

## URSA UK Ltd

Crest House  
102-104 Church Road  
Teddington  
Middlesex TW11 8PY  
Tel: 020 8977 9697 Fax: 020 8977 9456  
e-mail: ursauk@uralita.com  
website: www.ursa-uk.co.uk



Agrément Certificate  
**09/4624**  
Product Sheet 1

## URSA PARTIAL AND FULL FILL CAVITY WALL INSULATION

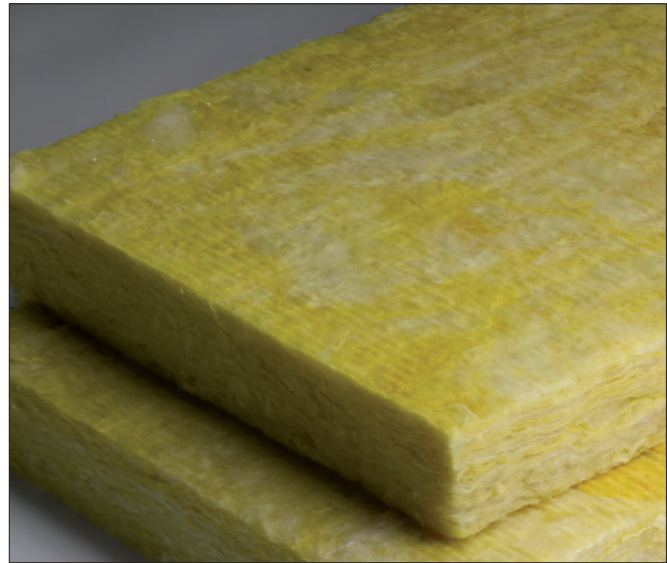
### URSA CAVITY BATT 35 INSULATION

#### PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Ursa Cavity Batt 35 Insulation, a lightweight, non-combustible, unfaced glass mineral wool slab for use as full or partial fill insulation in external masonry cavity walls.

#### AGRÉMENT CERTIFICATION INCLUDES:

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



#### KEY FACTORS ASSESSED

**Thermal performance** — the product has a thermal conductivity ( $\lambda_{90/90}$  value) of  $0.035 \text{ Wm}^{-1}\text{K}^{-1}$  and calculations for 'typical' wall constructions indicate U values between  $0.39 \text{ Wm}^{-2}\text{K}^{-1}$  and  $0.18 \text{ Wm}^{-2}\text{K}^{-1}$  (see section 5).

**Rain penetration** — the product will resist water transfer across the cavity of the walls (see section 6).

**Condensation** — the product will contribute to limiting the risk of condensation (see section 7).

**Behaviour in relation to fire** — the product is classified as class A2 reaction to fire in accordance with BS EN 13501-1 : 2007 (see section 8).

**Durability** — the product will have a life equivalent to that of the wall structure in which it is incorporated (see section 10).

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

On behalf of the British Board of Agrément

Date of First issue: 7 August 2009

Chris Hunt  
Head of Approvals — Physics

Greg Cooper  
Chief Executive

*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](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.*

British Board of Agrément  
Bucknalls Lane  
Garston, Watford  
Herts WD25 9BA

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tel: 01923 665300  
fax: 01923 665301  
e-mail: [mail@bba.star.co.uk](mailto:mail@bba.star.co.uk)  
website: [www.bbacerts.co.uk](http://www.bbacerts.co.uk)

# Regulations

In the opinion of the BBA, Ursa Cavity Batt 35 Insulation if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



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

<b>Requirement:</b> C2(a)	<b>Resistance to moisture</b>
<b>Comment:</b>	The product does not absorb water by capillary action and, therefore, may be used in situations where it bridges the damp-proof courses of the inner or outer leaves. See section 6.1 of this Certificate.
<b>Requirement:</b> C2(b)	<b>Resistance to moisture</b>
<b>Comment:</b>	Tests by the BBA indicate that a wall incorporating the product can resist rain penetration and satisfy this Requirement. See sections 3.2, 3.3 and 6.2 of this Certificate.
<b>Requirement:</b> C2(c)	<b>Resistance to moisture</b>
<b>Comment:</b>	The product can contribute to satisfying this condensation Requirement. See sections 7.1 and 7.3 of this Certificate.
<b>Requirement:</b> L1(a)(i)	<b>Conservation of fuel and power</b>
<b>Comment:</b>	The product can contribute to meeting this Requirement. See sections 5.3 to 5.5 of this Certificate.
<b>Requirement:</b> Regulation 7	<b>Materials and workmanship</b>
<b>Comment:</b>	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



## The Building (Scotland) Regulations 2004 (as amended)

<b>Regulation:</b> 8(1)(2)	<b>Fitness and durability of materials and workmanship</b>
<b>Comment:</b>	The product can contribute to a construction satisfying this Regulation. See sections 10 and 11 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b> 9	<b>Building standards – Construction</b>
<b>Standard:</b> 2.6	Spread to neighbouring buildings
<b>Comment:</b>	The product has a classification A2 and is unrestricted by clauses 2.6.5 <sup>(1)</sup> and 2.6.6 <sup>(2)</sup> . See section 8.5 of this Certificate.
<b>Standard:</b> 3.4	Moisture from the ground
<b>Comment:</b>	The product does not absorb water by capillary action and, therefore, may be used where it bridges the dpc of the inner or outer leaf, with reference to clauses 3.4.1 <sup>(1)</sup> and 3.4.5 <sup>(1)(2)</sup> . See section 6.1 of this Certificate.
<b>Standard:</b> 3.10	Precipitation
<b>Comment:</b>	Walls incorporating the product can satisfy this Standard, with reference to clause 3.10.1 <sup>(1)(2)</sup> . See sections 3.2, 3.3, 3.8 and 6.2 of this Certificate.
<b>Standard:</b> 3.15	Condensation
<b>Comment:</b>	The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)</sup> , 3.15.3 <sup>(1)</sup> and 3.15.4 <sup>(1)</sup> . See sections 7.2 and 7.3 of this Certificate.
<b>Standard:</b> 6.1(a)(b)	Carbon dioxide emissions
<b>Standard:</b> 6.2	Building insulation envelope
<b>Comment:</b>	The product can contribute to satisfying clauses, or parts of clauses, 6.1.1 <sup>(1)</sup> , 6.1.2 <sup>(2)</sup> , 6.1.6 <sup>(1)</sup> , 6.2.1 <sup>(1)(2)</sup> , 6.2.3 <sup>(1)</sup> , 6.2.9 <sup>(1)</sup> , 6.2.11 <sup>(1)</sup> , 6.2.10 <sup>(2)</sup> and 6.2.12 <sup>(2)</sup> . See sections 5.3 to 5.5 of this Certificate.
<b>Regulation:</b> 12	<b>Building standards – conversions</b>
<b>Comment:</b>	All comments given for this product under Regulation 9, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)</sup> and Schedule 6 <sup>(1)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

<b>Regulation:</b> B2	<b>Fitness of materials and workmanship</b>
<b>Comment:</b>	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b> B3(2)	<b>Suitability of certain materials</b>
<b>Comment:</b>	The product is acceptable. See section 10 of this Certificate.
<b>Regulation:</b> C4(a)	<b>Resistance to ground moisture</b>
<b>Comment:</b>	The product does not absorb water by capillary action and, therefore, may be used where it bridges the damp-proof course of the inner or outer leaf. See section 6.1 of this Certificate.
<b>Regulation:</b> C4(b)	<b>Resistance to ground moisture and weather</b>
<b>Comment:</b>	Walls incorporating the product can satisfy this Regulation. See sections 3.2, 3.3 and 6.2 of this Certificate.
<b>Regulation:</b> C5	<b>Condensation</b>
<b>Comment:</b>	The product can contribute to satisfying this Regulation. See section 7.3 of this Certificate.
<b>Regulation:</b> F2(a)(i)	<b>Conservation measures</b>
<b>Regulation:</b> F3	<b>Target carbon dioxide Emissions Rate</b>
<b>Comment:</b>	The product can contribute to satisfying these Regulations. See sections 5.3 to 5.5 of this Certificate.

## Construction (Design and Management) Regulations 2007

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

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

See section: 2 Delivery and site handling (2.4)

## Non-regulatory Information

### NHBC Standards 2008

NHBC accepts the use of Ursa Cavity Batt 35 Insulation installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls*.

### Zurich Building Guarantee Technical Manual 2007

In the opinion of the BBA, Ursa Cavity Batt 35 Insulation, when installed and used in accordance with this Certificate, satisfies the requirements of the *Zurich Building Guarantee Technical Manual*, Section 4 *Superstructure*, Sub-sections *External walls – masonry* and *External walls – thermal insulation*.

## General

This Certificate relates to URSA Cavity Batt 35 Insulation, for use as full fill or partial fill thermal insulation in new external masonry walls up to and including 12 m in height, in domestic and non-domestic buildings.

The product is manufactured by Ursa Benelux, Industriezone 7, Pitantiestraat 127, 8792 Waregem-Desselgem, Belgium. Tel: 00 32 56 73 84 84.

## Technical Specification

### 1 Description

- 1.1 Ursa Cavity Batt 35 Insulation is a yellow 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 1200 mm and width of 455 mm, with thickness in the range of 75 mm to 150 mm.
- 1.3 The product has a nominal density of 20 kgm<sup>-3</sup>.
- 1.4 For the partial fill application, cavity wall ties in accordance with BS EN 845-1: 2003 and BS 5628-3: 2001, approved by the BBA, are suitable.

### 2 Delivery and site handling

- 2.1 The product is supplied wrapped in polythene to provide short-term protection.
- 2.2 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.
- 2.3 Partially completed walls should be protected from inclement weather (wind, rain and snow) and covered at the end of a day's work.
- 2.4 It is recommended that dust masks, gloves and long sleeved clothing should be worn during cutting and handling the product. Large-scale machining should be connected to a dust extraction system.

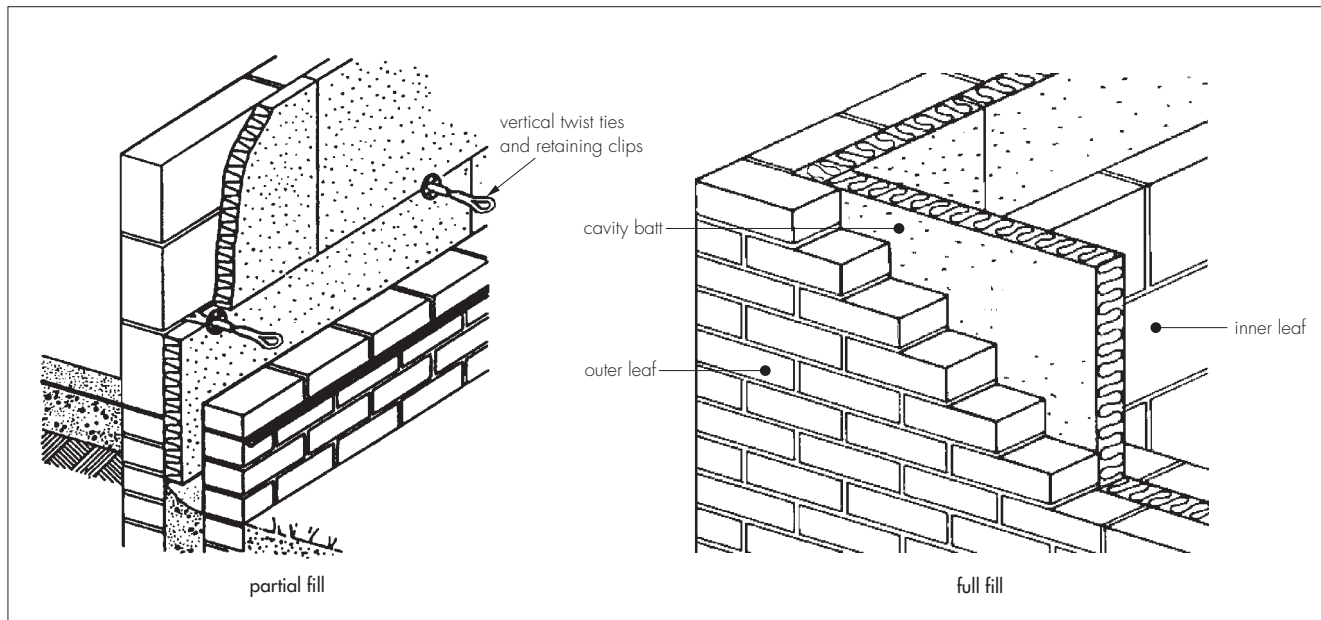
## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on URSA Cavity Batt 35 Insulation.

## 3 General

3.1 URSA Cavity Batt 35 Insulation is effective in reducing the thermal transmittance (U value) of cavity walls both as partial fill and full fill, with masonry inner and outer leaves as shown in Figure 1, where masonry includes clay and calcium silicates bricks, concrete blocks, natural and reconstituted stone blocks, in new and existing buildings up to 12 m in height.

Figure 1 Partial fill and full fill cavity insulation



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

- BS 5628-3 : 2005. In particular, Clause 5.5.2 *Exclusion of water* of the Code of Practice should be followed in that the designer should select a construction appropriate to the local wind-driven rain index, paying due regard to the design detailing, workmanship and materials to be used.
- BS 8000-3 : 2001.

3.3 For full fill applications the design conditions to be followed are:

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

3.4 Other new buildings not subjected to any of the above should also be built in accordance with BS 5628-3 : 2005 and BS 8000-3 : 2001.

3.5 As with all cavity wall insulation, the construction and detailing should comply with good practice as described in the BBA joint publication *Cavity Insulation of Masonry Walls — Dampness Risks and How to Minimise Them*. They are particularly important in areas subject to severe or very severe driving rain.

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

3.7 To reduce the risk of water penetration, raked or recessed mortar joints should be avoided in severe or very severe exposure zones.



3.8 For both full fill and partial fill where a residual cavity width of 50 mm or greater is specified, the product can be used in buildings up to 12 m high, any exposure zone. However, the use of the boards 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.

3.9 As with any other form of cavity wall insulation, where buildings need to comply with *NHBC Standards 2008* or *Zurich Building Guarantee Technical Manual 2007*, specifiers should observe the requirements of these standards.

3.10 For partial fill applications, the minimum residual cavity width to be maintained during construction must be 25 mm. To achieve this requirement 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 cavity width by consideration of 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 use the data from their respective manufacturers. In addition, allowance may need to be made for the quality of available building operatives and the degree of site supervision or control available, or
- design a nominal residual cavity width of 50 mm (a residual cavity nominally 50 mm wide will be required by the NHBC, where normal standards of tolerance and workmanship are adopted).

3.11 The size of residual cavity obtained in the processes described in section 3.9 is also subject to the following limitations in respect of exposure of the proposed building as set out in Table 1.

**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 : 2005) tile hanging slate hanging 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.	
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.	100
	88

(1) Based upon the approach in BS 5618 : 1985 and also outlined in BBA Information Sheet No 10.

## 4 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product (see sections 12.1 and 12.2).

## 5 Thermal performance

5.1 Calculations of thermal transmittance (U value) should be carried out in accordance with BS EN ISO 6946 : 2007 and BRE report (BR 443 : 2006) *Conventions for U-value calculations*, using the manufacturer's declared thermal conductivity value ( $\lambda_{90/90}$  value) of  $0.035 \text{ Wm}^{-1}\text{K}^{-1}$ .

5.2 The U value of a completed wall will depend on the selected insulation thickness, number and type of fixings, the insulating value of the substrate masonry and its internal finish. Calculated U values for example constructions are given in Tables 2 and 3.

**Table 2** U values for the partial fill construction (either 25 mm or 50 mm air gap)

Cavity width (mm)	Insulation thickness (mm)	U value ( $\text{Wm}^{-2}\text{K}^{-1}$ )	
		AAC block ( $\lambda = 0.12 \text{ Wm}^{-1}\text{K}^{-1}$ ) <sup>(1)</sup>	Dense block ( $\lambda = 1.13 \text{ Wm}^{-1}\text{K}^{-1}$ ) <sup>(2)</sup>
100	75	0.29	0.36
125	100	0.24	0.29
150	125	0.20	0.24
175	150	0.18	0.20

(1) With plasterboard on dabs internal finish

(2) With plaster internal finish

**Table 3** U values for the full fill construction

Cavity width (mm)	U value ( $Wm^{-2}K^{-1}$ )	
	AAC block ( $\lambda = 0.12 Wm^{-1}K^{-1}$ ) <sup>(1)</sup>	Dense block ( $\lambda = 1.13 Wm^{-1}K^{-1}$ ) <sup>(2)</sup>
75	0.30	0.39
100	0.25	0.31
125	0.21	0.25
150	0.18	0.21

(1) With plasterboard on dabs internal finish

(2) With plaster internal finish



5.3 When considering insulation requirements, designers should refer to the detailed guidance contained in the documents supporting the national Building Regulations. The U values shown in Tables 2 and 3 indicate that the product can enable a wall to achieve typical design U values referred to in those supporting documents (see Tables 4 and 5).

**Table 4** Typical design U values for walls – England & Wales and Northern Ireland

U value ( $Wm^{-2}K^{-1}$ )	Construction type
0.30	Mean for new extensions <sup>(1)</sup>
0.35	'Notional' mean in SAP and SBEM and limit mean for new-build
0.35	Mean for replacement, renovated and retained walls and non-domestic consequential improvements <sup>(1)</sup>
0.70	Individual limit for new-build and flexible approaches <sup>(1)</sup>

(1) Alternative/flexible approaches are described in the relevant documents supporting the national Building Regulations.

**Table 5** Typical design U values for walls – Scotland

U value ( $Wm^{-2}K^{-1}$ )	Construction type
0.20	'Notional' mean for dwellings in SAP and the 'simplified' approach: – solid fuel, package 6
0.25	– other fuels, packages 1–5
0.27	Mean for new extensions, conversions, alterations <sup>(1)</sup>
0.27	Mean for stand-alone buildings less than 50 m <sup>2</sup> .
0.30	'Notional' mean for non-domestic in SBEM and limit mean for new-build and stand-alone buildings of 50 m <sup>2</sup> or more
0.70	Individual limit for new-build, extensions, conversions, alterations, reconstructions and stand alone-buildings less than 50 m <sup>2</sup> .

(1) Alternative/flexible approaches are described in the relevant documents supporting the national Building Regulations.

5.4 For new buildings, walls with U values lower than (or the same as, for dwellings in Scotland) the relevant 'notional' value specified in Table 4 or 5 will contribute to a building meeting its Target Emission Rate. Walls with higher U values will require additional energy saving measures in the building envelope and/or services. For existing buildings, walls should be designed not to exceed the relevant U value in Table 4 or 5.

5.5 The product can maintain, or contribute to maintaining, continuity of thermal insulation around openings and at junctions between external walls and other building elements. Default psi values can be used for Accredited Construction details in Emission Rate calculations to SAP 2005 or the Simplified Building Energy Model (SBEM). Detailed guidance in this respect and on limiting heat loss by air infiltration can be found in:

**England and Wales** – TSO 2002 publication *Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings or Accredited Construction Details* (version 1.0).

**Scotland** – Accredited Construction Details (Scotland).

**Northern Ireland** – Accredited Construction Details (version 1.0).

## 6 Rain penetration



6.1 When the product is used in situations where it bridges the damp-proof course 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:

**England and Wales** – Approved Document C, section 5

**Scotland** — Mandatory Standard 3.4, clause 3.4.1<sup>(1)</sup>

(1) Technical Handbook (Domestic).

**Northern Ireland** — Technical Booklet C, Section 1.6.

6.2 Tests for full fill applications confirm that constructions built in accordance with BS 5628-3 : 2005 will prevent water reaching the inner leaf in damaging amounts. Water penetrating the outer leaf of the wall, will drain down the cavity face of the outer leaf and the product will contribute to satisfy the national Building Regulations:

**England and Wales** — Approved Document C, section 5

**Scotland** — Mandatory Standard 3.10, clause 3.10.1<sup>(1)(2)</sup>

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non Domestic).

**Northern Ireland** — Technical Booklet C, Section 2.

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

- installation is carried out to the highest level on each wall or the top edge of the insulation is protected by a cavity tray
- wall ties are installed correctly and are thoroughly clean
- excess mortar is cleaned from the cavity face of the leading leaf
- mortar droppings are cleaned from the exposed edges of installed boards
- cavity trays are used with appropriate stop ends and weep holes at lintel level
- dpc's at ground level for partial fill do not project into any residual cavity as they can form a trap for mortar bridging.

## 7 Condensation

### Surface condensation



7.1 Walls will limit the risk of surface condensation adequately when the thermal transmittance (U value) does not exceed  $0.7 \text{ Wm}^{-2}\text{K}^{-1}$  at any point, and the junctions with floors, roofs and openings are designed in accordance with section 5.5.



7.2 For buildings in Scotland, constructions will be acceptable where the thermal transmittance (U value) of the wall does not exceed  $1.2 \text{ Wm}^{-2}\text{K}^{-1}$  at any point and openings and junctions with other elements comply with the guidance given in BS 5250 : 2002, Section 8, and further guidance can be found in BRE report (BR 262 : 2002) *Thermal insulation: avoiding risks*.

### Interstitial condensation



7.3 Walls will limit the risk of interstitial condensation adequately when they are designed and constructed in accordance with BS 5250 : 2002, Section 8 and Annex D.

7.4 The product has a nominal vapour resistivity of  $5 \text{ MNsg}^{-1}\text{m}^{-1}$ .

## 8 Behaviour in relation to fire

8.1 The product does not prejudice the fire-resistance properties of the wall. The Certificate holder has declared the product is characterised as Class A2 'reaction to fire' when classified in accordance with BS EN 13501-1 : 2007.

8.2 The requirements of the Building Regulations relating to fire spread in cavity walls can be met in buildings of all purpose groups without the need for cavity barriers, where the cavity is fully filled or the construction complies with the provisions detailed in:

**England and Wales** — Approved Document B, Volume 1, Diagram 13 and Volume 2, Diagram 34

**Northern Ireland** — Technical Booklet E, Diagram 3.5.

8.3 A summary of these provisions is given here:

- the wall must consist of masonry inner and outer leaves, each at least 75 mm thick
- the cavity must not be more than 300 mm wide (Northern Ireland only)
- the cavity must be closed at the top of the wall and at the top of any opening
- in addition to the insulation, only the following combustible materials shall be placed in, or exposed to, the cavity:
  - timber lintels, window or door frames, or end of timber joists
  - pipe, conduit or cable
  - dpc, flashing, cavity closer or wall tie
  - domestic meter cupboard, provided that there are not more than two cupboards to a dwelling, the opening in the outer leaf is not more than 800 mm by 500 mm for each cupboard, and the inner leaf is not penetrated except by a sleeve not more than 80 mm by 80 mm, which is fire-stopped.

8.4 For constructions not covered by sections 8.2 and 8.3, cavity barriers must be provided to comply with:

**England and Wales** — Approved Document B, Volume 1, Section 6 and Volume 2, Section 9

**Scotland** — Mandatory Standard 2.4, clauses 2.4.1<sup>(1)(2)</sup>, 2.4.2<sup>(1)(2)</sup>, 2.4.7<sup>(1)</sup> and 2.4.9<sup>(2)</sup>

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non Domestic).

**Northern Ireland** — Technical Booklet E, Paragraphs 3.35 to 3.39.



8.5 The product is classified as non combustible and this means that it is unrestricted by clauses 2.6.5<sup>(1)</sup> and 2.6.6<sup>(2)</sup>.

## 9 Proximity of flues and appliances

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

**England and Wales** — Approved Document J

**Northern Ireland** — Technical Booklet L.

## 10 Maintenance



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

## 11 Durability



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

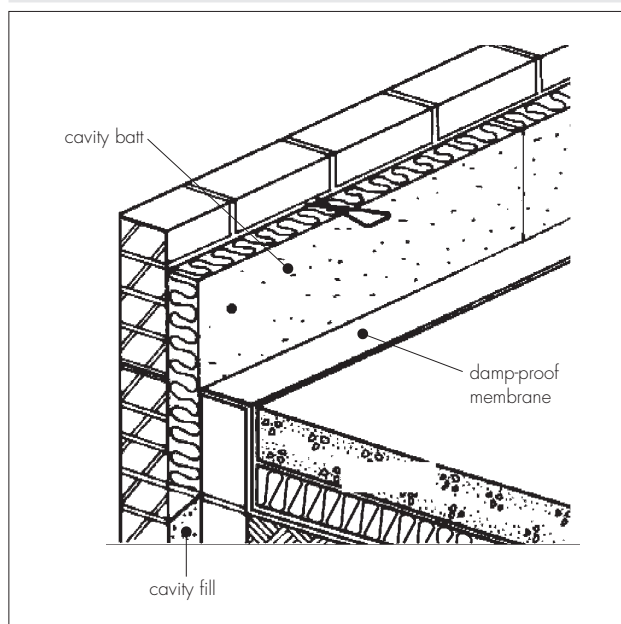
# Installation

## 12 General

12.1 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 damp-proof course, and at approximately 600 mm horizontal spacing. Any mortar protruding into the cavity space from the back of the internal leaf shall be cleaned off before installing the product.

12.2 The first run of boards may commence below damp-proof course level to provide some edge insulation for the floor (see Figure 2).

Figure 2 Building in the first row of boards

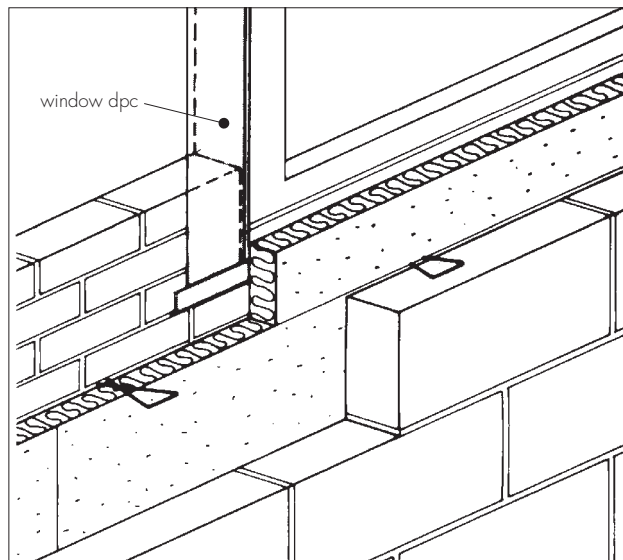


12.3 A section of the wall leaf is built up to a course above the next row of wall ties which are placed at the usual spacing of 450 mm vertically and not more than 900 mm horizontally (see BS 5628-3 : 2005, Table 9).

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 for structural stability or to ensure adequate retention of the product. The product can be 'slit' with a sharp knife to allow wall ties through. Cut sections of the product may be required around openings or at corners. It is essential that these be cut accurately to fill the space they are intended for and are adequately secured.

Figure 3 Reveal detail with double ties



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

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

### 13 Procedure

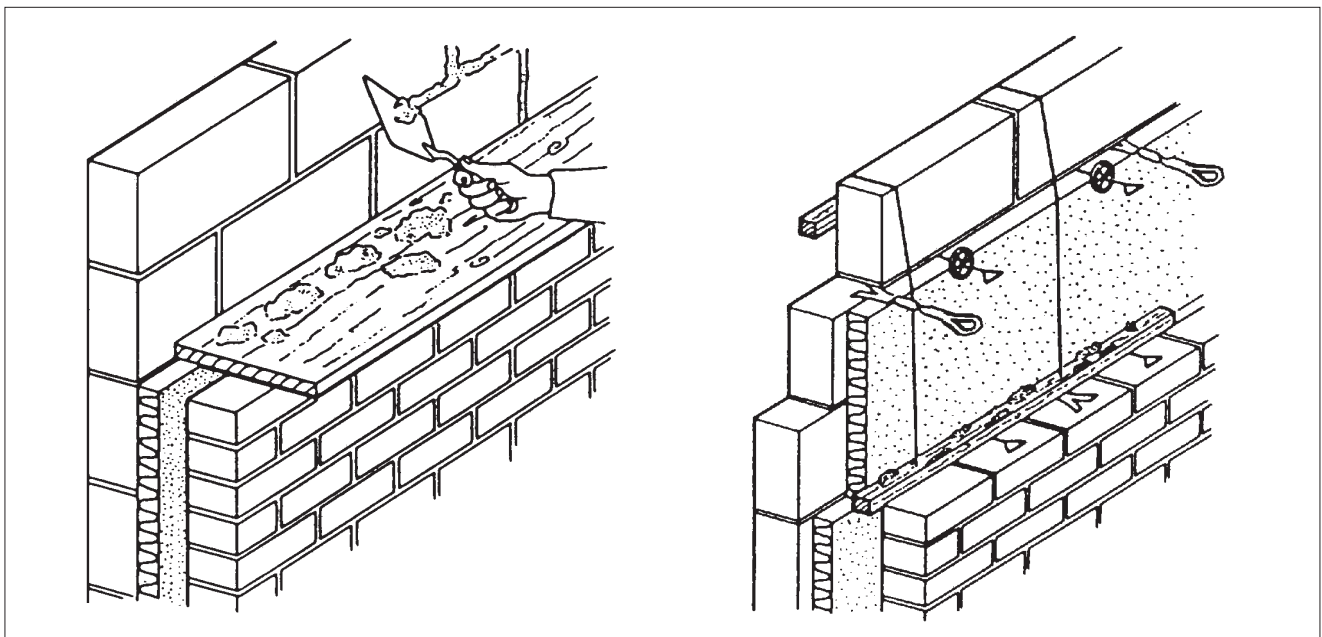
13.1 Walls are constructed in the conventional manner (see section 12).

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 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.

13.4 Use of a cavity board or batten is recommended to protect the product edges and make cleaning easier, as the next section is built (see Figure 4).

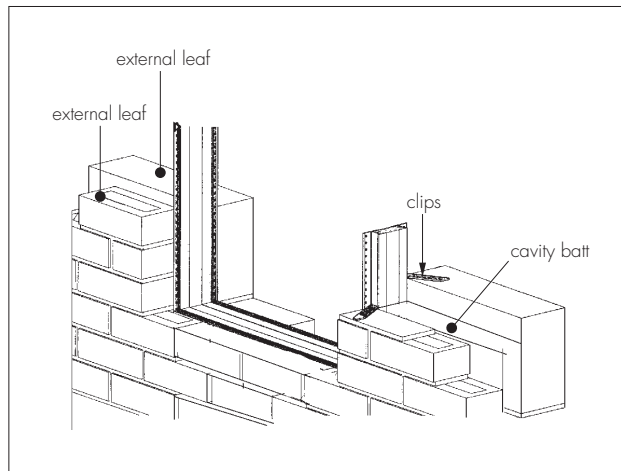
Figure 4 Use of cavity board when cleaning off excess mortar



13.5 Where openings such as doors and windows are in close proximity, it is recommended that a continuous lintel is used. Damp-proofing at lintel level must be provided with stopends and weep holes.

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 The product should always be installed to the highest level of each wall. If installation of the product is terminated at any other levels, the top edge of the insulation must be protected by a cavity tray and alternate perpend joints raked out to provide adequate drainage of water from this tray.

13.8 For full fill application it is recommended that when the outer leaf is built, the inner face must be in contact with the product and also the permitted deviation in the cavity width be as shown in Table 6.

Table 6 Deviation in cavity width

Insulation thickness (mm)	Permitted Deviation (mm)
75	75 – 90
100	100 – 115
125	125 – 140
150	150 – 170

#### Protection

13.9 All building involving the product, particularly interrupted work, must conform to BS 5628-3 : 2005, Sections 4.3 Storage on site, 4.13 Protection against damage during construction, and 4.14 Supervision.

## Technical Investigations

### 14 Tests

The following tests were carried out on URSA Cavity Batt 35 Insulation:

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

### 15 Investigations

The following investigations were carried out:

- thermal performance
- thermal conductivity data
- condensation risk analysis
- fire data.
- manufacturing process

## Bibliography

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- 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 5628-3 : 2005 *Code of practice for the use of masonry — Materials and components, design and workmanship*
- BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*
- BS EN 845-1 : 2003 *Specification for ancillary components for masonry — Ties, tension straps, hangers and brackets*
- BS EN 12524 : 2000 *Building materials and products — Hygrothermal properties — Tabulated design values*
- BS EN 13501-1 : 2007 *Fire classification of construction products and building elements. Classification using test data from reaction to fire tests*
- BS EN 13914-1 : 2005 *Design, preparation and application of external rendering and internal plastering — External rendering*
- BS EN ISO 6946 : 2007 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

## 16 Conditions

16.1 This Certificate:

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

16.2 Publications and documents referred to in this Certificate are those that the BBA deems to be relevant at the date of issue or re-issue of this Certificate and include any: Act of Parliament; Statutory Instrument; Directive; Regulation; British, European or International Standard; Code of Practice; manufacturers' instructions; or any other publication or document similar or related to the aforementioned.

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

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

16.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any information relating to the manufacture, supply, installation, use and maintenance of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.