

# Eternit (Schweiz) AG

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## Agrément Certificate

15/5227

Product Sheet 1

### SWISSPEARL S-PEARL CLADDING PANELS

### SWISSPEARL S-PEARL CARAT, REFLEX AND XPRESSIV PANELS

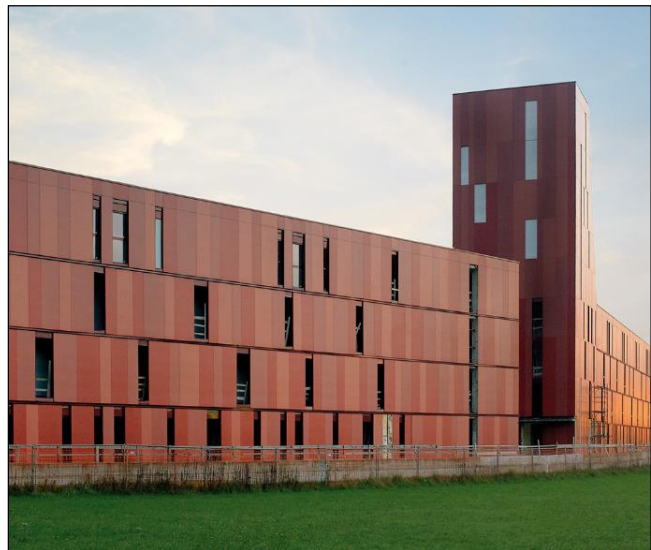
This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Swisspearl<sup>(2)</sup> S-Pearl Carat, Reflex and Xpressiv Panels, cement composite panels for use as exterior wall façade decorative panels in timber-frame and metal-frame buildings.

(1) Hereinafter referred to as 'Certificate'.

(2) Swisspearl is a registered trademark of Eternit (Schweiz) AG.

#### 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

**Strength** — the products can accept the surface loadings likely to be met in the UK (see section 6).

**Performance in relation to fire** — the products will enable an external wall cladding to be unrestricted under the Building Regulations (see section 7).

**Weathertightness** — the installed products are not weathertight and must be used in conjunction with a suitable vapour permeable membrane (see section 8).

**Durability** — the products are durable and can be expected to have a service life of in excess of 30 years (see section 12).

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

On behalf of the British Board of Agreement

Date of First issue: 26 June 2015

John Albon – Head of Approvals  
Construction Products

Claire Curtis-Thomas  
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)

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## Regulations

In the opinion of the BBA, Swisspearl S-Pearl Carat, Reflex and Xpressiv Panels, 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)

<b>Requirement:</b>	<b>A1(1)</b>	<b>Loading</b>
Comment:		The products are acceptable for use as set out in sections 4.2 to 4.5 and 6 of this Certificate.
<b>Requirement:</b>	<b>B4(1)</b>	<b>External fire spread</b>
Comment:		The products are unrestricted by this Requirement. See sections 7.1 and 7.2 of this Certificate.
<b>Requirement:</b>	<b>C2(b)(c)</b>	<b>Resistance to moisture</b>
Comment:		The products do not provide a watertight facing, but will resist the passage of rainwater to the supporting structure. See sections 4.5, 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>7</b>	<b>Materials and workmanship</b>
Comment:		The products are acceptable. See section 12.1 and the <i>Installation</i> part of this Certificate.



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

<b>Regulation:</b>	<b>8(1)(2)</b>	<b>Durability, workmanship and fitness of materials</b>
Comment:		The products can contribute to a construction satisfying this Regulation. See sections 11 and 12.1 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b>	<b>9</b>	<b>Building standards applicable to construction</b>
Standard:	1.1(a)(b)	Structure
Comment:		The products are acceptable for use, with reference to clause 1.1.1 <sup>(1)(2)</sup> . See sections 4.2 to 4.5 and 6 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The products are classified as non-combustible and therefore their use will be unrestricted under clause 2.6.4 <sup>(1)(2)</sup> . See sections 7.1 and 7.2 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		The products are classified as non-combustible and therefore their use will be unrestricted under clause 2.7.1 <sup>(1)(2)</sup> of this Standard. See sections 7.1 and 7.2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The products do not provide a watertight facing but will resist the passage of rainwater to the supporting structure, with reference to clauses 3.10.5 <sup>(1)(2)</sup> and 3.10.6 <sup>(1)(2)</sup> . See sections 4.5 and 8 of this Certificate.
Standard:	3.15	Condensation
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> and 3.15.5 <sup>(1)(2)</sup> . See section 9 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The products can contribute to meeting 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.
<b>Regulation:</b>	<b>12</b>	<b>Building standards applicable to conversions</b>
Comment:		Comments in relation to the products under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> .

- (1) Technical Handbook (Domestic)  
(2) Technical Handbook (Non-Domestic).



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

<b>Regulation:</b>	<b>23(a)(i)</b>	<b>Fitness of materials and workmanship</b>
<b>Comment:</b>	<b>(iii)(b)(i)</b>	The products are acceptable. See section 12.1 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b>	<b>28(b)</b>	<b>Resistance to moisture and weather</b>
<b>Comment:</b>		The products do not provide a watertight facing, but will resist the passage of rainwater to the supporting structure. See sections 4.6 and 8 of this Certificate.
<b>Regulation:</b>	<b>29</b>	<b>Condensation</b>
<b>Comment:</b>		Walls clad with the products can contribute to satisfying this Regulation. See section 9 of this Certificate.
<b>Regulation:</b>	<b>30</b>	<b>Stability</b>
<b>Comment:</b>		The products are acceptable for use as set out in sections 4.2 to 4.5 and 6 of this Certificate.
<b>Regulation:</b>	<b>36(a)</b>	<b>External fire spread</b>
<b>Comment:</b>		The products are unrestricted by this Regulation. See sections 7.1 and 7.2 of this Certificate.

## Construction (Design and Management) Regulations 2015

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

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

See sections: 1 *Description* (1.3) and 3 *Delivery and site handling* (3.1 and 3.3) of this Certificate.

## Additional Information

### NHBC Standards 2014

NHBC accepts the use of Swisspearl S-Pearl Carat, Reflex and Xpressiv Panels, provided they are installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards, Part 6 Superstructure (excluding roofs)*, Chapters 6.1 *External masonry walls*, 6.2 *External timber framed walls* and 6.9 *Curtain walling and cladding*.

## CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard BS EN 12467 : 2012. An asterisk (\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

## Technical Specification

### 1 Description

1.1 Swisspearl S-Pearl Carat, Reflex and Xpressiv Panels are integrally-coloured, fibre-reinforced cement panels finished with coatings on the top face. The panels satisfy the requirements of Category A, Class 4 to BS EN 12467 : 2012 for use as exterior non-load bearing, decorative panels for wall claddings in timber- and metal-frame constructions.

1.2 Carat panels are integrally coloured with a translucent top coat, Reflex panels are integrally coloured with an iridescent surface finishing, and Xpressiv panels have a translucent top coat. The panels are available in a range of colours. A factory-applied anti-graffiti coating is also available.

1.3 The products have the following nominal characteristics:

Thickness* (mm)	8.0 and 12.0
Width* (mm)	1220
Length* (mm)	2500 and 3040
Weight (kg·m <sup>-2</sup> )	15.2 and 22.8
Mechanical resistance*	Category A, Class 4 <sup>(1)</sup>
Density (kg·m <sup>-3</sup> )	1550
Minimum bending strength (N·mm <sup>-2</sup> )	18
Water permeability*	Pass
Dimensional variations*	Pass
Durability against warm water*	Pass
Durability against soak/dry*	Pass
Durability against freeze/thaw*	Pass
Durability against heat/rain*	Pass
Fire classification*	A2,s-1,d0.

(1) Category A – sheets intended for applications where they may be subjected to heat, high moisture and severe frost. Class 4 – minimum Modulus of Rupture (MOR) in the wet condition is 18 MPa.

1.4 Ancillary components for use with the products are:

- SFS AP15 blind rivets and TW-S-D12-4.8 x 38 screws — for fixing the panels to steel, aluminium and timber framework
- Luko cut edge impregnation — an aqueous acrylic dispersion for use at edges.

1.5 Accessories for use with the products but outside the scope of the Certificate are:

- EPDM backing strips — ethylene-polypropylene-diene monomer rubber strips in 60, 120 or 150 mm widths
- ventilation profiles
- horizontal I-flashing.

## 2 Manufacture

2.1 The products are manufactured from cellulose and polymeric fibres, Portland cement, pigments and other constituents using the Hatschek process.

2.2 The uncoated panels are cured for 21 days, then dried and coated on the front and reverse with an acrylic resin-based coating. The coating applied on the front can be translucent or opaque, depending on the type of panel required.

2.3 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 being operated by the manufacturer are being maintained.

2.4 The management systems of Eternit (Schweiz) AG and Eternit Werke Ludwig Hatschek AG have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by TÜV SÜD Management Service GmbH (certificate number 70765081 ) and by TÜV SÜD Management Service GmbH (certificate number 12 100 40262/04 TMS) respectively.

### 3 Delivery and site handling

3.1 Panels are delivered to site shrink-wrapped on pallets, 30 panels per pallet for the 8 mm thickness and 20 panels per pallet for the 12 mm thickness. The total weight per pallet of both sizes is 1800 kg (including the pallet). Packaging bears the panel identification, production date, manufacturer and EN standard number. The BBA logo and the number of this Certificate are printed on the reverse of the panels.

3.2 The panels should be lifted from the stack from both panel ends. To prevent surface damage during handling, sheets should be lifted clear of the surface of the stack and not dragged across it.

3.3 Panels must be stored flat in stacks (maximum 500 mm high) on firm, level ground, in a sheltered position and away from dampness and direct sunlight.

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Swisspearl S-Pearl Carat, Reflex and Xpressiv Panels.

## Design Considerations

### 4 General

4.1 Swisspearl S-Pearl Carat, Reflex and Xpressiv Panels are satisfactory for use as back-ventilated non-load bearing wall claddings on exterior walls on timber- and metal-frame buildings. It is essential that walls are designed and constructed incorporating the normal precautions to prevent moisture penetration.



4.2 The designer must ensure that the strength and integrity of the intended substrate is commensurate with that required of the cladding system.

4.3 New brickwork or blockwork walls must be constructed in accordance with the relevant sections of BS EN 1996-1-1 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006, BS EN 1996-3 : 2006 and their respective UK National Annexes, and PD 6697 : 2010, or one of the technical specifications given in the national Building Regulations.

4.4 Timber stud walls must be constructed in accordance with the relevant sections of BS EN 1995-1-1 : 2004 and its UK National Annex, and preservative-treated in accordance with BS 8417 : 2011. Guidance on recommended wood preservation is also given in *NHBC Standards 2014, Part 2 Materials, Chapter 2.3 Timber preservation (natural solid timber)*.

4.5 A minimum 38 mm drained and ventilated cavity must be maintained behind the cladding, with minimum 500 mm<sup>2</sup> ventilation slots per metre wall length, in accordance with BS 5250 : 2011.

4.6 Additional guidance on recommended cavity widths is given *NHBC Standards 2014, Part 6 Superstructure (excluding roofs)*, Chapter 6.2 *External timber framed walls* and Chapter 6.9 *Curtain walling and cladding*.

4.7 The strength and stability of the sub-frame fixings have not been assessed and are outside the scope of this Certificate.

### 5 Practicability of installation

The products are designed to be installed by a competent contractor experienced with this type of product.

## 6 Strength

### Wind loading



6.1 Under wind loading, the most likely mode of failure will be pull-through of the fixings owing to wind suction.

6.2 The characteristic wind load resistance of the panels, allowing for a normal wind load factor of 1.5, is as shown in Table 1, provided the designer ensures that:

- fixing of the support timber batten/metal rails to the substrate wall has adequate pull-out resistance for the calculated loads
- the system's fixings have adequate pull-out strength for the calculated wind loads (see section 6.7)
- the vertical timber battens or metal rails are no more than the fixing centres shown in Table 1.

Table 1 Wind load resistance ( $kN \cdot m^{-2}$ )

Fixing type	Fixing spacing(mm)		
	480	530	600
Screw (4.8 x 38mm with 12 mm diameter head)	1.3	1.1	0.9
Rivet (4.0 x 18mm with 15 mm diameter head)	1.3	1.1	0.9

6.3 Higher allowable wind pressures can be achieved by reducing the spacing between support rails.

6.4 When calculating wind loads, the higher pressure coefficients applicable to corners of the building should be used.

6.5 The adequacy of a proposed installation should always be checked by a qualified engineer, who should include in the check the adequacy of the fixing of battens to the substrate (outside the scope of this Certificate).

6.6 As the cladding is open-jointed, the supporting wall must be able to take the full wind load and any racking loads. It can be assumed that the panels do not contribute in this regard.

6.7 Wind loads should be calculated in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. The higher pressure coefficients applicable to corners of the building are used.

#### Impact resistance

6.8 The panels have adequate resistance to hard and soft body impacts likely to occur in practice. They are suitable for use in areas where there is little possibility of impact or abrasion damage, ie at low levels in areas of restricted access or at higher levels in public areas, as shown in Table 2.

Table 2 Resistance to impact categories

Category	Description	Example	Zone of wall up to 1.5 m above pedestrian or floor level
C	Accessible mainly to those with some incentive to exercise care. Some chance of accident occurring and of misuse	Walls adjacent to private open gardens. Back walls of balconies	
D	Only accessible, but not near a common route, to those with high incentive to exercise care. Small chance of accident occurring or of misuse	Walls adjacent to small fenced decorative gardens with no through paths	
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1. 5m to 6 m above pedestrian or floor level in public areas	
F	Above zone of normal impacts from people but not liable to impacts from thrown or kicked objects	Wall surfaces of high positions than those defined in E above	

## 7 Performance in relation to fire



7.1 The panels have a Class A2-s1, d0\* classification in accordance with BS EN 13501-1 : 2005.

7.2 The products are therefore classified as a material of 'limited combustibility' in England and Wales and Northern Ireland, and as 'non-combustible' in Scotland, as defined by the national Building Regulations.

7.3 For resistance to fire, the performance of the wall incorporating the cladding can only be determined by tests from a suitably-accredited laboratory and is not covered by this Certificate.

7.4 Cavity barriers should be used to satisfy the requirements of the national Building Regulations.

## 8 Weathertightness



8.1 The panels are not airtight, watertight or water-vapour tight. They must be backed with a breather membrane acting as a vapour permeable water barrier, incorporated behind the cladding under supporting battens. The breather membrane must meet the requirements of BS 5250 : 2011 and have a vapour resistance less than  $0.6 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$ .

8.2 Provision must always be made to allow water that has penetrated behind the cladding to drain away.

## 9 Condensation risk



9.1 When using the products, consideration should be given to the overall design using the recommendations of BS 5250 : 2011 to minimise the risk of condensation.

9.2 As the system in which the products are used incorporates a 38mm ventilated cavity, the risk of condensation is minimal.

## 10 Proximity of flues

When installing the products in close proximity to certain flue pipes, the provisions of the national Building Regulations should be met:

**England and Wales** — Approved Document J

**Scotland** — Mandatory Standard 3.19, clauses 3.19.1<sup>(1)(2)</sup> to 3.19.4<sup>(1)(2)</sup> and 3.19.8<sup>(1)(2)</sup>

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic)

**Northern Ireland** — Technical Booklet L.

## 11 Maintenance



11.1 Periodic inspections should be carried out to assess the need for cleaning, maintenance painting and localised repairs, and to replace elements such as fixings, seals and flashing. Advice regarding re-coating and maintenance procedures can be obtained from the Certificate holder.

11.2 Normally, cleaning will not be required as rain will periodically wash away dust, environmental dirt, etc. However, if particular environmental conditions lead to a dirty surface, the panels should be washed with a garden hose or with high-pressure cold water. The Certificate holder's advice should be sought in cases of more difficult chemical soiling.

## 12 Durability



12.1 The durability and service life of the panels will depend upon the building location, façade aspect, immediate environment, intended use of the building and general condition of the system components.

12.2 In common with all fibre-cement materials, the matrix material will carbonate and become brittle with time. When subjected to normal conditions of exposure and use, the panels will have a life in excess of 30 years.

12.2 In common with all building materials used externally, extensive exposure to sunlight over the years will cause fading of the surface colouring.

12.3 The coating on the panels is tough and durable and adheres to the substrate, but it is not resistant to continual abrasion.

12.4 The panels have good colour stability. However, a colour difference may exist between the coatings when new, or may develop on weathering. In most circumstances, the difference in colour will be acceptable, but a perfect colour match cannot be assured.

## Installation

### 13 Procedure

13.1 The panels should be installed in accordance with the Certificate holder's instructions on timber and metal sub-frames, and at the spacings shown in Table 3.

*Table 3 Distances to panel edges and joint widths (mm)*

Dimension	Spacing (mm)	
	Horizontal	Vertical
Distance to panel edge (min)	40	80
Distance to panel edge (max)	100	100
Panel joints for metal sub-frame	6-8	5-8
Panel joints for timber sub-frame	6-8	6-8

13.2 The panels must be fixed to vertical timber supports securely fixed to the substrate and levelled to give a flat fixing surface. Panels may be fixed to metal supports using rivets into the metal rails.

13.3 Structural expansion joints must be applied to the sub-framing and cladding in the identical position and to the same extent.

13.4 A breather membrane must be laid along the wall, with minimum laps of 150 mm.

13.5 The panels are fixed with two fix-points, using either SFS AP15 blind rivets in pre-drilled 9.5 mm diameter holes or TW-S-D12-4.8 x 38 screws with 5.5 mm pre-drilled holes.

13.6 The Reflex panels have an arrow on the reverse indicating the direction of production, which always runs with the longitudinal edge of the panel. All arrows must point in the same direction when installing these panels, to achieve consistency of the colour of the installed panels.

13.7 Horizontal joint flashing should be used to prevent water from penetrating into the ventilation cavity when using timber battens. All battens at vertical joints and intermediate battens must be fully covered by EPDM backing strips which are stapled to the battens. The strips should be used as a single piece top to bottom or lapped with a 40 mm overlap.



## 14 Cutting

14.1 All panels leave the factory sealed on all six faces. If panels are cut on site, each cut must be treated by hand-application of Luko impregnation liquid.

14.2 The Certificate holder provides an optimising computer programme to minimise offcut waste. When cutting is required, the panels are cut using a diamond-tipped blade or carbide metal blade with staggered teeth. Any dust generated should be removed immediately from the panel surfaces.

## 15 Repair

Damaged panels must be replaced as soon as possible, following the Certificate holder's instructions.

## Technical Investigations

### 16 Tests

16.1 An assessment was made of existing data to BS EN 12467 : 2012 in relation to:

- dimensions
- density
- bending strength
- water impermeability
- warm water
- soak/dry
- freeze/thaw
- heat/rain.

16.2 Tests were carried out in relation to:

- water absorption
- water vapour impermeability
- alkali immersion and adhesion
- resistance to abrasion
- resistance to staining
- resistance to algal growth.

### 17 Investigations

17.1 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.

17.2 An assessment was made of test data relating to:

- fire classification to EN 13501-1 : 2005
- accelerated artificial weathering and colour stability
- resistance to hard/soft body impacts
- resistance to wind loads
- pull-through resistance of screws and rivets.

17.3 A postal user survey was conducted to assess the products' performance in use.

## Bibliography

BS 5250 : 2011 *Code of practice for control of condensation in buildings*  
BS 8417 : 2011 *Preservation of wood — Code of practice*

BS EN 12467 : 2012 *Fibre-cement flat sheets — Product specification and test methods*  
BS EN 13501-1 : 2005 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*  
BS EN 1991-1-4 : 2005 *Eurocode 1 : Actions on structures — General actions — Wind actions*  
NA to BS EN 1991-1-4 : 2005 UK National Annex to *Eurocode 1: Actions on structures — General actions — Wind actions*  
BS EN 1995-1-1 : 2004 *Eurocode 5 : Design of timber structures — General — Common rules and rules for buildings*  
NA to BS EN 1995-1-1 : 2004 UK National Annex to *Eurocode 5 : Design of timber structures — General — Common rules and rules for buildings*  
BS EN 1996-1-1 : 2005 *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*  
NA to BS EN 1996-1-1 : 2005 UK National Annex to *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*  
BS EN 1996-1-2 : 2005 *Eurocode 6 : Design of masonry structures — General rules — Structural fire design*  
NA to BS EN 1996-1-2 : 2005 UK National Annex to *Eurocode 6 : Design of masonry structures — General rules — Structural fire design*  
BS EN 1996-2 : 2006 *Eurocode 6: Design of masonry structures — Design considerations, selection of materials and execution of masonry*  
NA to BS EN 1996-2 : 2006 UK National Annex to *Eurocode 6: Design of masonry structures — Design considerations, selection of materials and execution of masonry*  
BS EN 1996-3 : 2006 *Eurocode 6: Design of masonry structures — Simplified calculation methods for unreinforced masonry structures*  
NA to BS EN 1996-3 : 2006 UK National Annex to *Eurocode 6: Design of masonry structures — Simplified calculation methods for unreinforced masonry structures*  
BS EN ISO 9001 : 2008 *Quality management systems — Requirements*  
PD 6697 : 2010 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

### 18 Conditions

18.1 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 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.

18.2 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.

18.3 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.

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

18.5 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.

18.6 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.