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

- BS 5250 : 2021
- 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.

9.1.3 Construction elements must be designed and constructed to incorporate the normal precautions against moisture ingress before application of the product.

9.1.4 The guidance given in the documents supporting the national Building Regulations must be followed when the system is installed in close proximity to certain flue pipes and/or heat-producing appliances.

9.1.5 The product forms a strong bond with clean, dry substrates. This should be considered when specifying the product or anticipating future alterations.

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

9.1.7 Services which penetrate the internal plasterboard lining (such as light switches or power outlets) must 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.

9.1.8 Insulated dry lining systems require careful detailing during installation around doors and windows to achieve a satisfactory surface for finishing. In addition, every attempt must 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 must be checked before installation.

9.1.9 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.

9.1.10 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.

9.1.11 In England and Wales, 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 section 6 of this Certificate.

9.1.12 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 walls are designed and constructed in accordance with the relevant parts of BS 5250 : 2021. Further guidance may be obtained from BRE Report BR 262 : 2002.

9.1.13 To comply with the requirements of the *Health and Safety at Work Act 1974*, Section 4, 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.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance are provided in Annex A

9.2.3 A pre-installation survey must be carried out and documented to ensure that the construction is suitable for the application of the product. This must include a condensation risk assessment to BS EN ISO 13788 : 2012 (see section 3 of this Certificate).

9.2.4 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.

9.2.5 Any mould or fungal growth found to be present must be treated.

9.2.6 Installation must not be carried out until the moisture content of any timber is less than 20% by mass.

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

9.2.8 The building must be well-ventilated during the spraying process.

9.2.9 If vapour levels must be measured, methods must 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.

9.2.10 To minimise the hazards of spraying, the following points must 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.

9.2.11 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.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of Certificate holder's information and a site visit to witness an installation in progress. To achieve the performance described in this Certificate, the product must only be installed by installers who have been trained and approved by the Certificate holder. Details of Approved Installers are available from the Certificate holder.

9.4 Maintenance and repair

Once installed, provided that the product is protected by a lining board and that the masonry outer leaf is maintained in a weathertight condition, maintenance is not required.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors.

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

†10.1.6 The BBA will review 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.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is delivered to site in drums of up to 250 kg capacity, bearing the product name, company name, batch number, and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 Drums must be stored in a well-ventilated area, between 10 and 26°C, and away from possible ignition sources.

11.2.2 Drums must be protected from frost.

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the 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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product under the *GB CLP Regulation* and 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.

CE marking

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

Additional Guidance

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.

Additional information on installation

Procedure

A.1 The product should be spray-applied to clean and dry substrates and built up in one or two layers, up to a total maximum thickness of 200 mm.

A.2 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.

A.3 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.

A.4 Once cured, the product is trimmed flat with care using a saw and covered with an AVCL and a fire-resistant lining board.

Timber-frame

A.5 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 fire-resistant lining board installed with an AVCL with lapped and sealed joints.

Masonry external walls

A.6 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).

A.7 The product may be used on any stable, dry wall capable of taking the fixings for the timber battens.

A.8 Wallpaper, skirting, picture rails, gloss paint and projecting window boards are removed.

A.9 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.

A.10 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.

A.11 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 an AVCL with lapped and sealed joints.

Bibliography

- BRE Report BR 262 : 2002 *Thermal insulation: avoiding risks*
- BRE Report BR 443 : 2019 *Conventions for U-value calculations*
- BS 5250 : 2021 *Management of moisture in buildings. Code of practice*
- 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 823 : 2013 *Thermal insulating products for building applications — Determination of thickness*
- BS EN 1602 : 2013 *Thermal insulating products for building applications — Determination of the apparent density*
- BS EN 1604 : 2013 *Thermal insulating products for building applications — Determination of dimensional stability under specified temperature and humidity conditions*
- BS EN 1609 : 2013 *Thermal insulating products for building applications — Determination of short term water absorption by partial immersion*
- 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 12086 : 2013 *Thermal insulating products for building applications — Determination of water vapour transmission properties*
- BS EN 12667 : 2001 *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Products of high and medium thermal resistance*
- BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

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 13788 : 2012 *Hygrothermal performance of building components and building elements — Internal surface temperature to avoid critical surface humidity and interstitial condensation — Calculation methods*

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Conditions

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