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Agrément Certificate

09/4624

Product Sheet 2

URSA CAVITY WALL INSULATION

URSA CAVITY BATT 32 INSULATION FOR FULL FILL APPLICATION

This Agrément Certificate Product Sheet⁽¹⁾ relates to URSA Cavity Batt 32 Insulation for full fill application, a lightweight, unfaced glass mineral wool slab. The product is for use as full fill thermal insulation in new external masonry cavity walls in domestic and non-domestic buildings up to 25 metres in height (additional requirements apply for buildings above 12 metres). The product is installed during construction.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Thermal performance — the product has a declared thermal conductivity (λ_D) value of $0.032 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ (see section 6).

Water resistance — the product will resist the transfer of water across the cavity of the walls (see section 7).

Condensation — the product can contribute to limiting the risk of condensation (see section 8).

Behaviour in relation to fire — the product is classified as Class A1 in accordance with BS EN 13501-1 : 2018 (see section 9).

Durability — the product will have a life equivalent to that of the wall structure in which it is incorporated (see section 11).



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 Fourth issue: 15 June 2021

Originally certificated on 7 August 2009

Certificate amended on 8 August 2022 to update section 1.2

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

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

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

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Regulations

In the opinion of the BBA, URSA Cavity Batt 32 Insulation for full fill application, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B3(4)	Internal fire spread (structure)
Comment:		The product is unrestricted by this Requirement. See sections 9.1 and 9.2 of this Certificate
Requirement:	B4(1)	External fire spread
Comment:		The product is unrestricted by this Requirement. See section 9.1 of this Certificate.
Requirement:	C2(a)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See section 7.1 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See section 7.2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See sections 8.1 and 8.3 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The product can contribute to satisfying this Requirement. See sections 6.1 and 6.2 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The product is unrestricted by this Regulation. See section 9.1 this Certificate.
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new buildings (applicable to England only)
Regulation:	26A	Primary energy consumption rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Comment:		The product can contribute to satisfying these Regulations. See sections 6.1 and 6.2 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.4	Cavities
Comment:		The product is unrestricted by this Standard. See section 9.1 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The product is unrestricted by this Standard, with reference to clauses 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See section 9.1 of this Certificate.

Standard: Comment:	3.4	Moisture from the ground The product can contribute to satisfying this Standard, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ and 3.4.5 ⁽¹⁾⁽²⁾ . See section 7.1 of this Certificate.
Standard: Comment:	3.10	Precipitation The product can contribute to satisfying this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.3 ⁽¹⁾⁽²⁾ . See section 7.2 of this Certificate.
Standard: Comment:	3.15	Condensation The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See sections 8.2 and 8.3 of this Certificate.
Standard: Standard: Comment:	6.1(a) 6.2	Carbon dioxide emissions Building insulation envelope The product can contribute to satisfying clauses, or parts of clauses, 6.1.1 ⁽¹⁾ , 6.1.2 ⁽²⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.5 ⁽²⁾ , 6.2.9 ⁽¹⁾ , 6.2.11 ⁽¹⁾⁽²⁾ and 6.2.13 ⁽²⁾ . See sections 6.1 and 6.2 of this Certificate.
Standard: Comment:	7.1(a)(b)	Statement of sustainability The product can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the product can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾], 7.1.6 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾] and 7.1.7 ⁽¹⁾⁽²⁾ [Aspect 1 ⁽¹⁾⁽²⁾]. See sections 6.1 and 6.2 of this Certificate.
Regulation: Comment:	12	Building standards applicable to conversions Comments in relation to the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).		



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

Regulation: Comment:	23	Fitness of materials and workmanship The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation: Comment:	28(a)	Resistance to moisture and weather The product can contribute to satisfying this Regulation. See section 7.1 of this Certificate.
Regulation: Comment:	28(b)	Resistance to moisture and weather The product can contribute to satisfying this Regulation. See section 7.2 of this Certificate.
Regulation: Comment:	29	Condensation The product can contribute to satisfying this Regulation. See section 8.3 of this Certificate.
Regulation: Comment:	35(4)	Internal fire spread (structure) The product is unrestricted by this Regulation. See section 9.1 of this Certificate.
Regulation: Comment:	36(a)	External fire spread The product is unrestricted by this Regulation. See section 9.1 of this Certificate.
Regulation: Regulation: Comment:	39(a)(i) 40(2)	Conservation measures Target carbon dioxide emission rate The product can contribute to satisfying these Regulations. See sections 6.1 and 6.2 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: *3 Delivery and site handling* (3.4) of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, URSA Cavity Batt 32 Insulation for full fill application, when used as full-fill cavity wall insulation and if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.1 *External Masonry Walls*, other than in very severe exposure locations with fair-faced masonry.

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13162 : 2012.

Technical Specification

1 Description

1.1 URSA Cavity Batt 32 Insulation for full fill application is an olive green, mineral wool slab of homogeneous texture which has been treated with silicon-based, water-repellent additive.

1.2 The product has a nominal length of 1350 mm, width of 455 mm and thicknesses of 75, 85, 100, 125 and 150 mm.

2 Manufacture

2.1 Insulation slabs are manufactured using conventional fully automated techniques.

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 URSA UK Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by LGA (Certificate QM-1903108).

3 Delivery and site handling

3.1 The slabs are delivered to site in polythene-wrapped packs. Each pack contains a label with the Certificate holder's name, slab dimensions and the BBA logo incorporating the number of this Certificate.

3.2 On site, the product should be stored clear of the ground on a clean, level surface and preferably under cover to protect it from prolonged exposure to moisture or mechanical damage.

3.3 Partially completed walls should be protected from inclement weather (wind, rain and snow) and covered at the end of a day's work.

3.4 It is recommended that dust masks, gloves and long-sleeved clothing are worn during cutting and handling the product. Large-scale machining should be connected to a dust-extraction system.

Assessment and Technical Investigations

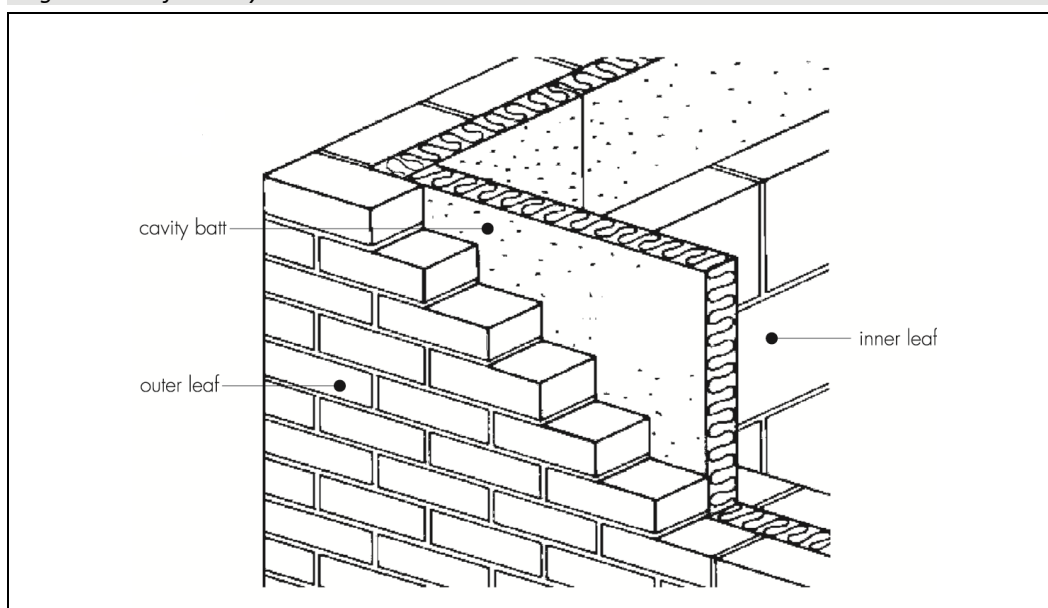
The following is a summary of the assessment and technical investigations carried out on URSA Cavity Batt 32 Insulation for full fill application.

Design Considerations

4 Use

4.1 URSA Cavity Batt 32 Insulation for full fill application is satisfactory for use as full fill cavity wall insulation and is effective in reducing the thermal transmittance (U-value) of external cavity walls with masonry inner and outer leaves (where masonry includes clay and calcium silicate bricks, concrete blocks, and natural and reconstituted stone blocks). The product is for use in new domestic and non-domestic buildings up to 25 m in height (although additional requirements apply above 12 metres in height). It is essential that walls are designed and constructed to incorporate the precautions given in this Certificate to prevent moisture penetration.

Figure 1 Full fill cavity insulation



4.2 This Certificate covers the use of the product in any exposure zone. However, use of the product does not preclude the need to apply any external render coat or other suitable finish in severe exposure zones where such application would be normal practice.

4.3 Buildings subject to national Building Regulations should be designed and constructed in accordance with the relevant recommendations of:

- BS 8000-3 : 2001
- BS EN 845-1 : 2013
- BS EN 1996-1-1 : 2005 and its UK National Annex
- BS EN 1996-1-2 : 2005 and its UK National Annex
- BS EN 1996-2 : 2006 and its UK National Annex
- BS EN 1996-3 : 2006 and its UK National Annex.

4.4 Other new buildings not subject to these Regulations should also be built in accordance with the Standards given in section 4.3 of this Certificate.

4.5 The use of cavity battens and/or boards during construction is strongly recommended to prevent bridging by mortar droppings.

4.6 It is recommended that installation is continuous up to the highest level on each wall. If it is terminated at any other level, the top edge of the insulation must be protected by a cavity tray with stop-ends and weep holes at alternate perpend.

4.7 Cavity wall ties with insulation-retaining fixings and, if required, any additional ties to BS EN 845-1 : 2013 and PD 6697 : 2010 should be used for structural stability in accordance with BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006.

4.8 Care must be taken in the overall design and construction of walls incorporating the products to ensure the provision of appropriate:

- cavity trays and damp-proof courses (dpc)
- cavity barriers and fire stopping
- resistance to the ingress of precipitation, moisture and dangerous gases from the ground
- resistance to sound transmission when flanking separating walls and floors.

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

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

Buildings up to and including 12 m in height

4.10 The following design conditions must be ensured

- the insulation completely fills the cavity
- the insulation thickness remains constant where possible. Should any change in vertical thickness occur, a horizontal damp-proof cavity tray should separate each thickness change
- a minimum thickness of 50 mm is maintained where possible. Where, for structural reasons, the insulation thickness is reduced, eg by the intrusion of ring beams, a minimum thickness of 25 mm insulation should be maintained and the manufacturer's advice on fixing and weatherproofing sought.

Buildings over 12 m high and up to and including 25 m high

4.11 Where the walls of a building are between 12 and 25 m high, the following requirements also apply:

- from ground level, the maximum height of continuous cavity must not exceed 12 m. Above 12 m, the maximum height of continuous cavity must not exceed 7 metres. In both cases, breaks should be in the form of continuous horizontal cavity trays and weepholes discharging to the outside
- the area to be insulated must not be an infill panel in a framed structure
- the Certificate holder, in association with the architect, must carry out a detailed programme of assessment of the project including an examination of the quality of installation as work progresses. Above average site supervision is recommended during installation
- Certification relates only to buildings where the Certificate holder has given written approval for use of the product on the specified building.

5 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

6 Thermal performance



6.1 Calculations of the thermal transmittance (U value) should be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2006, using the declared thermal conductivity (λ_D) of $0.032 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

6.2 The U value of a typical brick and block cavity wall construction will depend on the cavity width and the insulating value of the internal block leaf finish. Calculated U values for sample constructions are given in Table 1 of this Certificate.

Table 1 Example cavity wall U values⁽¹⁾

U value requirement ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) ⁽¹⁾	Insulation thickness (mm)	
	13 mm dense plaster ⁽²⁾ 100 mm dense block ⁽³⁾	Plasterboard on dabs ⁽⁴⁾ 100 mm AAC block ⁽⁵⁾
0.18	160 ⁽⁶⁾	150
0.19	160 ⁽⁶⁾	150
0.25	125	100
0.26	125	85
0.27	125	85
0.28	100	85
0.30	100	75
0.35	85	75

(1) Assumes fixings correction for fully penetrating steel fixings ($17 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) at 2.5 m^2 with cross-sectional area of 12.5 mm^2 . Construction includes 102.5 mm thick brick outer leaf.

(2) Dense block and mortar thermal conductivity 1.13 and $0.88 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ respectively.

(3) Plaster thermal conductivity $0.57 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

(4) AAC block and mortar thermal conductivity 0.12 and $0.88 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ respectively.

(5) Plasterboard thermal conductivity $0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

(6) Thickness achieved with two layers of insulation.

6.3 Care must be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration. Detailed guidance can be found in the documents supporting the national Building Regulations.

7 Water resistance



7.1 When the product is used in situations where it bridges the damp-proof course (dpc) in walls, dampness from the ground will not pass through to the inner leaf provided the wall is detailed in accordance with the requirements and provisions of the national Building Regulations.

7.2 Constructions incorporating the products and built in accordance with the Standards listed in section 4.3, will resist the transfer of precipitation to the inner leaf and satisfy the national Building Regulations.

8 Condensation

Interstitial condensation



8.1 Walls will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2011, Annexes D and G, and the relevant guidance.

8.2 The insulation water vapour resistance factor (μ) may be taken as 1.

Surface condensation



8.3 Walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $0.7 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point and junctions with other elements are designed in accordance with the guidance referred to in section 6.3 of this Certificate.



8.4 For buildings in Scotland, wall constructions will be acceptable when the thermal transmittance (U value) does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the junctions with other elements are designed in accordance with the guidance referred to in BS 5250 : 2011, Annex G. Further guidance may be obtained from BRE Report BR 262 : 2002 and section 6.3 of this Certificate.

9 Behaviour in relation to fire



9.1 The product has an A1 reaction to fire classification⁽¹⁾ to BS EN 13501-1 : 2018. It is, therefore, unrestricted in terms of building height and proximity to boundaries.

(1) Report no. RA20-0276, Date: 18 November 2020. CSTB.

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

10 Maintenance

As the product is confined within the wall cavity and has suitable durability, maintenance is not required (see section 11).

11 Durability



The product is unaffected by the normal conditions in a wall construction, and is durable, rot-proof, water resistant and sufficiently stable to remain effective as insulation for the life of the building.

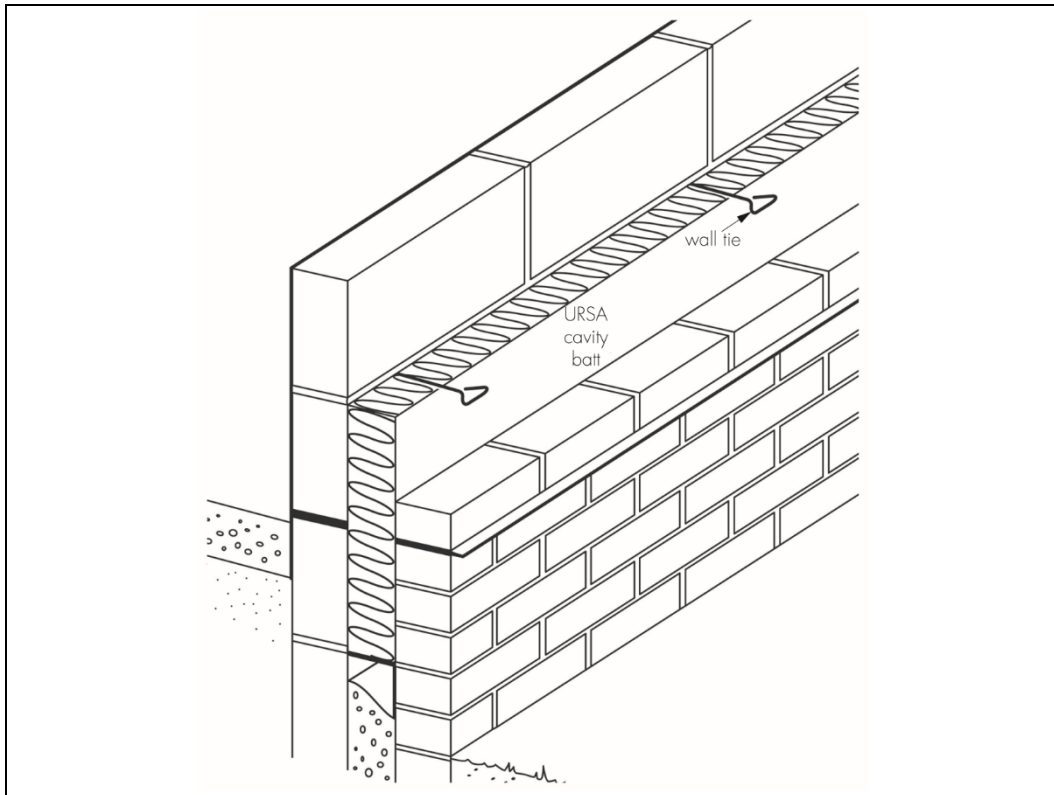
Installation

12 General

12.1 It is recommended that the internal leaf is constructed ahead of the external leaf, with the first row of wall ties where the insulation is to begin, but not on the dpc, and at approximately 600 mm horizontal spacing. Any mortar protruding into the cavity space from the back of the internal leaf should be cleaned off before installing the product.

12.2 The first run of slabs may commence below dpc level to provide some edge insulation for the floor (see Figure 2).

Figure 2 Building in the first row of slabs



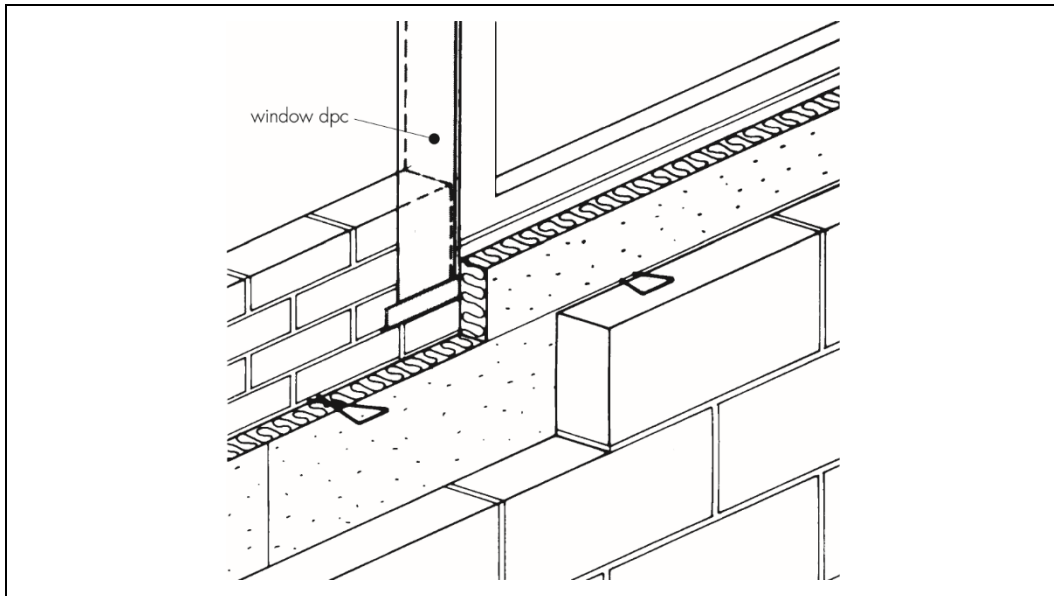
12.3 A section of the wall leaf is built up to a course above the next row of wall ties, which are placed at 450 mm spacing vertically and not more than 900 mm horizontally.

12.4 The product is placed between the upper and lower wall ties to form a closely butt-jointed run. It is essential that all wall ties slope downwards towards the outer leaf.

12.5 Additional ties (see Figure 3) may be required to satisfy the structural requirements of BS EN 845-1 : 2013, BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006 to ensure adequate retention of slabs or cut pieces.

12.6 The product can be 'slit' with a sharp knife to allow wall ties through.

Figure 3 Reveal details with double ties



12.7 The product can be cut with a knife, to fit around corners, windows, doors and air bricks. It is essential that it is cut accurately so that the cut pieces completely fill the spaces for which they are intended and that no gaps are left in the insulation.

12.8 The other leaf is then built up to the same level as the product, and the process repeated.

13 Procedure

13.1 Walls are constructed in the conventional manner (see section 4).

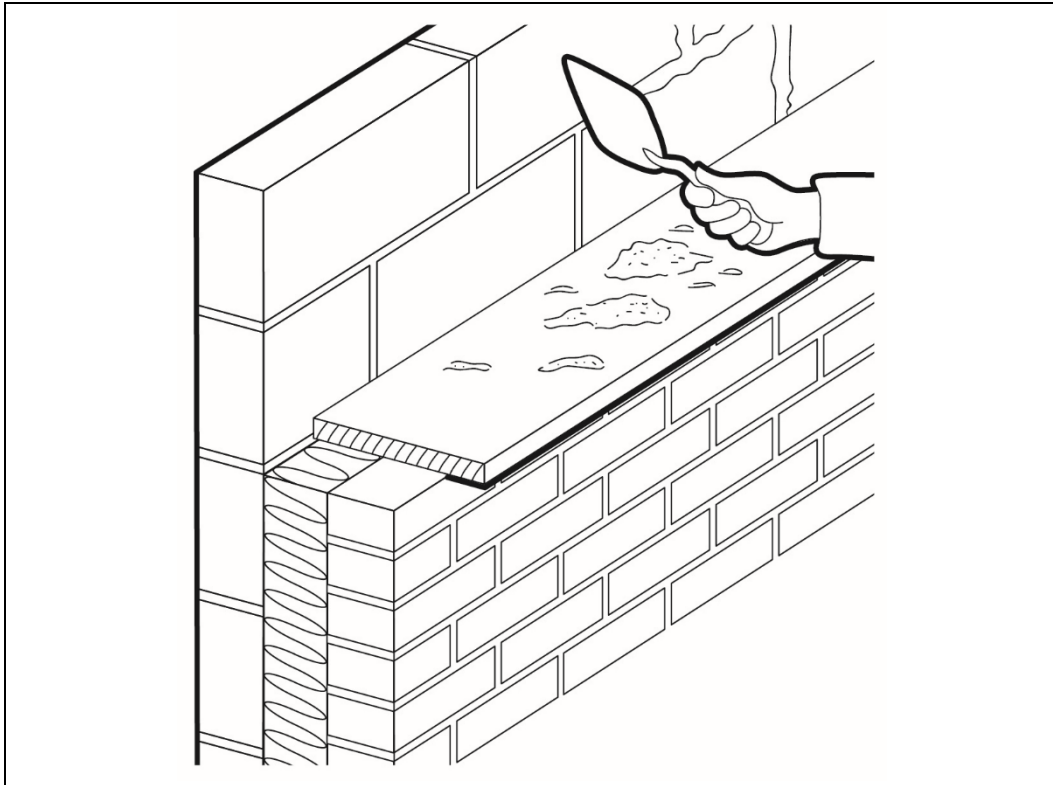
13.2 Successive sections of wall, incorporating wall ties, are constructed and the product installed as work proceeds up to the required height.

13.3 The two-layer insulation (see Table 1 of this Certificate) is identical to the single-layer insulation, but the vertical joints in the second layer must not coincide with the vertical joints in the first layer.

Mortar droppings

13.4 After each section of the wall leaf is built, excess mortar should be removed and mortar droppings cleaned from exposed edges of the installed product before installation of the next section. Use of a cavity board or a cavity batten will protect the installed board edges and help to keep the cavity clean as the following leaf is built (see Figure 4).

Figure 4 Use of cavity board or batten when cleaning off excess mortar

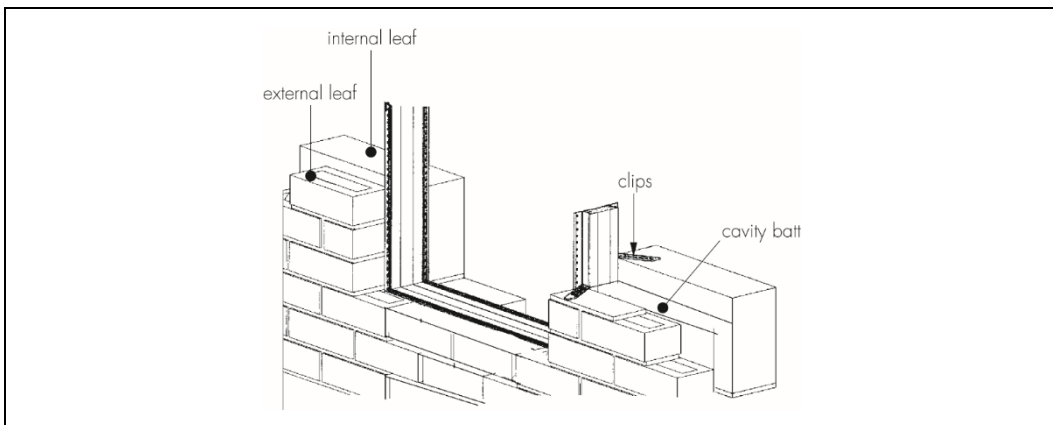


Wall openings

13.5 Where openings such as doors and windows are in close proximity, it is recommended that a continuous lintel or cavity tray is used. Damp-proofing at lintel level must be provided with stop-ends and be adequately drained.

13.6 Where required, door and window reveals should incorporate a cavity closer depending on the set-back of the frame (see Figure 5). It is recommended that BBA-approved cavity closers are used.

Figure 5 Reveal details with cavity closer



13.7 It is recommended that when the outer leaf is built, the inner face is in contact with the product and the permitted deviation in the cavity width is as shown in Table 2.

<i>Table 2 Deviation in cavity width</i>	
Insulation thickness (mm)	Permitted deviation (mm)
75	75 to 90
100	100 to 115
125	125 to 140
150	150 to 170

Protection

13.8 Exposed areas of slabs should always be covered at the end of a day's work or in driving rain.

Technical Investigations

14 Tests

The following tests were carried out by the BBA on URSA Cavity Batt 32 Insulation for full fill application:

- rain penetration
- thermal conductivity
- product characteristics:
 - refractive index
 - ash content
 - water absorption
- density.

15 Investigations

15.1 Assessment was made of the following characteristics:

- thermal conductivity data
- fire data.

15.2 U value calculations were carried out.

15.3 A condensation risk analysis was carried out.

15.4 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 + A1 : 2016 *Code of practice for control of condensation in buildings*

BS 8000-3 : 2020 *Workmanship on building sites — Code of practice for masonry*

BS EN 845-1 : 2013 + A1 : 2016 *Specification for ancillary components for masonry — Wall ties, tension straps, hangers and brackets*

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 UK National Annex to *Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*

BS EN 13162 : 2012 + A1 : 2015 *Thermal insulation products for buildings — Factory made mineral wool (MW) products — Specification*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

BS EN ISO 6946 : 2017 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

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

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

PD 6697 : 2010 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

16 Conditions

16.1 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.

16.2 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.

16.3 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.

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

16.5 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.

16.6 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.

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Agrément Certificate

09/4624

Product Sheet 4

URSA CAVITY WALL INSULATION

URSA CAVITY BATT 32 INSULATION FOR PARTIAL FILL APPLICATION

This Agrément Certificate Product Sheet⁽¹⁾ relates to URSA Cavity Batt 32 Insulation for partial fill application, a lightweight, unfaced glass mineral wool slab. The product is for use as partial fill insulation in new external masonry cavity walls of domestic and non-domestic buildings without height restriction (additional requirements apply above 25 metres). The product is installed during construction.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Thermal performance — the product has a declared thermal conductivity (λ_D) of $0.032 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$ (see section 6).

Water resistance — the product will resist the transfer of water across the cavity of the walls (see section 7).

Condensation — the product can contribute to limiting the risk of condensation (see section 8).

Behaviour in relation to fire — the product is classified as Class A1 in accordance with BS EN 13501-1 : 2018 (see section 9).

Durability — the product will have a life equivalent to that of the wall structure in which it is incorporated (see section 11).



The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 15 June 2021

Certificate amended on 8 August 2022 to update sections 1.2 and 4

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

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

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Regulations

In the opinion of the BBA, URSA Cavity Batt 32 Insulation for partial fill application, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(1)	External fire spread
Comment:	The product is unrestricted by this requirement. See section 9.1 of this Certificate.	
Requirement:	C2(a)	Resistance to moisture
Comment:	The product can contribute to satisfying this Requirement. See section 7.1 of this Certificate.	
Requirement:	C2(b)	Resistance to moisture
Comment:	The product can contribute to satisfying this Requirement. See section 7.2 of this Certificate.	
Requirement:	C2(c)	Resistance to moisture
Comment:	The product can contribute to satisfying this Requirement. See sections 8.1 and 8.3 of this Certificate.	
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:	The product can contribute to satisfying this Requirement. See sections 6.1 and 6.2 of this Certificate.	
Regulation:	7(1)	Materials and workmanship
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.	
Regulation:	7(2)	Materials and workmanship
Comment:	The product is unrestricted by this Regulation. See section 9.1 of this Certificate.	
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new buildings (applicable to England only)
Regulation:	26A	Primary energy consumption rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Comment:	The product can contribute to satisfying these Regulations. See sections 6.1 and 6.2 of this Certificate.	



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:	The product can contribute to satisfying this Regulation. See section 11 and the <i>Installation</i> part of this Certificate.	
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings
Comment:	The use of the product is unrestricted by this Standard with reference to clauses 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See section 9.1 of this Certificate.	
Standard:	3.4	Moisture from the ground
Comment:	The product can contribute to satisfying this Standard, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ and 3.4.5 ⁽¹⁾⁽²⁾ . See section 7.1 of this Certificate.	
Standard:	3.10	Precipitation
Comment:	The product can contribute to satisfying this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.3 ⁽¹⁾⁽²⁾ . See section 7.2 of this Certificate.	

Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See sections 8.1 and 8.4 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The product can contribute to satisfying clauses, or parts of clauses, 6.1.1 ⁽¹⁾ , 6.1.2 ⁽²⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.5 ⁽²⁾ , 6.2.9 ⁽¹⁾ , 6.2.11 ⁽¹⁾⁽²⁾ and 6.2.13 ⁽²⁾ . See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The product can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the product can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾], 7.1.6 ⁽¹⁾⁽²⁾ [Aspects 1 ⁽¹⁾⁽²⁾ and 2 ⁽¹⁾] and 7.1.7 ⁽¹⁾⁽²⁾ [Aspect 1 ⁽¹⁾⁽²⁾]. See sections 6.1 and 6.2 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⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
(1) Technical Handbook (Domestic).		
(2) Technical Handbook (Non-Domestic).		



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

Regulation:	23	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		The product can contribute to satisfying this Regulation. See section 7.1 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The product can contribute to satisfying this Regulation. See section 7.2 of this Certificate.
Regulation:	29	Condensation
Comment:		The product can contribute to satisfying this Regulation. See section 8.1 of this Certificate.
Regulation:	36(a)	External fire spread (structure)
Comment:		The product is unrestricted by this Regulation. See section 9.1 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Comment:		The product can contribute to satisfying these Regulations. See sections 6.1 and 6.2 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.4) of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, the URSA Cavity Batt 32 Insulation for partial fill application, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.1 *External Masonry Walls*.

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13162 : 2012.

Technical Specification

1 Description

1.1 URSA Cavity Batt 32 Insulation for partial fill application is an olive green, mineral wool slab of homogeneous texture, which has been treated with silicon-based, water-repellent additive.

1.2 The product has a nominal length of 1350 mm, width of 455 mm and thicknesses of 75, 85, 100, 125 and 150 mm.

2 Manufacture

2.1 Insulation slabs are manufactured using conventional fully automated techniques.

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 URSA UK Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by LGA (Certificate QM-1903108).

3 Delivery and site handling

3.1 The slabs are delivered to site in polythene-wrapped packs. Each pack contains a label with the Certificate holder's name, slab dimensions and the BBA logo incorporating the number of this Certificate.

3.2 On site, the product should be stored clear of the ground on a clean level surface and preferably under cover to protect it from prolonged exposure to moisture or mechanical damage.

3.3 Partially completed walls should be protected from inclement weather (wind, rain and snow) and covered at the end of a day's work.

3.4 It is recommended that dust masks, gloves and long-sleeved clothing are worn when cutting and handling the product. Large-scale machining should be connected to a dust-extraction system.

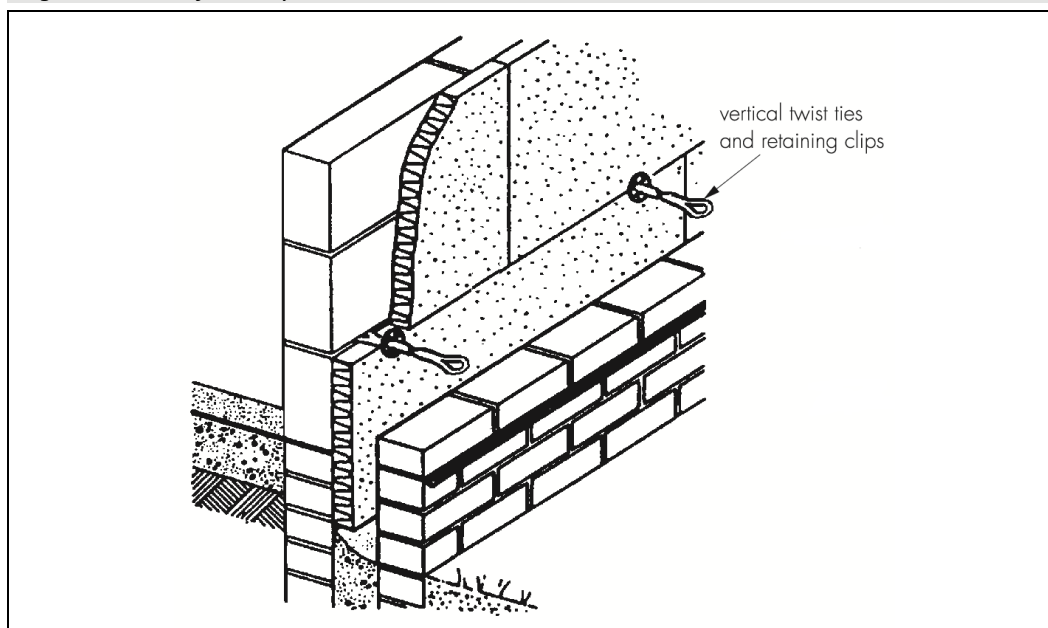
Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on URSA Cavity Batt 32 Insulation for partial fill application.

4 Use

4.1 URSA Cavity Batt 32 Insulation is satisfactory for use as partial fill cavity wall insulation and is effective in reducing the thermal transmittance (U value) of external cavity walls with masonry inner and outer leaves (where masonry includes clay and calcium silicate bricks, concrete blocks, and natural and reconstituted stone blocks). The product is for use in new domestic and non-domestic buildings without height restriction (additional requirements apply above 25 metres). It is essential that walls are designed and constructed to incorporate the precautions given in this Certificate to prevent moisture penetration.

Figure 1 Partial fill cavity insulation



4.2 Buildings subject to the national Building Regulations should be designed and constructed in accordance with the relevant recommendations of:

- BS 8000-3 : 2001
- BS EN 845-1 : 2013
- BS EN 1996-1-1 : 2005 and its UK National Annex
- BS EN 1996-1-2 : 2005 and its UK National Annex
- BS EN 1996-2 : 2006 and its UK National Annex
- BS EN 1996-3 : 2006 and its UK National Annex

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

4.4 The use of cavity battens and/or boards during construction is strongly recommended to prevent bridging by mortar droppings.

4.5 It is recommended that installation is continuous up to the highest level on each wall. The cavity must be capped in brick, block or suitable board material.

4.6 Cavity wall ties with insulation-retaining fixings and, if required, any additional ties to BS EN 845-1 : 2013 and PD 6697 : 2010 should be used for structural stability in accordance with BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006.

4.7 Care must be taken in the overall design and construction of walls incorporating the products to ensure the provision of appropriate:

- cavity trays and damp-proof courses (dpc)
- cavity barriers and fire stopping
- resistance to the ingress of precipitation, moisture and dangerous gases from the ground
- resistance to sound transmission when flanking separating walls and floors.

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

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

Buildings up to and including 12 metres high

4.9 The residual cavity width to be maintained during construction is 25 mm. To achieve this, a greater nominal residual cavity width may need to be specified at the design stage (to allow for inaccuracies inherent in the building process). The specifier may either:

- design a nominal residual cavity width of 50 mm (a residual cavity nominally at least 50 mm wide will be required by the NHBC), or
- design a cavity width which takes into account the dimensional tolerances of the components which make up the wall (by reference to the British Standards relating to the bricks, blocks and boards, or by using the data from the respective manufacturers). Allowances may need to be made for the quality of building operatives and the degree of site supervision or control available. The limitations in respect of exposure of the proposed building as set out in Table 1 must also be observed.

Table 1 Maximum allowable total exposure factors of different constructions

Construction	Maximum allowable exposure factor (E) ⁽¹⁾
All external masonry walls protected by: rendering (to BS EN 13914-1 : 2016); tile hanging; slate hanging; or timber, plastic or metal weatherboarding or cladding	No restriction
One or more external masonry walls constructed from facing clay brickwork or natural stone, (the porosity of which exceeds 20% by volume). Mortar joints must be flush-pointed or weatherstruck	100
One or more external masonry walls constructed from calcium silicate bricks, concrete blocks, reconstituted stone, or natural stone, the porosity of which is less than 20% by volume, or any material with raked mortar joints	88

(1) To BS 5618 : 1985

4.10 An external render coat or other suitable finish should be applied in locations where such application would be normal practice; care should be taken to ensure that the residual cavity is not bridged by mortar.

Buildings over 12 metres in height

4.11 The width of the residual clear cavity to be achieved is to be in excess of 50 mm, and the following additional requirements apply:

- from ground level, the maximum height of continuous cavity walls must not exceed 12 metres; above 12 metres, the maximum height of continuous cavity walls must not exceed 7 metres. In both cases, breaks should be in the form of continuous horizontal cavity trays and weepholes discharging to the outside
- the specifier must take extra care when detailing to ensure that the introduction of the insulation does not affect the weather resistance of the wall. Above average site supervision is recommended during installation of the product
- where, for structural reasons, the cavity width is reduced, eg by the intrusion of ring beams, a minimum residual cavity width of 25 mm must be maintained and extra care must be taken with fixings and weatherproofing, eg by the inclusion of cavity trays with weepholes.

5 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

6 Thermal performance



6.1 Calculations of the thermal transmittance (U value) should be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2006 using the declared thermal conductivity (λ_D) of $0.032 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

6.2 The U value of a typical brick and block cavity wall construction will depend on the cavity width and the insulating value of the internal block leaf finish. Calculated U values for sample constructions are given in Table 2 of this Certificate.

Table 2 Example cavity wall U values⁽¹⁾

U value requirement ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) ⁽¹⁾	Insulation thickness (mm)	
	13 mm dense plaster ⁽²⁾	Plasterboard on dabs ⁽⁴⁾
	100 mm dense block ⁽³⁾	100 mm AAC block ⁽⁵⁾
0.18	160 ⁽⁶⁾	150
0.19	160 ⁽⁶⁾	125
0.25	125	85
0.26	125	85
0.27	100	75
0.28	100	75
0.30	100	75
0.35	75	75

(1) Assumes fixings correction for fully penetrating steel fixings ($17 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) at 2.5 m^2 with cross-sectional area of 12.5 mm^2 and a 50 mm air cavity. Construction includes 102.5 mm thick brick outer leaf.

(2) Dense block and mortar thermal conductivity 1.13 and $0.88 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ respectively.

(3) Plaster thermal conductivity $0.57 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

(4) AAC block and mortar thermal conductivity 0.12 and $0.88 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ respectively.

(5) Plasterboard thermal conductivity $0.25 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

(6) Thickness achieved with two layers of insulation.

6.3 Care must be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration. Detailed guidance can be found in the documents supporting the national Building Regulations.

7 Water resistance



7.1 When the product is used in situations where it bridges the damp-proof course (dpc) in walls, dampness from the ground will not pass through to the inner leaf provided the wall is detailed in accordance with the requirements and provisions of the national Building Regulations.

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

8 Condensation

Interstitial condensation



8.1 Walls will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2011, Annexes D and G, and the relevant guidance.

8.2 The insulation water vapour resistance factor (μ) may be taken as 1.

Surface condensation



8.3 Walls will adequately limit the risk of surface condensation when 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.



8.4 For buildings in Scotland, wall constructions will be acceptable when the thermal transmittance (U value) does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the junctions with other elements are designed in accordance with the guidance referred to in BS 5250 : 2011, Annex G. Further guidance may be obtained from BRE Report BR 262 : 2002 and section 6.3 of this Certificate.

9 Behaviour in relation to fire



9.1 The product has an A1 reaction to fire classification⁽¹⁾ to BS EN 13501-1 : 2018. It is, therefore, unrestricted in terms of building height and proximity to boundaries.

(1) Report no. RA20-0276, Date: 18 November 2020. CSTB.

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

10 Maintenance

As the product is confined within the wall cavity and has suitable durability, maintenance is not required (see section 11).

11 Durability



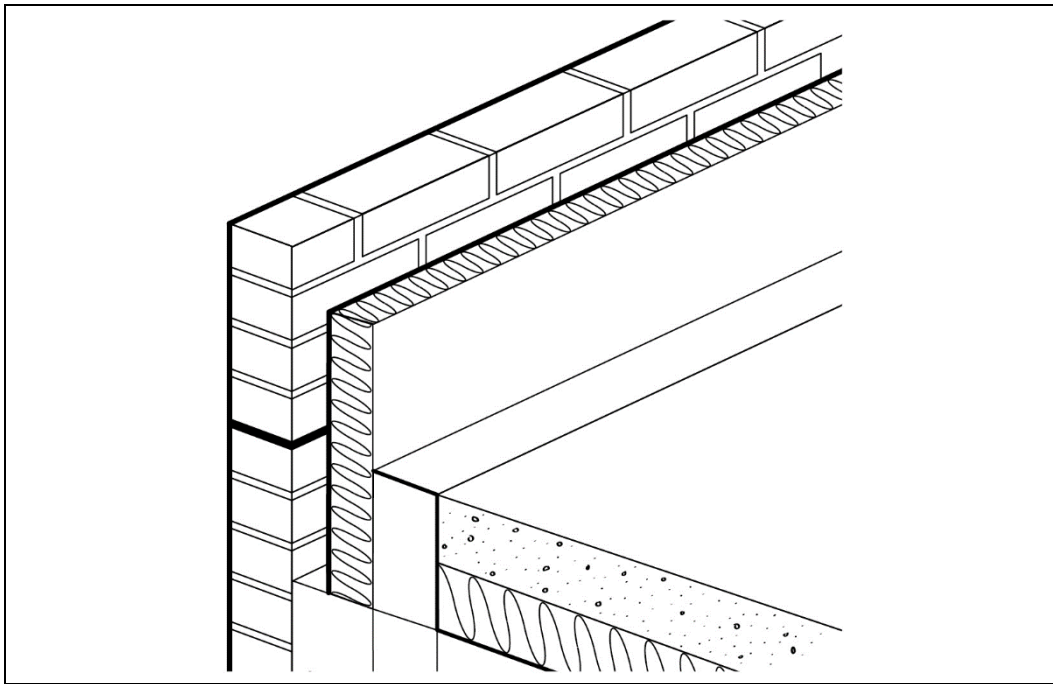
The product is unaffected by the normal conditions in a wall construction, and is durable, rot-proof, water resistant and sufficiently stable to remain effective as insulation for the life of the building.

12 General

12.1 It is recommended that the internal leaf is constructed ahead of the external leaf, with the first row of wall ties where the insulation is to begin, but not on the dpc, and at approximately 600 mm horizontal spacing. Any mortar protruding into the cavity space from the back of the internal leaf should be cleaned off before installing the product.

12.2 The first run of slabs may commence below dpc level to provide some edge insulation for the floor (see Figure 2).

Figure 2 Building in the first row of slabs



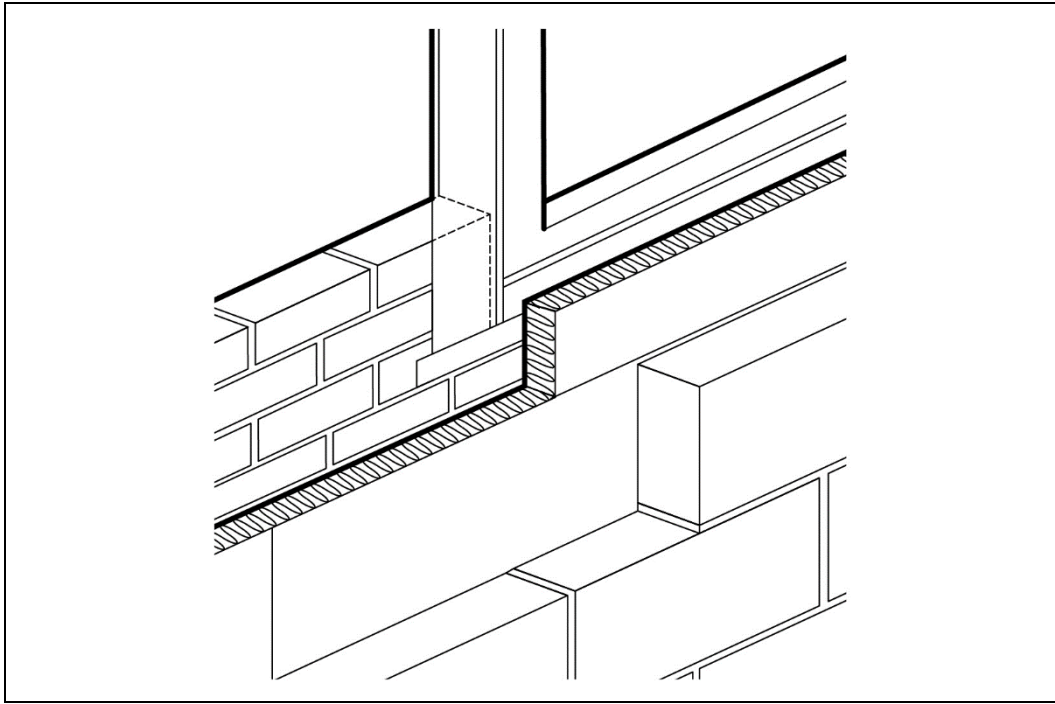
12.3 A section of the wall leaf is built up to a course above the next row of wall ties, which are placed at 450 mm spacing vertically and not more than 900 mm horizontally.

12.4 The product is placed between the upper and lower wall ties to form a closely butt-jointed run. It is essential that all wall ties slope downwards towards the outer leaf.

12.5 Additional ties (see Figure 3) may be required to satisfy the structural requirements of BS EN 845-1 : 2013, BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006 to ensure adequate retention of slabs or cut pieces.

12.6 The product can be 'slit' with a sharp knife to allow wall ties through.

Figure 3 Reveal details



12.7 The product can be cut with a knife, to fit around corners, windows, doors and air bricks. It is essential that it is cut accurately so that the cut pieces completely fill the spaces for which they are intended and that no gaps are left in the insulation.

12.8 The other leaf is then built up to the same level as the product, and the process repeated.

13 Procedure

13.1 Walls are constructed in the conventional manner (see section 4).

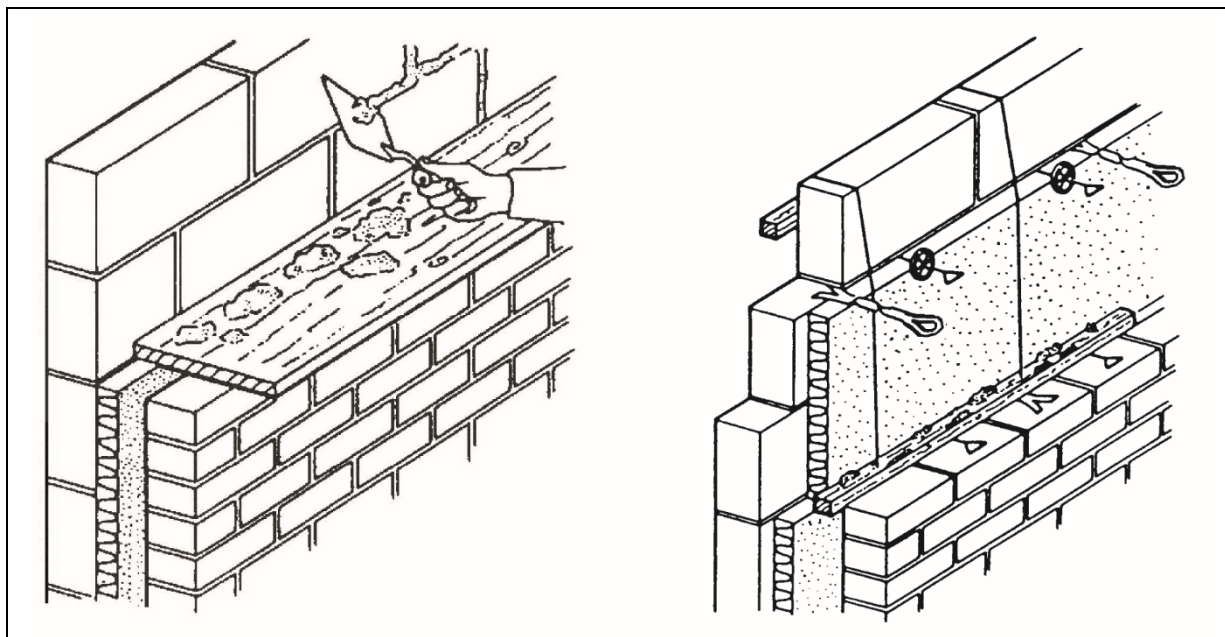
13.2 Successive sections of wall, incorporating wall ties, are constructed and the product installed as work proceeds up to the required height.

13.3 The two-layer insulation (see Table 1 of this Certificate) is identical to the single-layer insulation, but the vertical joints in the second layer must not coincide with the vertical joints in the first layer.

Mortar droppings

13.4 After each section of the wall leaf is built, excess mortar should be removed and mortar droppings cleaned from exposed edges of the installed product before installation of the next section. Use of a cavity board or a cavity batten will protect the installed board edges and help to keep the cavity clean as the following leaf is built (see Figure 4).

Figure 4 Use of cavity board or batten when cleaning off excess mortar

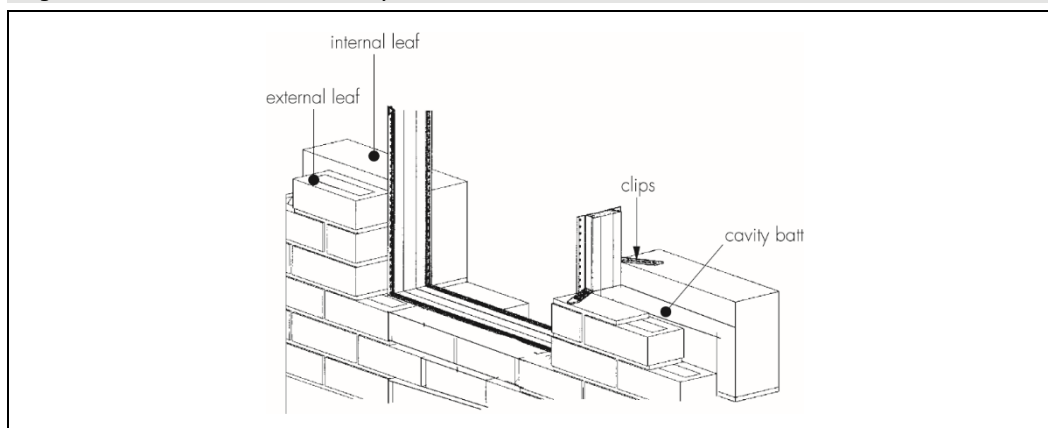


Wall openings

13.5 Where openings such as doors and windows are in close proximity, it is recommended that a continuous lintel or cavity tray is used. Damp-proofing at lintel level must be provided with stop-ends and be adequately drained.

13.6 Where required, door and window reveals should incorporate a cavity closer depending on the set-back of the frame (see Figure 5). It is recommended that BBA-approved cavity closers are used.

Figure 5 Reveal details with cavity closer



Protection

13.7 Exposed areas of slabs should always be covered at the end of a day's work or in driving rain.

Technical Investigations

14 Tests

The following tests were carried out by the BBA on URSA Cavity Batt 32 Insulation for partial fill application:

- rain penetration
- thermal conductivity
- product characteristics:
 - refractive index

- ash content
 - water absorption
- density.

15 Investigations

15.1 Assessment was made of the following characteristics:

- thermal conductivity data
- fire data.

15.2 U value calculations were carried out.

15.3 A condensation risk analysis was carried out.

15.4 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 + A1 : 2016 *Code of practice for control of condensation in buildings*

BS 5618 : 1985 *Code of practice for thermal insulation of cavity walls (with masonry or concrete inner and outer leaves) by filling with urea-formaldehyde (UF) foam systems*

BS 8000-3 : 2020 *Workmanship on building sites — Code of practice for masonry*

BS EN 845-1 : 2013 + A1 : 2016 *Specification for ancillary components for masonry — Wall ties, tension straps, hangers and brackets*

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 UK National Annex to *Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*

BS EN 13162 : 2012 + A1 : 2015 *Thermal insulation products for buildings — Factory made mineral wool (MW) products — Specification*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

BS EN 13914-1 : 2016 *Design, preparation and application of external rendering and internal plastering — External rendering*

BS EN ISO 6946 : 2017 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

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

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

PD 6697 : 2010 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

16 Conditions

16.1 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.

16.2 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.

16.3 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.

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

16.5 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.

16.6 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.