

Provincial Seals Ltd

Unit 8
Stocksfield Hall
Stocksfield
Northumberland NE43 7TN
Tel: 01661 842 221 Fax: 01661 844 760
e-mail: info@provincialeseals.co.uk
website: www.provincialeseals.co.uk



Agrément Certificate
09/4669
Product Sheet 1

GUARDIAN FIBERGLASS INSULATION WHITE WOOL

GUARDIAN CWI 36 FIBERGLASS

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Guardian CWI 36 Fiberglass, a glass wool material, injected in loose form for use in a cavity wall.

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 investigation
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Thermal performance — the product has a thermal conductivity of $0.036 \text{ Wm}^{-1}\text{K}^{-1}$ (mean target value) (see section 5).

Liquid water penetration — the product will not allow water to cross the wall construction via the insulation (see section 6).

Condensation — walls will limit the risk of condensation provided the conditions stated within this Certificate are met (see section 7).

Behaviour in relation to fire — the Certificate holder has declared the product is characterised as non-combustible (see section 8).

Durability — the product is durable, rot proof, water resistant and sufficiently stable to remain effective as an insulation for the life of the building (see section 11).



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

On behalf of the British Board of Agrément

Date of First issue: 14 July 2009

Chris Hunt
Head of Approvals — Physics

Greg Cooper
Chief Executive

*Certificate amended on 16 September 2011 to include a tolerance for the installed density in section 1.3.

** Certificate amended on 28 November 2011 to cover a change in product name.

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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

tel: 01923 665300
fax: 01923 665301
e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

©2009

Regulations

In the opinion of the BBA, Guardian CWI 36 Fiberglass, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



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

Requirement: B3(4)	Internal fire spread (structure)
Comment:	The product is tested as non-combustible to EN ISO 1716 : 2002 and EN ISO 1182 : 2002 and therefore meets this Requirement and may be used in buildings of any purpose group. See sections 8.2 to 8.5 and 8.7 of this Certificate. It may also be regarded as a cavity barrier provided all of the cavity is filled.
Requirement: C2(a)(b)(c)	Resistance to moisture
Comment:	The product does not absorb water by capillary action and may therefore be used in situations where it bridges the damp-proof course of the inner and outer leaf. See sections 6, 7.1 and 7.3, 3.4, 3.6, 3.7, and 3.11 of this Certificate.
Requirement: L1(a)(i)	Conservation of fuel and power
Comment:	The product can contribute to meeting this Requirement. See sections 5.3 to 5.6 of this Certificate.
Requirement: Regulation 7	Materials and workmanship
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: 8(1)(2)	Fitness and durability of materials and workmanship
Comment:	The product can contribute to a construction satisfying this Regulation. See sections 10 and 11 and the <i>Installation</i> part of this Certificate.
Regulation: 9	Building standards — construction
Standard: 2.4	Cavities
Comment:	Cavity barriers are not required provided all of the cavity is filled, with reference to clauses 2.4.1 ⁽¹⁾⁽²⁾ and 2.4.2 ⁽¹⁾⁽²⁾ . See sections 8.6 and 8.7 of this Certificate.
Standard: 2.6	Spread to neighbouring buildings
Comment:	The product is non-combustible to EN ISO 1716 : 2002 and EN ISO 1182 : 2002 and may be used in any purpose group, with reference to clauses 2.6.5 ⁽¹⁾ and 2.6.6 ⁽¹⁾ . See sections 8.2 and 8.3 of this Certificate.
Standard: 3.4	Moisture from the ground
Comment:	The product can contribute to a construction satisfying this Standard, with reference to clause 3.4.1 ⁽¹⁾ . The product can be used in situations where it bridges the damp-proof course of the inner and outer leaf. See section 6 of this Certificate.
Standard: 3.10	Precipitation
Comment:	The product will satisfy this Standard, with reference to clause 3.10.1 ⁽¹⁾ provided it complies with the conditions set out in sections 3.4, 3.6, 3.7 and 3.11 of this Certificate. See also section 6 of this Certificate.
Standard: 3.15	Condensation
Comment:	The product can satisfy, or contribute to satisfy this Standard, with reference to clauses 3.15.1 ⁽¹⁾ , 3.15.3 ⁽¹⁾ and 3.15.4 ⁽¹⁾ . See sections 7.2 and 7.3 of this Certificate.
Standard: 6.1(a)(b)	Carbon dioxide emissions
Standard: 6.2	Building insulation envelope
Comment:	The product can contribute to satisfying clauses, or parts of, 6.2.1 ⁽¹⁾ of these Standards. See sections 5.3 to 5.6 of this Certificate.
Regulation: 12	Building standards — conversions
Comment:	All comments given for this product under Regulation 9, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾ and Schedule 6 ⁽¹⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

Regulation: B2	Fitness of materials and workmanship
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation: B3(2)	Suitability of certain materials
Comment:	The product does not normally require maintenance. See section 10 of this Certificate.
Regulation: C4(a)(b)	Resistance to ground moisture and weather
Comment:	The product does not absorb water by capillary action and may therefore be used in situations where it bridges the damp-proof course of the inner and outer leaf. See sections 3.4, 3.6, 3.7 and 3.11 and also section 6 of this Certificate.
Regulation: C5	Condensation
Comment:	Walls incorporating the product can meet this Regulation. See section 7.3 of this Certificate.

Regulation:	E4(4)	Internal fire spread – Structure
Comment:	The product is non combustible to EN ISO 1716 : 2002 and EN ISO 1182 : 2002 and may be used in buildings of any purpose group. Cavity barriers are not required provided all of the cavity is filled. See sections 8.2 to 8.5 and 8.7 of this Certificate.	
Regulation:	F2(a)(i)	Conservation measures
Regulation:	F3	Target carbon dioxide Emissions rate
Comment:	The product can contribute to a building satisfying these Regulations. See sections 5.3 to 5.6 of this Certificate.	

Construction (Design and Management) Regulations 2007

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

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

See sections: 2 *Delivery and site handling* and 12 *Site preparation* (12.2).

Non-regulatory Information

NHBC Standards 2008

NHBC accepts the use of Guardian CWI 36 Fiberglass when 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, CWI 36 Fiberglass, 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 Guardian CWI 36 Fiberglass for use as a full fill cavity wall insulation to reduce the thermal transmittance of cavity walls with masonry inner and outer leaves, in buildings up to 12 m in height.

The product is manufactured by Guardian Building Products, 979 Batesville Road, Greer, South Carolina 29651, USA.

Technical Specification

1 Description

1.1 Guardian CWI 36 Fiberglass consists of granulated glass wool fibres, treated with an inert water repellent during manufacture.

1.2 The length of the fibres and degree of granulation are subject to regular quality control checks by the manufacturer.

1.3 The target mean density for this product, when installed, is 21 kgm⁻³. Local areas within the wall, when sampled over an area of 0.5 m², may have a density variation of ± 5 kgm⁻³.

2 Delivery and site handling

The product is delivered to site in polythene wrapped bales weighing approximately 16 kg, which should not be opened until required for use. The bales are marked with the BBA identification mark incorporating the number of this Certificate.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Guardian CWI 36 Fiberglass.

Design Considerations

3 Use

3.1 Guardian CWI 36 Fiberglass is effective in reducing the U value (thermal transmittance) of external cavity walls, with masonry inner and outer leaves (where masonry includes clay and calcium silicate bricks, concrete blocks, natural and reconstituted stone blocks). It is essential that such walls are designed and constructed to incorporate the precautions given in this Certificate to prevent moisture penetration.

3.2 The product may be used in buildings up to and including 12 m in height subject to the conditions given in section 3.1.1 and as follows:

- the cavity width must be a minimum 50 mm. It should be noted that to comply with the U value requirements the design cavity width may need to be increased (see section 5.2)
- walls must be in a good state of repair and must show no evidence of frost damage
- mortar joints must not be raked or recessed and must not show evidence of more than hairline cracking
- normally the area to be insulated shall not be infill panels in a framed structure. However, where the walls to be injected can, in the opinion of the Certificate holder, be classified as sheltered and the external leaf brickwork has been in place for more than 10 years, then the filling may be undertaken
- installation is carried out to the highest level on each wall unless the top edge of the insulation is protected by a cavity tray
- from ground level, the maximum height of continuous cavity wall must not exceed 12 m
- this Certificate covers the use of the product in areas where the exposure factor does not exceed 120 (factor calculated using BBA Information Paper No 10).

3.3 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 as defined in BS 5628-3 : 2005.

Existing buildings



3.4 Existing buildings subject to the national Building Regulations should be suitable when assessed in accordance with BS 8208-1 : 1985.

3.5 In an existing building, the product may be installed only:

- where there are no signs of dampness on the inner face of the cavity wall, other than those caused solely by condensation, and
- where the cavity is not being used as a source of combustion air or as a flue for ventilation purposes.

New buildings



3.6 New buildings subject to the national Building Regulations should be constructed in accordance with the relevant recommendations of BS 5628-3 : 2005. In particular Clause 5.5 of the Code of Practice *Exclusion of water* 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.

3.7 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.

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

3.9 In a new building where the product is to be installed:

- cavity battens or boards must be used to reduce the amount of mortar droppings left in the cavity
- injection of the product is to be left until the cavity is sealed from the weather, ie the roof is in place and the window and door openings are sealed.

3.10 To reduce the risk of water penetration, raked or recessed mortar joints should be avoided in high exposures areas.



3.11 The product is for use in any exposure zone in buildings up to 12 m in height. However, the use of the product does not preclude the need to apply any external render coat or either suitable finish in severe exposures zones where such application would be normal practice.

4 Practicability of installation

The product must be installed by operatives trained and approved by the Certificate holder (see section 13).

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 insulation declared thermal conductivity of 0.036 Wm⁻¹K⁻¹.

5.2 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 and finish. Calculated U values for example constructions are given in Table 1.

Table 1 *U values ($Wm^{-2}K^{-1}$) of walls with fibreglass insulation*

Insulation thickness (mm)	Dense concrete block ($\lambda = 1.13 Wm^{-1}K^{-1}$)	Aerated concrete block with mortar ($\lambda = 0.12 Wm^{-1}K^{-1}$ and $0.88 Wm^{-1}K^{-1}$ respectively)	Medium density ($\lambda = 0.32 Wm^{-1}K^{-1}$)
50	0.55	0.42	0.50
75	0.40	0.32	0.37
100	0.31	0.26	0.29
125	0.27 ⁽¹⁾	0.22	0.24
150	0.23 ⁽¹⁾	0.19	0.22

(1) 100 mm, dense block: $\lambda = 1.13 Wm^{-1}K^{-1}$, aerated block: $\lambda = 0.12 Wm^{-1}K^{-1}$, 100 mm, medium density block: $\lambda = 0.32 Wm^{-1}K^{-1}$ (Table 3.1 CIBSE Guide A : 2006 *Environmental design*), bridged with mortar: $\lambda = 0.88 Wm^{-1}K^{-1}$ [BRE report (BR 443 : 2006) *Conventions for U-value calculations*], plaster: $\lambda = 0.57 Wm^{-1}K^{-1}$ at $\lambda = 1300 kgm^{-3}$ (BS EN 12524).



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 Table 1 indicate that the product can enable a wall to achieve typical design U values referred to in those supporting documents. See Tables 2 and 3.

New buildings

5.4 Walls with U values lower than (or the same as, for dwellings in Scotland) the relevant 'notional' value specified in section 5.3 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.

5.5 The product can maintain, or contribute to maintaining, continuity of thermal insulation at junctions between external walls and other building elements. Example junction detail shown in Figure 1 will allow use of the default psi values for Accredited Construction details in Target Emission Rate calculations to SAP 2005 *The Government's Standard Assessment Procedure for Energy Rating of Dwellings* 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 — *Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings* TSO 2002 or Accredited Construction Details (version 1.0).

Scotland — Accredited Construction Details (Scotland)

Northern Ireland — Accredited Construction Details (version 1.0).

Existing buildings

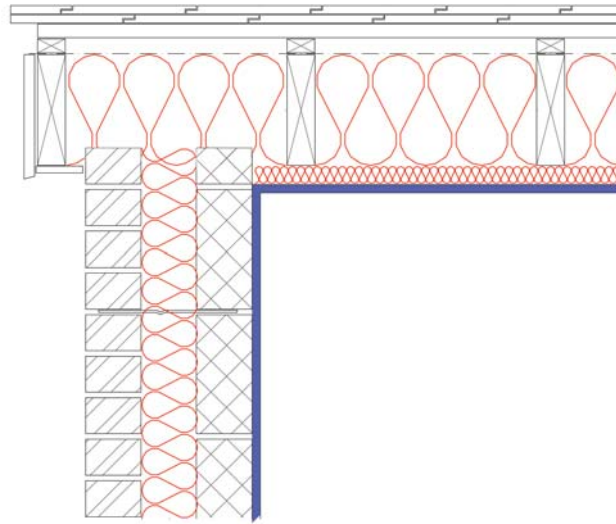
5.6 For existing buildings, extensions and conversions, walls will be acceptable where they do not exceed the relevant U value in Table 2 or 3 and junctions and openings comply with section 5.5 or BRE report (BR 262 : 2002) *Thermal insulation: avoiding risks*.

Table 2 *Typical design U values for walls — England & Wales and Northern Ireland*

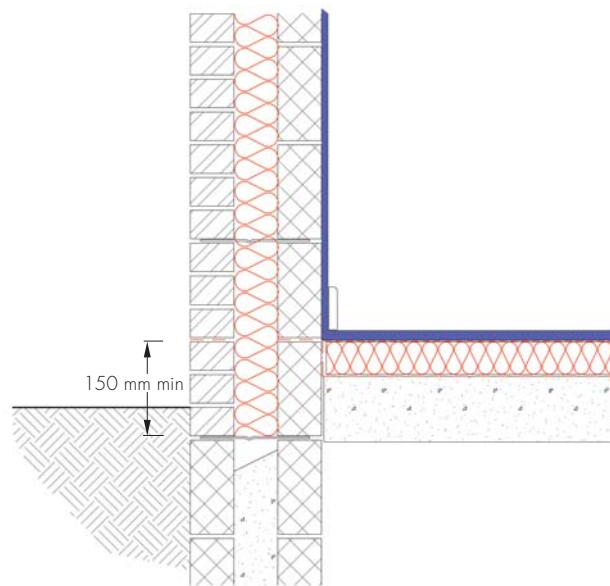
$Wm^{-2}K^{-1}$	Construction type
0.30	Mean for new extensions
0.35	'notional' mean in SAP and SBEM and limit mean for new build
0.35	Limit mean for replacement, renovation and retained walls
0.70	Individual limit for; new build, new extensions, and reconstructions

Table 3 *Typical design U values for walls — Scotland*

$Wm^{-2}K^{-1}$	Construction type
0.20	'notional' mean for dwellings in SAP and the 'simplified' approach: • solid fuel, package 6 • other fuels, packages 1–5
0.25	
0.27	Limit mean for domestic extensions, non-domestic extensions and reconstructions
0.30	'notional' mean for non-domestic in SBEM and limit mean for all new build
0.70	Individual limit for; new build, new extensions, and reconstructions

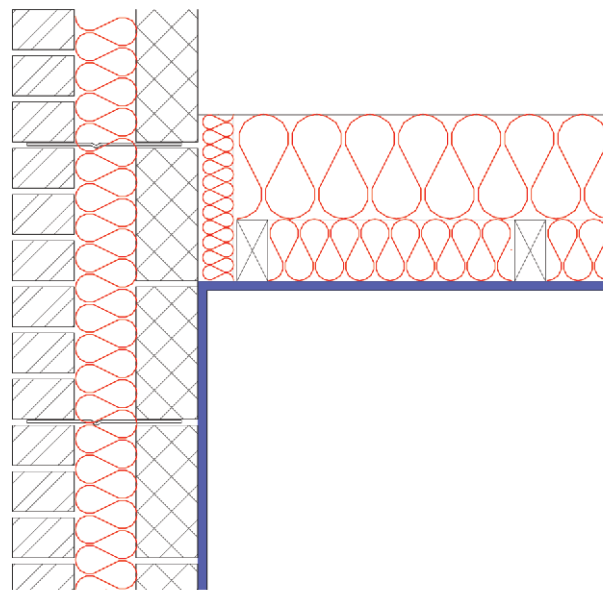


Gable wall – pitched roof junction



150 mm min

Wall-floor junction



Wall-ceiling junction

Ensure insulation and air barrier continuity and closely butt joints between insulation and adjacent materials.

6 Liquid water penetration



Tests by the BBA confirm that constructions built in accordance with BS 5628-3 : 2005, will resist the transfer of precipitation to the inner leaf and satisfy the national Building Regulations:

England and Wales — Requirement C2(b)

Scotland — Mandatory Standard 3.10, clause 3.10.1⁽¹⁾

(1) Technical Handbook (Domestic).

Northern Ireland — Regulation C4(a)(b).

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 *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings* TSO 2002 or BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*.



7.2 For buildings in Scotland, other constructions will also 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 Section 8 of BS 5250 : 2002, BRE report (BR 262 : 2002) or Technical Booklet, Annex 6D, of the Scottish Building Regulations.

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).

8 Behaviour in relation to fire

8.1 The product does not prejudice the fire-resistance properties of the wall or constitute a toxic hazard in fire.



8.2 The Certificate holder has declared the product is characterised as being non-combustible as tested to BS EN ISO 1176 : 2002 and BS EN ISO 1182 : 2002.

8.3 The product may be used as described in the national Building Regulations:

England and Wales — in buildings of every purpose group

Scotland and Northern Ireland — in buildings of any occupancy or purpose group.



8.4 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, provided 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.

8.5 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 (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.



8.6 For buildings subject to the Building Standards in Scotland, cavity barriers are not required to limit the area of a cavity or at junctions with other wall cavities, but cavity barriers are required around openings, penetrations and junctions with roof or floor cavities, with reference to clauses 2.4.1⁽¹⁾⁽²⁾, 2.6.5⁽¹⁾ and 2.6.6⁽²⁾.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).



8.7 For constructions not covered by sections 8.4, 8.5 and 8.6 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 Standards 2.4 and 2.6, clauses 2.4.1⁽¹⁾⁽²⁾, 2.6.0⁽¹⁾⁽²⁾, 2.6.5⁽¹⁾ and 2.6.6⁽²⁾.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet E, Paragraphs 3.35 to 3.38.

9 Water vapour penetration

The product is not a water vapour control layer.

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 insulation for the life of the building.

Installation

12 Site survey

Prior to installation a survey is carried out by a trained surveyor to ascertain the suitability of the property or properties for Guardian CWI 36 Fiberglass. A complete survey report is prepared and held at the installer's offices. Particular problems are specifically identified and any reasons for rejection of the work noted.

13 Site preparation

13.1 The installing operative ensures that the property has been correctly surveyed and is suitable for insulation with the product. Any problems encountered during drilling which prevent compliance with this Certificate are referred to the installation company before proceeding.

13.2 Essential ventilation openings, such as those providing combustion air or underfloor ventilation, and all flues in the cavity wall must be checked. If adequate sleeving or other cavity closures are not present, installation must not proceed until these openings have been sleeved or otherwise modified to prevent blockage by the product.

14 Approved installers

Installation of the product is carried out by the Certificate holder and their approved installers; an approved installer being a company:

- required to satisfy an initial site installation check by the BBA prior to approval by the Certificate holder and is subject to the BBA Assessment and Surveillance Scheme for Installation of Cavity Wall Insulation
- approved by the Certificate holder and the BBA to install the product
- undertaken to comply with the Certificate holder installation procedure
- employing operatives who have been issued with appropriate identity cards by the Certificate holder; at least one member of each installation team must carry a card
- subject to supervision by the Certificate holder, including unannounced site inspections.

15 Supervision

15.1 Installation of the product should be carried out in accordance with the BBA Assessment and Surveillance Scheme for Installation of Cavity Wall Insulation.

15.2 During installation the following simple checks can be made, as an aid to determining that the installation conforms to the BBA Certificated method:

- the pattern of holes complies with the description given in section 16.4
- the injection of the material takes place at each hole, to complete the filling of the cavity space.

16 Procedure

16.1 The installation of the product is undertaken using the blowing machines approved by the BBA, and machinery is marked with the appropriate BBA Certificate number.

16.2 The installer provides all necessary hoses, drilling tools, equipment and materials for making good the walls after the installation of the product.

16.3 Where a semi-detached or terraced property is to be insulated then a nylon cavity barrier brush is inserted at the line dividing the properties to contain the insulation.

16.4 A diamond drilling pattern of not more than 1.35 m centres is used, and the injection holes at the top should be no more than 0.35 m below the top cavity edge or sloping boundary and not more than 0.8 m apart.

16.5 The drilling and injection holes should be 22 mm in diameter. The bottom row of the holes should be drilled at 0.8 m above the dpc as seen in Figures 2 and 3.

Figure 2 Typical drilling pattern — frontage

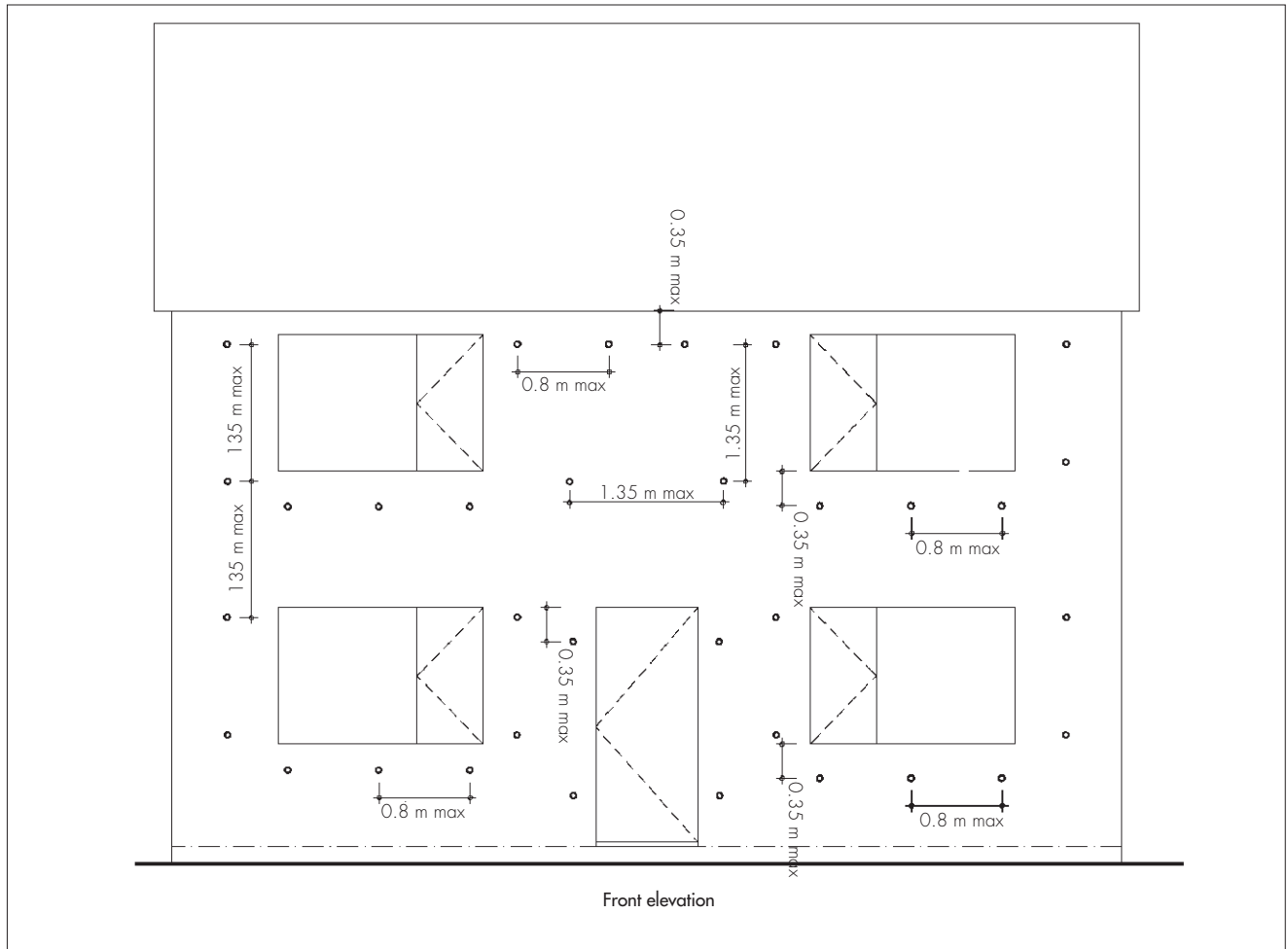
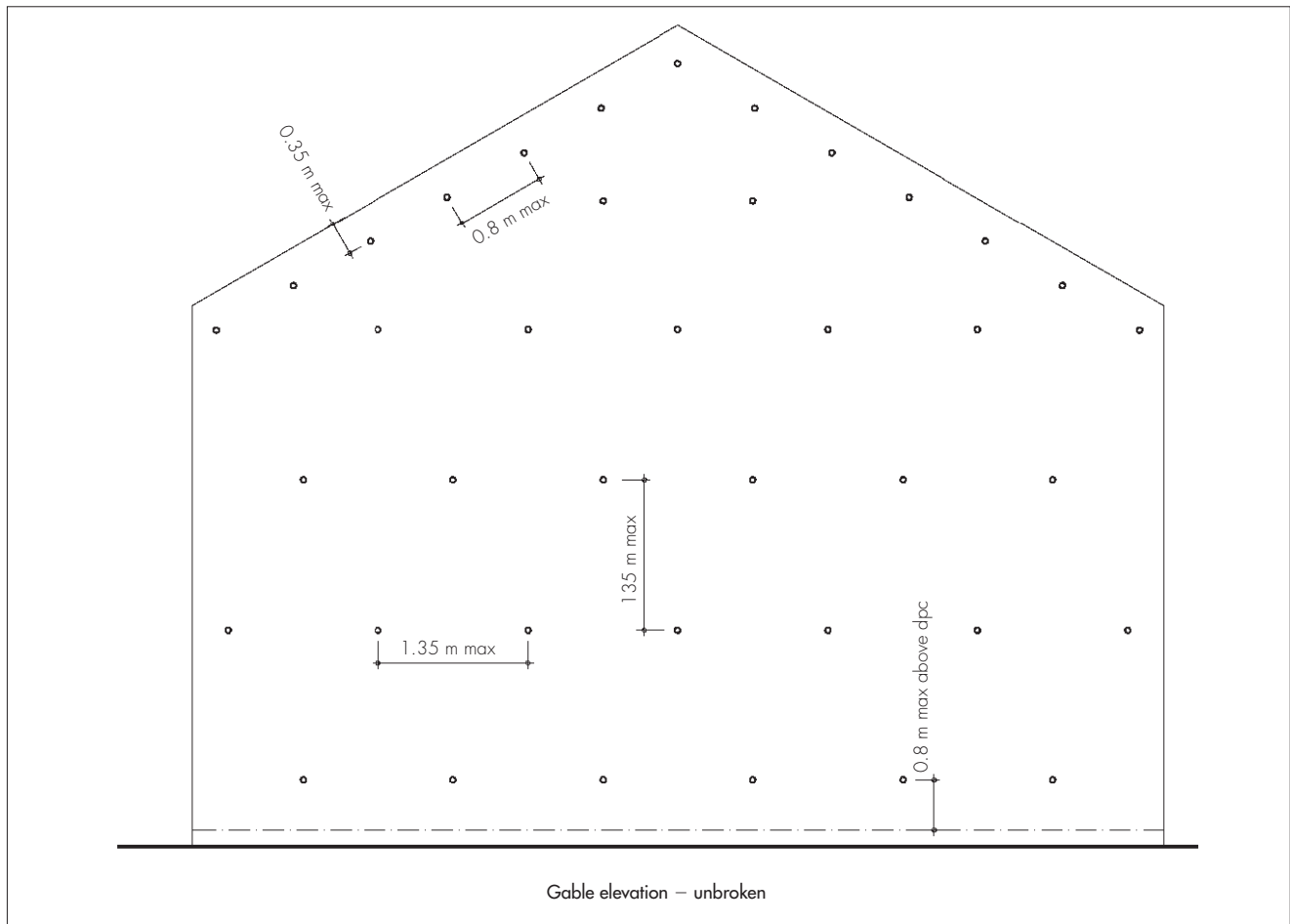


Figure 3 Typical drilling pattern — plain gable end



16.6 Where building features such as sills or air bricks occur, the diamond pattern may be difficult to achieve and additional holes should be drilled to be certain of an adequate fill. Under no circumstances must drill holes be inserted below the dpc.

16.7 The whole of an elevation should be drilled out completely before the filling operation commences.

16.8 The material is blown into the cavity, under pressure using the appropriate injection nozzle and a flexible hose, starting from one end of the elevation to the other end, (ie laterally). Injection should always commence from the bottom to the top.

16.9 On completion of the injection process, the wall is made good to match the existing finish as closely as possible. All necessary air vents are checked including those providing under floor ventilation and combustion air for heating appliances. In all cases flues are carefully checked on completion of the installation by means of an appropriate test (eg a smoke test) to ensure they are not obstructed by the product.

Technical Investigations

17 Investigations

The following is a summary of the technical investigations carried out on Guardian CWI 36 Fiberglass.

18 Tests

Tests were carried out to determine:

- the water resistance of a cavity wall, filled with the insulant
- adequacy of fill using specified installation machinery and drilling pattern.

19 Investigations

19.1 The manufacturing process of the granulated glass wool fibre was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

19.2 Existing data on thermal properties, toxicity and properties in relation to fire were evaluated.

19.3 A site visit was carried out to ensure that the installation procedure is satisfactory.

19.4 The company's training arrangements were examined and approved.

Bibliography

- BS 5250 : 2002 *Code of practice for control of condensation in buildings*
- BS 5628-3 : 2001 *Code of practice for use of masonry — Materials and components, design and workmanship*
- BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*
- BS 8208-1 : 1985 *Guide to assessment of suitability of external cavity walls for filling with thermal insulants — Existing traditional cavity construction*
- BS EN ISO 6946 : 2007 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*
- EN ISO 1182 : 2002 *Reaction to fire tests for building products — Non-combustibility test*
- EN ISO 1716 : 2002 *Reaction to fire tests for building products — Determination of the heat of combustion*

20 Conditions

20.1 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.

20.2 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.

20.3 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.

20.4 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.

20.5 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.