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Agrément Certificate  
**10/4777**  
Product Sheet 2

## FOAMSEAL

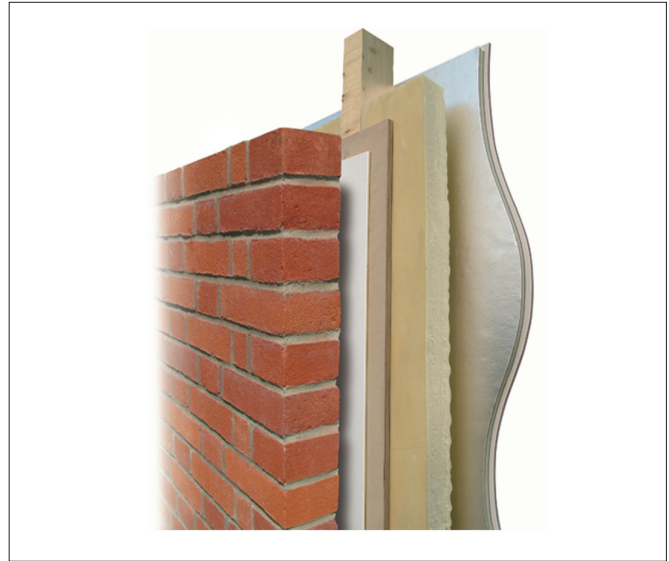
### FOAMSEAL RANGE OF INSULATION FOR WALLS

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to the Foamseal Range of Insulation for Walls, spray-applied in-situ thermal insulation for external walls of new and existing dwellings or similar buildings.

(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** — depending on their thickness, the products have a declared thermal conductivity ( $\lambda_D$ )\* value of between  $0.025 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and  $0.027 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  for Poliuretán Spray RF-352D and between  $0.026 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and  $0.028 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  for Poliuretán Spray S-353E (see section 6).

**Condensation risk** — the products have a water vapour resistance factor ( $\mu$ )\* of 60 (resistivity of  $300 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$ ) for Poliuretán Spray RF-352D and 80 (resistivity of  $400 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$ ) for Poliuretán Spray S-353E. The risk of interstitial condensation will depend on the roof construction and should, therefore, be assessed for each project. A vapour control layer (VCL) must be used (see section 7).

**Durability** — the products will have a life equivalent to that of the structure in which they are incorporated (see section 12).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 6 June 2015

John Albon — Head of Approvals  
Construction Products

Claire Curtis-Thomas  
Chief Executive

Originally certificated on 6 October 2010

*The BBA is a UKAS accredited certification body — Number 1113. 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](http://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 Foamseal Range of Insulation for Walls, if installed, used and maintained in accordance with this Certificate, can satisfy or can 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:	C2(c)	Resistance to moisture
Comment:		The products 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 products can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The products are acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation:	26	CO <sub>2</sub> emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new dwellings (applicable to England only)
Regulation:	26A	Primary energy consumption rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Comment:		The products 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)	Durability, workmanship and fitness of materials
Comment:		The products are 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 products can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> , 3.15.3 <sup>(1)(2)</sup> , 3.15.4 <sup>(1)(2)</sup> , 3.15.5 <sup>(1)(2)</sup> and 3.15.7 <sup>(1)(2)</sup> . See sections 7.1 and 7.5 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to satisfying these Standards, with reference to clauses, or parts of, 6.1.1 <sup>(1)</sup> , 6.1.6 <sup>(1)</sup> , 6.2.1 <sup>(1)(2)</sup> , 6.2.3 <sup>(1)</sup> , 6.2.4 <sup>(1)(2)</sup> , 6.2.5 <sup>(2)</sup> , 6.2.6 <sup>(1)(2)</sup> , 6.2.7 <sup>(1)</sup> , 6.2.8 <sup>(2)</sup> , 6.2.9 <sup>(1)(2)</sup> , 6.2.10 <sup>(1)</sup> , 6.2.11 <sup>(1)(2)</sup> , 6.2.12 <sup>(2)</sup> and 6.2.13 <sup>(1)(2)</sup> . See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products 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 of this Certificate.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for these products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

Regulation:	23	Fitness of materials and workmanship
Comment:		The products are acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation:	29	Condensation
Comment:		The products can contribute to satisfying this Regulation. See section 7.1 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.

## Construction (Design and Management) Regulations 2015

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

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

See sections: 3 *Delivery and site handling* and 14 *Precautions* of this Certificate.

## Additional Information

### NHBC Standards 2014

NHBC accepts the use of the Foamseal Range of Insulation for Walls, if installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls* and Chapter 6.2 *External timber framed walls*.

### CE marking

The Certificate holder has taken the responsibility of CE marking the products, in accordance with harmonised European Standard EN 14315-1 : 2013. An asterisk (\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

## Technical Specification

### 1 Description

1.1 The Foamseal Range of Insulation for Walls consists of Poliuretán Spray RF-352D and Poliuretán Spray S-353E, closed-cell polyurethane foams suitable for application between the inner leaf studs of conventional timber-frame cavity walls with a masonry outer skin, or to the internal surface of external solid masonry walls in combination with a dry-lining system.

1.2 The products are prepared from two liquid components, isocyanate and resin, and are yellowish in colour.

1.3 The products are applied with a fixed ratio (1:1) volumetric displacement pump, up to a maximum thickness of 250 mm.

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

- non-breathable and breathable roof underlays
- vapour control layer (VCL)
- gypsum plaster board
- timber battens
- spray equipment.

### 2 Manufacture

2.1 Poliuretán Spray is produced by a simple blending of components in a given proportion. The data are introduced into a computer program and the addition of the different components is automatic and controlled by the software.

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 the manufacturer has been assessed and registered as meeting the requirements of ISO 9001 : 2008 by Bureau Veritas (Certificate ES056037-B1).

### 3 Delivery and site handling

3.1 The isocyanate and resin components are delivered to site in drums (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, ideally above 10°C, and away from possible ignition sources. The drums must be protected from frost.

3.3 The isocyanate component is classified under the *Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009*, and the packaging bears the appropriate hazard warning label(s).

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Foamseal Range of Insulation for Walls.

## 4 Use

4.1 The Foamseal Range of Insulation for Walls is satisfactory for use in reducing the thermal transmittance (U value) of walls of dwellings or similar buildings.

4.2 The products can be used:

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

4.3 Constructions must be designed in accordance with the relevant recommendations of:

- BS 5250 : 2011
- BS 8000-3 : 2001
- BS EN 351-1 : 2007, and
- BS EN 1995-1-1 : 2004, BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006 and their relevant UK National Annexes.

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

4.5 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 installation.

4.6 If present, mould or fungal growth must be treated prior to the application of the product.

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

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

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

4.10 To satisfy the requirements of NHBC, a VCL of a type specified in their Standards must be applied behind the plasterboard lining in wall applications.

### External cavity walls (insulated timber-frame inner skin)

4.11 Services which penetrate the internal plasterboard lining (eg, light switches, 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 suitably-tested proprietary fire-rated systems in order to preserve the fire resistance of the wall.

### External solid masonry walls (insulated dry lining)

4.12 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.

4.13 Services which penetrate the dry lining (eg light switches, power outlets) should be kept to a minimum to limit damage to vapour checks.

## 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 : 2007, BS EN ISO 13370 : 2007 and BRE Report BR 443 : 2006 using the declared thermal conductivity ( $\lambda_D$ )\* in Table 1 of this Certificate.

Table 1 Thermal conductivity ( $\lambda_D$ )\*

Insulation thickness (mm)	Thermal conductivity ( $W \cdot m^{-1} \cdot K^{-1}$ )	
	Poliuretan Spray RF-352D	Poliuretan Spray S-353E
<80	0.027	0.028
80 to 120	0.026	0.027
<120	0.025	0.026

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 2 and 3. For improved energy or carbon savings, designers should consider appropriate fabric and/or services measures.

*Table 2 U values — Timber frame walls*

Design U values (W·m <sup>-2</sup> ·K <sup>-1</sup> )	Insulation thickness <sup>(1)</sup> (mm)	
	Poliuretán Spray S-353E <sup>(2)(3)</sup>	Poliuretán Spray RF-352D <sup>(2)(3)</sup>
0.18	190 <sup>(4)</sup>	185 <sup>(4)</sup>
0.19	175 <sup>(4)</sup>	170 <sup>(4)</sup>
0.22	145 <sup>(4)</sup>	140 <sup>(4)</sup>
0.25	125 <sup>(5)</sup>	125 <sup>(5)</sup>
0.27	120 <sup>(5)</sup>	115 <sup>(5)</sup>
0.28	110 <sup>(5)</sup>	110 <sup>(5)</sup>
0.30	100 <sup>(5)</sup>	100 <sup>(5)</sup>
0.35	80 <sup>(5)</sup>	85 <sup>(6)</sup>

- (1) Thickness range of 30 mm to 200 mm with 5 mm increments.
- (2) Wall construction inclusive of 102.5 mm brick ( $\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ) bridged with mortar ( $17.3\% \lambda = 0.94 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ), 50 mm cavity (resistance =  $0.18 \text{ m}^2\cdot\text{kW}^{-1}$ ), breather membrane, 9 mm plywood sheathing ( $\lambda = 0.24 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ), 12.5 mm plasterboard ( $\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ).
- (3) It is assumed there is no air gap correction ( $\Delta U_g = 0.00$ ).
- (4) Insulation within a 200 mm stud (15% bridge).
- (5) Insulation within a 140 mm stud (15% bridge).
- (6) Insulation within a 89 mm stud (15% bridge).

*Table 3 U values — Masonry walls*

Design U values (W·m <sup>-2</sup> ·K <sup>-1</sup> )	Insulation thickness <sup>(1)</sup> (mm)	
	Poliuretán Spray S-353E <sup>(2)(3)</sup>	Poliuretán Spray S-353E <sup>(2)(3)</sup>
0.18	175	170
0.19	165	160
0.22	140	135
0.25	125	120
0.27	110	110
0.28	105	105
0.30	100	95
0.35	80	80

- (1) Thickness range of 30 mm to 200 mm with 5 mm increments.
- (2) Wall construction inclusive of 5 mm render ( $\lambda = 1 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ), 215 mm brick ( $\lambda = 0.77 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ) bridged with mortar ( $17.3\% \lambda = 0.88 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ), variable thickness of timber batten bridge (11.8%) containing a variable thickness of insulation and a 25 mm cavity, 12.5 mm plasterboard ( $\lambda = 0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ ).
- (3) It is assumed there is no air gap correction ( $\Delta U_g = 0.00$ ).

## Junctions



6.3 Care must be taken in the overall design and construction of junctions with other elements 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, the insulation vapour resistance factor ( $\mu$ )\* may be taken as 60 (resistivity of  $300 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$ ) for Poliuretán Spray RF-352D and 80 (resistivity of  $400 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}\cdot\text{m}^{-1}$ ) for Poliuretán Spray S-353E.

### External solid masonry walls (insulated dry lining)

7.3 The risk of summer 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.

## 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.

## 8 Behaviour in relation to fire

8.1 Poliuretán Spray S-353E is classified as Class E\* and Poliuretán Spray RF-352D as D-s3,d0\* to EN 13501-1 : 2007. The products are not classified as 'non-combustible' and must be protected from naked flames and other ignition sources during and after installation.

8.2 Elements must incorporate cavity barriers at edges, around openings and junctions with fire-resisting elements and in 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.

8.3 When installed, the products will be contained by a suitable lining board, eg plasterboard, with all joints fully sealed and supported by timber studs or battens. Therefore, it will not contribute to the development stages of a fire.

## 9 Proximity of flues and appliances

9.1 When installing the products in close proximity to certain flue pipes, chimneys 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<sup>(1)(2)</sup>.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

9.2 The products must not be installed within 50 mm of heat-emitting devices where the temperature is in excess of 93°C.

## 10 Materials in contact — wiring installations

10.1 The products are compatible with PVC materials in contact.

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

## 11 Maintenance

Once installed, the products do not require any regular maintenance and have suitable durability (see section 12), provided the external wall and waterproof layers are maintained in a weather-tight condition.

## 12 Durability



The products will have a life equivalent to that of the structure in which they are incorporated.

# Installation

## 13 Approved installers

The Certificate holder operates an Approved Installer Scheme for these products, 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 products in accordance with 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 products may produce a build-up of harmful vapours. Installers must wear full personal protection equipment (PPE) when working with the product, including full-face fresh-air-supplied respirators, protective clothing and chemical-resistant 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 *Foamseal Insulation Manual* and the product safety data sheets issued to installers must be followed at all times.

14.3 Vapours given off by certain components are generally heavier than air and will tend to move to lower parts of the building. These parts should be suitably ventilated.

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.

## 15 Procedure

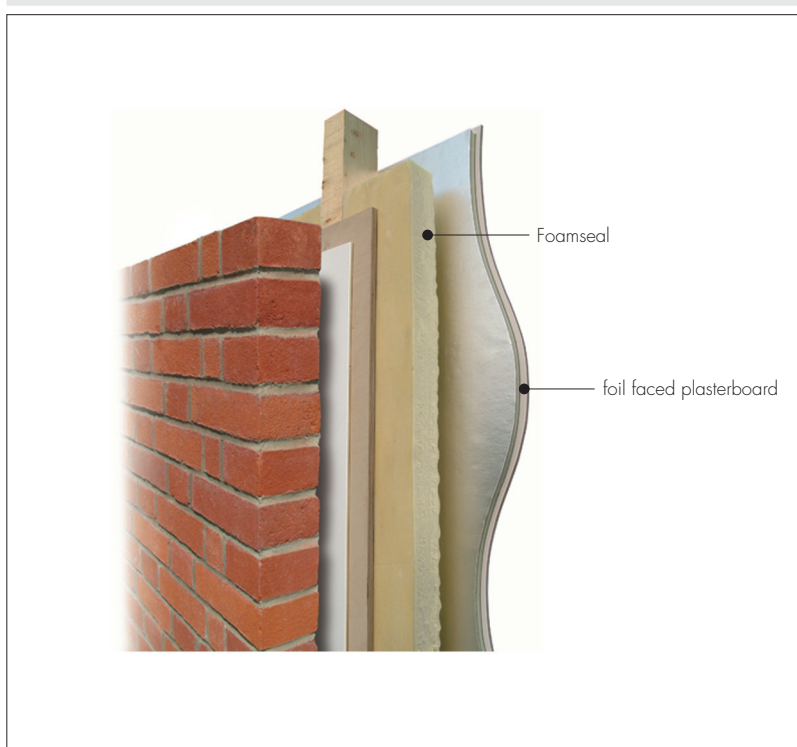
### General

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

### External cavity walls (insulated timber-frame inner skin)

15.2 The products should be spray-applied to clean and dry substrates in a flash coat <10 mm thick. Subsequent coats not exceeding 20 mm thick are applied once the foam reaction has occurred, and within 10 minutes of the previous coat until the required total thickness is achieved, leaving an air cavity between the plasterboard lining and the insulation.

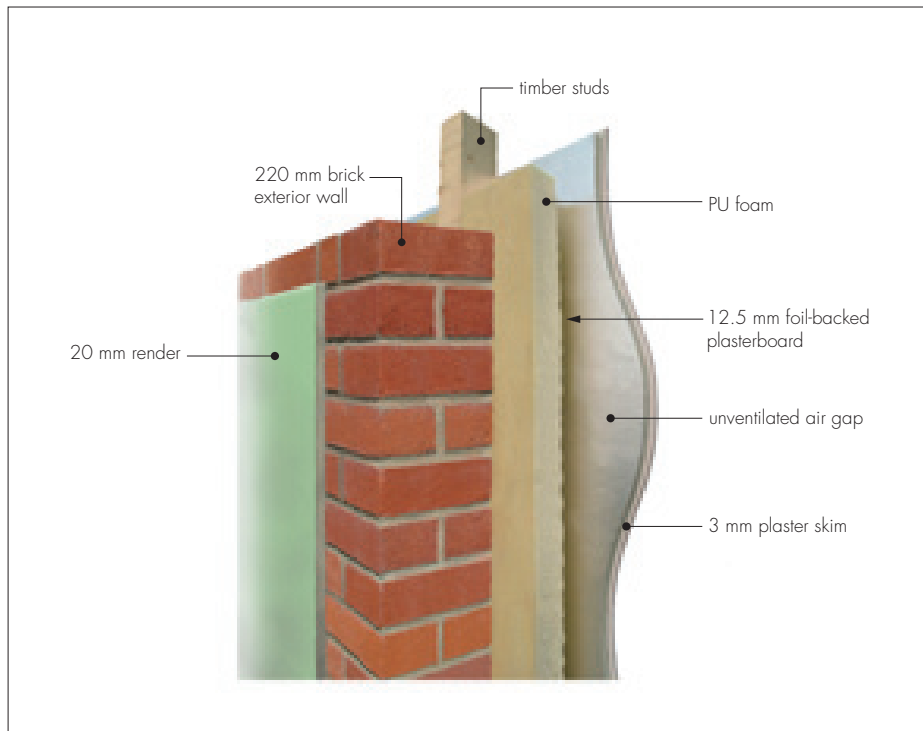
Figure 1 Typical timber-frame application



### External solid masonry walls (insulated dry lining)

15.3 The product can be applied directly to solid walls for internal wall insulation by spraying between timber studwork and then fitting plasterboard over or it. The product should be spray-applied to clean and dry substrates in a flash coat <10 mm thick. Subsequent coats not exceeding 20 mm thick are applied once the foam reaction has occurred, and within 10 minutes of the previous coat until the required total thickness is achieved.

Figure 2 Typical solid masonry wall application



## Technical Investigations

### 16 Investigations

16.1 An assessment was made of independent data relating to:

- thermal conductivity
- behaviour in relation to fire
- water vapour permeability.

16.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

## Bibliography

BS 5250 : 2011 *Code of practice for control of condensation in buildings*

BS 8000-3 :2001 *Workmanship on building sites — Code of practice for masonry*

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

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

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

BS EN 1996-1-1 : 2005 *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*

NA to BS EN 1996-1-1 : 2005 *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 *UK National Annex to Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*



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*

BS EN ISO 13370 : 2007 *Thermal performance of buildings — Heat transfer via the ground — Calculation methods*

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*

ISO 9000 : 2008 *Quality management systems — Requirements*

BRE Report (BR 262 : 2002) *Thermal insulation: avoiding risks*

BRE Report (BR 443 : 2006) *Conventions for U-value calculations*

## Conditions of Certification

### 17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

17.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

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

17.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.