

## Trespa International B.V.

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Agrément Certificate

**99/3629**

Product Sheet 1

### TRESPA WALL CLADDING SYSTEMS

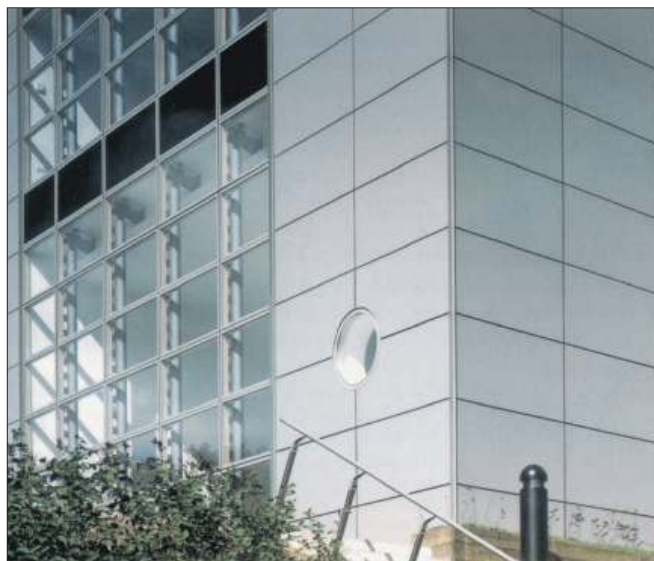
### TRESPA METEON PANELS AND FIXINGS

#### PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Trespa Meteon Panels and Fixings, for use externally on buildings as a decorative and protective facing.

#### 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

**Strength and stability** — when installed in accordance with design specifications and this Certificate, the panels and fixings will have adequate strength to resist the wind loads and impacts likely to occur under normal circumstances (see section 5).

**Behaviour in relation to fire** — the panels will have adequate fire resistance (see section 6).

**Air and water penetration** — the panels are suitable for use as drained and rear-ventilated rainscreen provided adequate additional ventilation and water barriers are incorporated where necessary (see section 7).

**Durability** — provided that regular maintenance is carried out in accordance with this Certificate and the Certificate holder's instructions, the system should have an ultimate service life in excess of 50 years (see section 9).

The BBA has awarded this Agrément Certificate to the company named above for the system described herein. This system 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: 4 August 2010

Originally certificated on 17th August 1999

Brian Chamberlain

Head of Approvals — Engineering

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.*

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# Regulations

In the opinion of the BBA, Trespa Meteon Panels and Fixings, 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:	A1	Loading
Comment:		When designed in accordance with this Certificate, the panels and fixings have sufficient strength and stiffness to accept wind loads and transfer them to the supporting structure. See sections 3.3 to 3.5, 5.3 to 5.5 and 5.7 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		The claddings are acceptable. See sections 6.1 to 6.4 of this Certificate.
Requirement:	C2(b)(c)	Resistance to moisture
Comment:		The cladding panels will resist the passage of rainwater to the supporting structure. See section 7 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The panels and fixings are acceptable. See section 9 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 use of the panels and fixings satisfies the requirements of this Regulation. See sections 8 and 9 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building Standards — construction
Standard:	1.1(a)(b)	Structure
Comment:		When designed in accordance with this Certificate, the panels and fixings have sufficient strength and stiffness to resist wind loads as calculated in accordance with clause 1.1.1 <sup>(1)(2)</sup> of this Standard, and to transfer them to the supporting structure. See sections 3.3 to 3.5, 5.3 to 5.5 and 5.7 of this Certificate.
Standard:	2.4	Cavities
Standard:	2.6	Spread to neighbouring buildings
Comment:		The claddings are acceptable for use as specified in this Certificate, with reference to clauses 2.6.1 <sup>(1)(2)</sup> and 2.6.2 <sup>(1)(2)</sup> of these Standards. See sections 6.1 to 6.4 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The cladding panels will resist the passage of rainwater to the supporting structure, with reference to clauses 3.10.1 <sup>(1)(2)</sup> , 3.10.2 <sup>(1)(2)</sup> , 3.10.3 <sup>(1)(2)</sup> and 3.10.5 <sup>(1)(2)</sup> of this Standard. See section 7 of this Certificate. (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 panels and fixings are acceptable. See section 9 and the <i>Installation</i> part of this Certificate.
Regulation:	B3(2)	Suitability of certain materials
Comment:		The products are acceptable. See section 8 of this Certificate.
Regulation:	C4(b)	Resistance to ground moisture and weather
Comment:		The cladding panels will resist the passage of rainwater to the supporting structure. See section 7 of this Certificate.
Regulation:	D1	Stability
Comment:		When designed in accordance with this Certificate, the panels and fixings have sufficient strength and stiffness to withstand wind loads and to transfer them to the supporting structure. See sections 3.3 to 3.5, 5.3 to 5.5 and 5.7 of this Certificate.
Regulation:	E5(a)	External fire spread
Comment:		The claddings are acceptable. See sections 6.1 to 6.4 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 4 *Practicability of installation* of this Certificate.

# Non-regulatory Information

## NHBC Standards 2010

NHBC accepts the use of Trespa Meteon Panels and Fixings, when installed and used in accordance with this Certificate, in relation to *NHBC Standards, Part 6 Superstructure (excluding roofs) Chapter 6.9 Curtain walling and cladding*.

## General

This Certificate relates to the Trespa Meteon Panels and Fixings, for use externally on buildings as a decorative and protective facing.

This Certificate is a Confirmation of a Dutch Agrément Certificate GB-001/7, issued by Intron Certification to Trespa International B.V. on 1 November 2006.

The systems are marketed in the UK by:

Trespa UK Ltd, Grosvenor House, Hollinswood Road, Central Park, Telford, Shropshire TF2 9TW  
Tel: 01952 290707, Fax: 01952 290101

It is essential that the cladding panels are installed in accordance with the manufacturer's instructions and the provisions of this Certificate.

## Technical Specification

### 1 Description

1.1 Trespa Meteon Panels are fixed to building exteriors, via conventional timber battens or a purpose-built aluminium sub-frame, to provide a protective and decorative facing.

1.2 The panels are formed under high temperature and pressure from thermosetting resins, homogeneously reinforced with wood fibres. During the manufacturing process a decorative surface, made of acrylic urethane coating layers on a substrate of decor paper, is bonded to the exterior face of the panels.

1.3 The panels are available in both standard and fire resistant (FR) grades.

1.4 The panels are also available in a curved shape with a radius of 600 mm to 3000 mm. The characteristics of the curved panels are identical to the flat panels except for the modulus of elasticity (see section 1.7).

1.5 Specifications for the range of flat panels available are given in Table 1.

Table 1 Flat panel specifications<sup>(1)</sup>

Panel size (mm)	Nominal thickness (mm)	Weight (kg·m <sup>-2</sup> )	Approx. weight of complete panel (kg)
1530 x 3050	6	8.4	39.2
	8	11.2	52.3
	10	14.0	65.3
	13	18.2	85.0
1860 x 2550	6	8.4	39.8
	8	11.2	53.1
	10	14.0	66.4
	13	18.2	86.3
1860 x 3650	6	8.4	57.0
	8	11.2	76.0
	10	14.0	95.1
	13	18.2	123.6
2130 x 4270 (this size is used only for cutting smaller panel parts)	6	8.4	76.4
	8	11.2	101.9
	10	14.0	127.3
	13	18.2	165.5

(1) Curved panels have a thickness of 8 mm or 10 mm.

1.6 The panels are available in a range of colours made up from approved base pigments in the following colour groups:

- metallics
- wood decors
- naturals
- unicolours.

1.7 Strength characteristics of the panels, to EN 438-7 : 2005, are:

modulus of elasticity  $\geq 9000 \text{ N}\cdot\text{mm}^{-2(1)}$

tensile strength  $\geq 70 \text{ N}\cdot\text{mm}^{-2}$

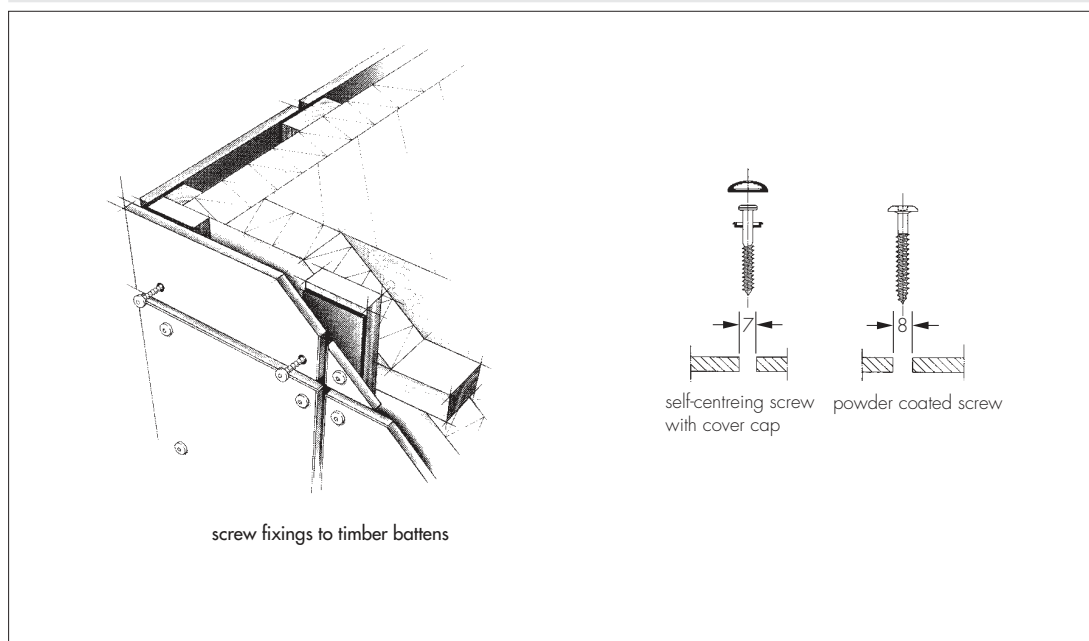
flexural strength  $\geq 120 \text{ N}\cdot\text{mm}^{-2}$ .

(1) Data relates to flat panels (data on curved panels should be sought from the Certificate holder).

1.8 Types of fixing include:

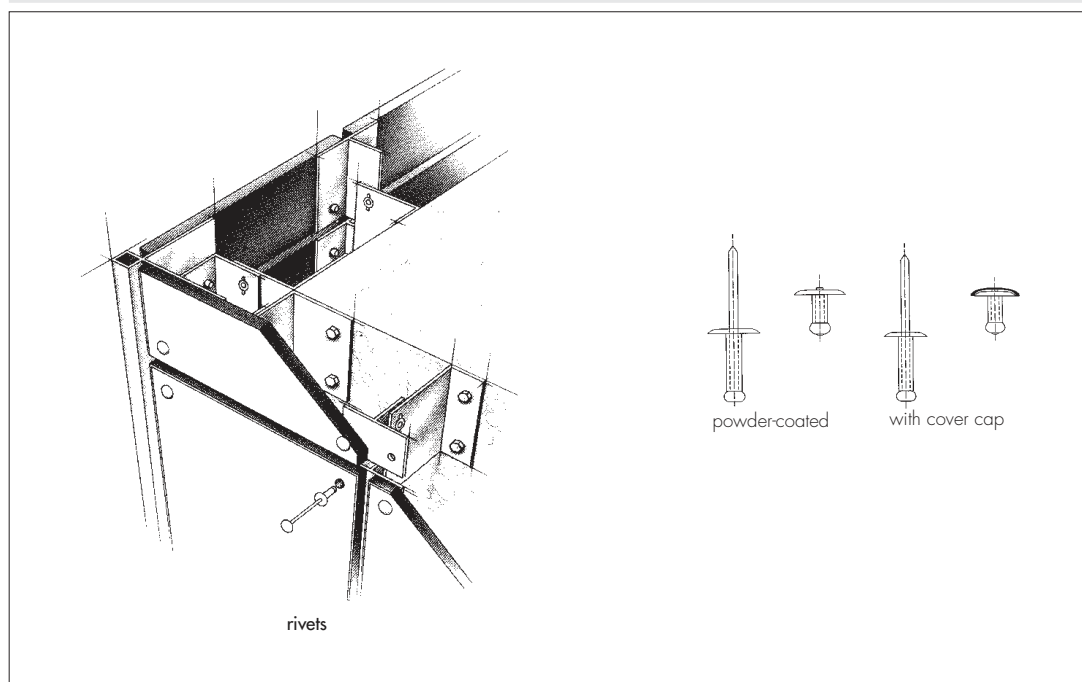
- visible screw fixings to timber battens (see Figure 1)

Figure 1 Visible screw fixings to timber battens (dimensions shown are in millimetres)



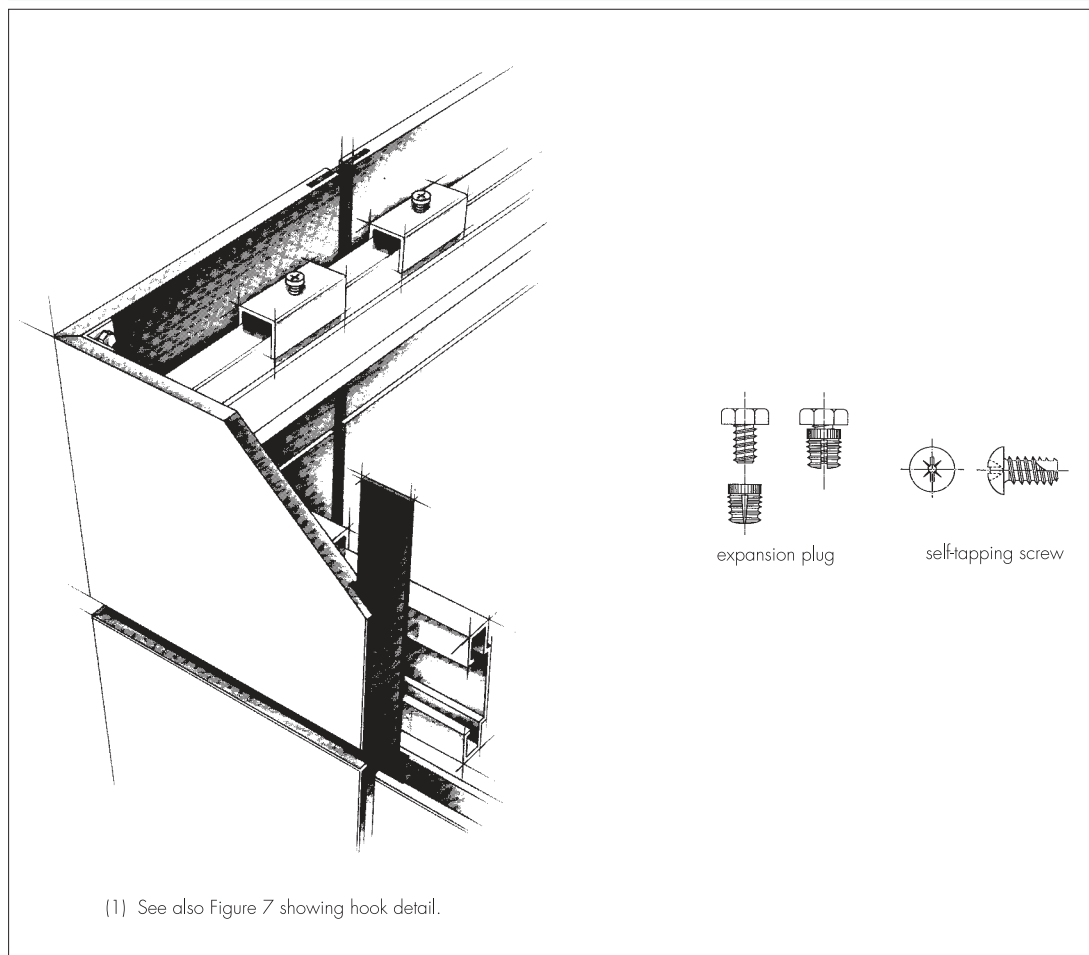
- visible rivet fixings to aluminium sub-frames (see Figure 2)

Figure 2 Visible rivet fixings to aluminium sub-frames



- invisible fixings for use where aluminium hooks locate onto aluminium rails, which are attached to the substrate by battens or an aluminium sub-frame (see Figure 3).

Figure 3 Invisible fixings for use where hooks locate onto aluminium rails<sup>(1)</sup>



1.9 Two types of screw are approved for fixing the panels to timber battens, ie powder-coated for quick assembly and self-centreing with a separate washer and cap. The cover caps and powder-coated screws are available in colours to match the panel (see Figure 1 and Table 2).

Table 2 Screws<sup>(1)</sup> for timber battens — visible fix (all dimensions in millimetres)

Characteristics	Self-centreing screw with cover cap	Powder-coated screw (6, 8 and 10 mm panels only)
Length	36	min 36
Screw diameter	4	4.8
Head diameter	9	12
Washer diameter	11.4	—
Hole diameter	7	8

(1) Material: A2/A4 stainless steel to BS EN 10088-1 : 2005 grades (1.4301, 1.4401).

1.10 Aluminium or stainless steel rivets are available for fixing panels to an aluminium subframe (see Figure 2 and Table 3). Powder-coated rivets or coloured caps are available to match the colour of the panel.

Table 3 Rivets<sup>(1)</sup> for aluminium sub-frame — visible fix (all dimensions in millimetres)

Characteristics	Rivet
Length	Panel thickness and metal thickness + minimum 5
Diameter	5
Head diameter	14 (with cover cap): 16 (powder coated)
Hole diameter	10 (expansion hole): 5 (fixed hole)

(1) Material: AlMg5 aluminium to BS EN 573-3 : 2009 or A2/A4 stainless steel to BS EN 10088-1 : 2005 (grades 1.4301, 1.4401).

1.11 Expanding plug fixings and self-tapping screws are both approved methods of fixing for 10 and 13 mm thick panels via aluminium hooks onto aluminium rails (see Figure 3 and Table 4). The hooks and aluminium rails are outside the scope of this Certificate.

**Table 4 Fixings for aluminium sub-frame — invisible fix (all dimensions in millimetres)**

Characteristics	Expanding plug	Self-tapping screw <sup>(2)</sup>
Length		
– 10 mm panel	7.5	11.5
– 13 mm panel	10.5	14.5
Diameter	plug <sup>(1)</sup> 8.0 screw <sup>(2)</sup> M6	6.0
Head diameter	10.0	12.0
Hole diameter	8.0	5.0
Hole depth		
– 10 mm panel	7.5	7.0
– 13 mm panel	10.5	10.0

(1) Brass.

(2) A2/A4 stainless steel to BS EN 10081-1 : 2005 (grade 1.4301, 1.4401).

1.12 A purpose-built aluminium sub-frame system is covered in Product Sheet 2 of this Certificate. Other sub-frame systems, trims and ancillary items are outside the scope of this Certificate.

1.13 Factory production control of the panels at the Trespa factory in Holland is monitored by Intron Certification.

## 2 Delivery and site handling

2.1 Panels are stacked on pallets, packed in plastic sheets and banded. Each full-size panel carries a label bearing the manufacturer's name and production batch number and a label bearing the BBA identification mark incorporating the number of this Certificate.

2.2 During storage, the panels and ancillary items must be kept dry, away from damp areas and in normal ambient conditions.

2.3 Stacked panels should be stored horizontally on a flat surface. A protective sheet must be placed between panels and the stack covered to protect against the ingress of foreign matter.

2.4 When moving panels, each panel must be lifted up clear of the remaining stack, and not slid across it, in order to avoid scratching or other damage.

2.5 Fixings are delivered to site in boxes of between 100 and 500 units, each box bearing a Trespa label with the product identification and colour code.

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Trespa Meteon Panels and Fixings.

### Design Considerations

## 3 General

3.1 Trespa Meteon Panels are suitable for fixing to the studs of a timber-frame building via timber battens, or to masonry or concrete walls via timber battens or an aluminium sub-frame. The process of fixing the timber battens or aluminium sub-frame to the substructure is outside the scope of this Certificate.

3.2 The designer should ensure that the strength and integrity of the intended substrate is sufficient to take the full wind load, as well as any racking loads. The cladding system does not contribute in this respect (see sections 3.3 and 3.4).



3.3 Masonry or concrete to which the support work and cladding are fixed should be structurally sound and have been constructed in the conventional manner in accordance with one or more of the following technical specifications:

- BS 5628-1 : 2005 and BS 5628-3 : 2005
- BS 8110-1 : 1997 and BS 8110-2 : 1985 or BS EN 1992-1-1 : 2004 and BS EN 1992-1-2 : 2004
- Section 1, Part C of Approved Document A1/2 to The Building Regulations (England and Wales)
- *The Small Buildings Guide*, for compliance with Part C of the Technical Booklet for compliance with The Building (Scotland) Regulations
- Technical Booklet D *Structure*, to The Building Regulations (Northern Ireland).

3.4 Timber stud walls and timber support work should be structurally sound and have been constructed in accordance with BS 5268-2 : 2002 and preservative treated in accordance with BS 5268-5 : 1989. Studding and framing should be adequately supported by noggings to ensure rigidity. Where timber stud walls or battens are treated with aqueous, copper-based preservatives, care must be taken to ensure that sufficient time is allowed for complete fixation of the preservative (approximately seven days) before the cladding is secured.

3.5 Aluminium sub-frames should be constructed in accordance with BS 8118-1 : 1991.

3.6 Timber battens to which panels are fixed must be a minimum size of 34 mm by 90 mm at the join of two panels and 34 mm by 45 mm at the end or mid-panel. The recommended practice is to align the battens vertically to optimise ventilation and drainage behind the panel (see Figure 1). Where the panels are attached to horizontal battens fixed directly to the substrate, ventilation slots, equivalent to a minimum 5000 mm<sup>2</sup> per metre run, must be cut into the battens.

3.7 Where panels are fixed to timber battens, the fixings must be arranged as shown in the *Installation* part of this Certificate. Screws must be placed centrally in the holes, allowing 1.5 mm clearance around each screw.

3.8 Where panels are riveted to an aluminium sub-frame, the fixings must be arranged in the same way as for timber battens. With rivets there must be at least one fixed point per panel (hole diameter 5.1 mm), others being expansion points (hole diameter 10 mm) (see the *Installation* part of this Certificate). Where there are two fixed points adjacent to one another, the hole diameter should be 6 mm.

3.9 Fixings to aluminium rails via hooks can only be used with 10 mm and 13 mm thick panels. Aluminium brackets are fixed onto the back of the panel with either an expanding plug or a self-tapping screw (see Figure 3). The positioning of the fixings behind the panel is shown in the *Installation* part of this Certificate. The top row of fixings comprises a central bracket fixed securely to the aluminium support rail and two outer brackets incorporating screws to adjust the level of the panel. Other fixings use the standard bracket and allow movement in the panel.

3.10 Provision must be made for the thermal movement of aluminium sections behind the cladding.

3.11 Panels may undergo hygrothermal movement up to 2.5 mm per metre in both length and width. A 10 mm gap between panels is recommended to accommodate any such movement.

3.12 To prevent damage to the external wall resulting from condensation in the cavity and/or rain penetration behind the cladding, a minimum of 5000 mm<sup>2</sup> per metre of ventilation at the top and bottom of the installation above and below window/door openings, and cut into any horizontal battens, must be provided. At least one dimension of the ventilation openings should not be greater than 10 mm to restrict the ingress of vermin. Additional ventilation is required for vertical runs exceeding 20 m and for buildings with high internal relative humidity (see section 7.1). Particular care needs to be taken to ensure that adequate ventilation is provided behind cladding attached to horizontal timber battens fixed directly to the substrate. Further guidance on ventilation and weather resistance requirements in rainscreen cladding systems are given in the *NHBC Standards* Chapter 6.9-D7(b).

## 4 Practicability of installation

The panels are designed to be installed by competent trained operatives under normal site conditions using equipment and techniques commonly used for claddings. Extra care needs to be exercised when installing cladding panels above ground floor level.

## 5 Strength and stability

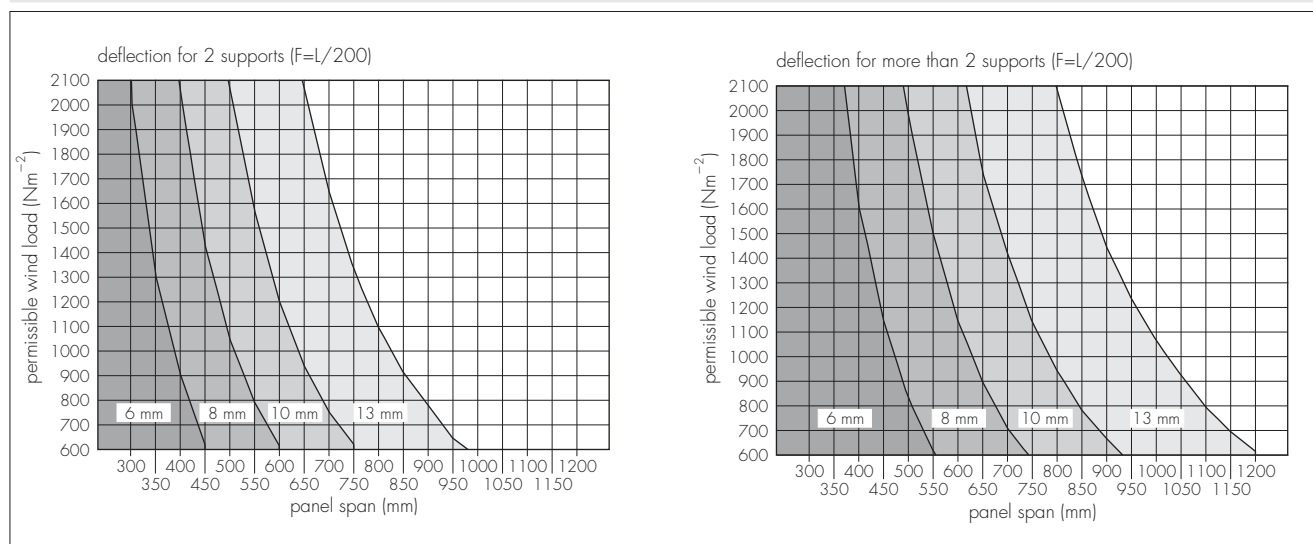
### Wind loading

5.1 The panels and fixings must be designed by suitably qualified engineers or other appropriately qualified persons.

5.2 Where increased strength and stability are required, consideration should be given to reducing the spacing of the fixings and supporting frame members.

5.3 The panels should be installed in accordance with the wind load/span graphs given in Figure 4, based on a limiting deflection of span/200 and a safety factor of 10 over ultimate panel failure. Wind loads should be calculated in accordance with BS EN 1991-1-4 : 2005 and BS 6399-2 : 1997.

Figure 4 Wind load — panel span data



5.4 The panels should not be taken into account when designing a timber stud wall to resist racking forces.

5.5 Permissible tensile forces on panel fixings are given in Table 5.

Table 5 Permissible tensile forces<sup>(1)</sup> on panel fixings (N)

Panel thickness (mm)	Visible-fix <sup>(2)</sup>			Invisible-fix	
	Fixing position			Expansion plug	Self-tapping screw
	centre	edge	corner		
6	600	450	360	—	—
8	600	600	600	350	550
10	600	600	600	500	950
13	600	600	600	800	1750

(1) All values include a material safety factor of 2 and, for the invisible fixings, an additional factor of 2 to allow for the eccentricity of the force on the hooked fixing.

(2) Screws to timber, rivets to aluminium.

5.6 Typical fixing arrangements and details required for strength, stability and panel expansion are shown in Figures 5, 6 and 7.

Figure 5 Fixing into timber battens

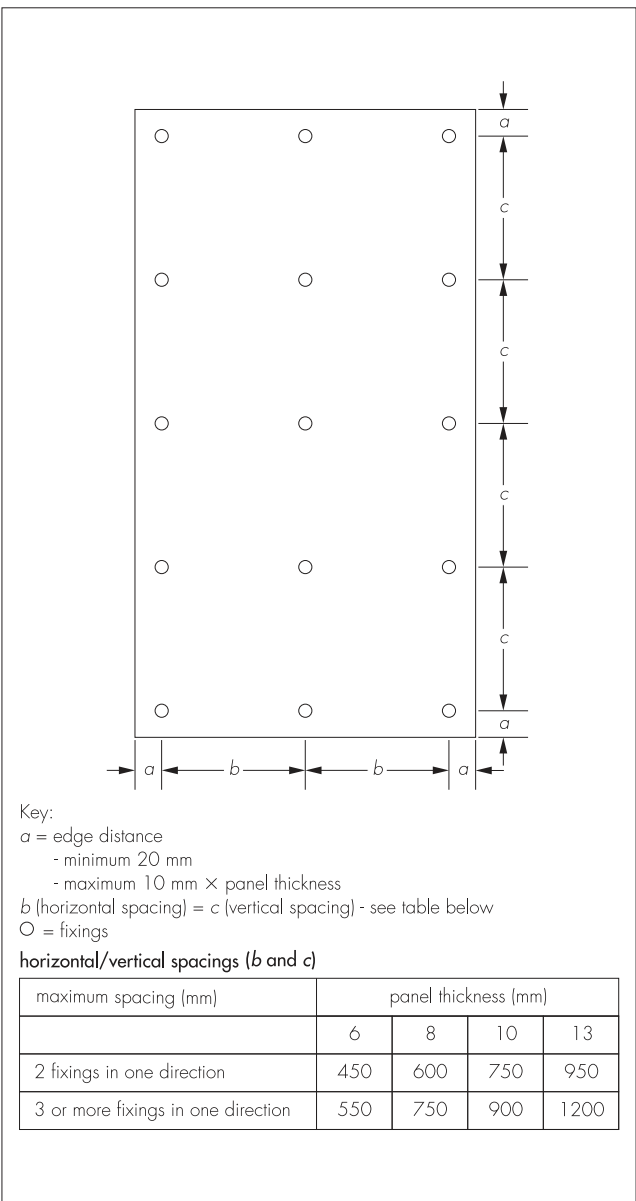
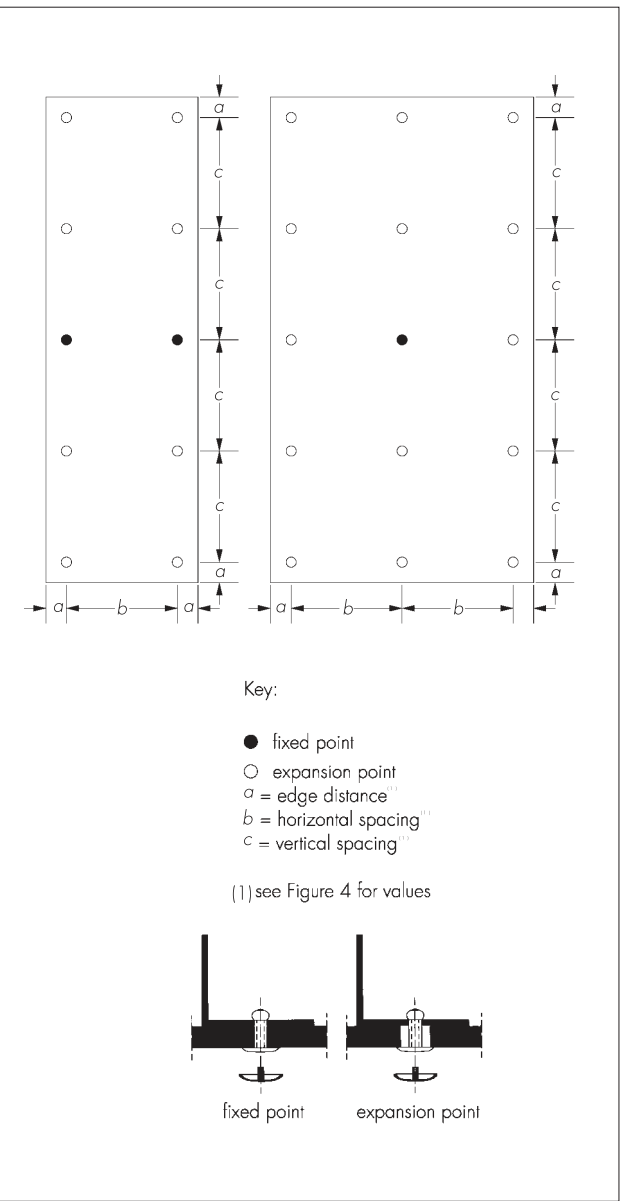
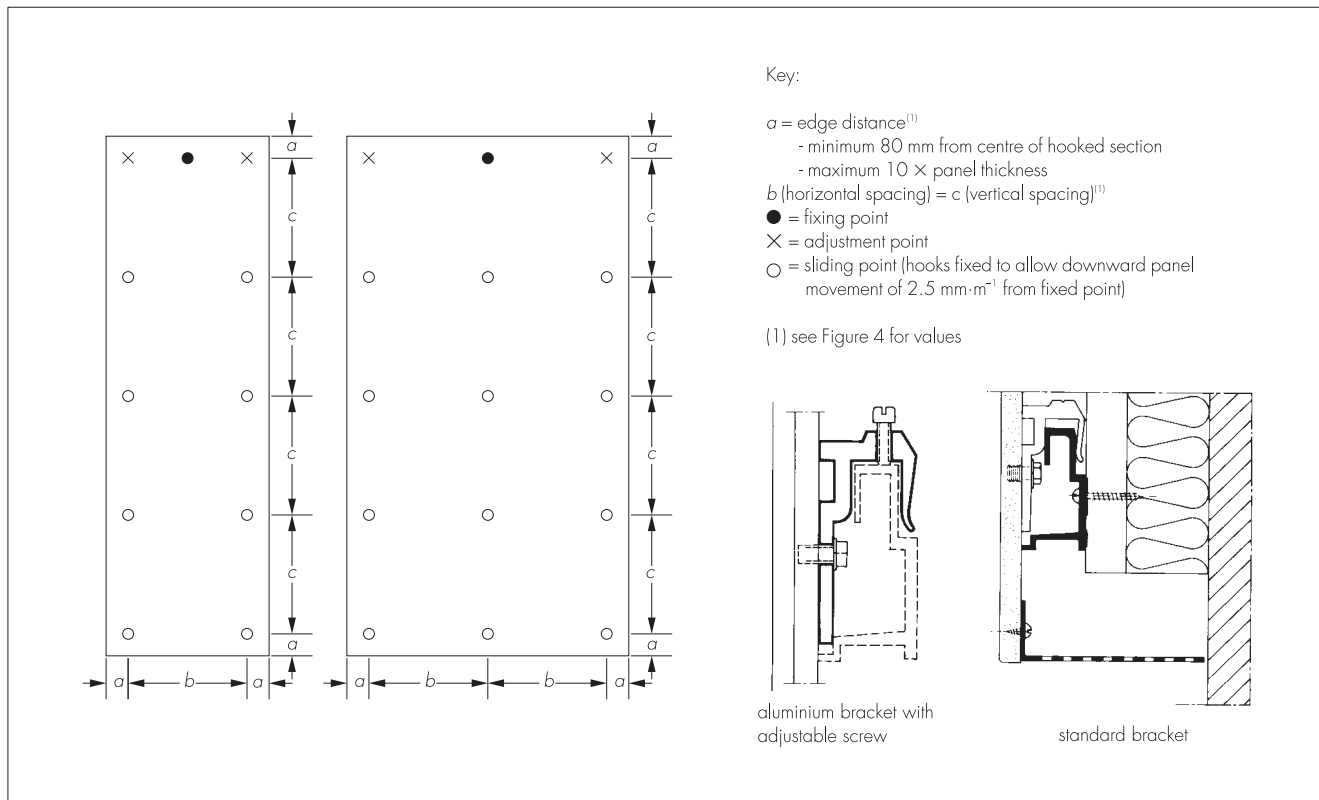


Figure 6 Rivet fixing into aluminium sub-frame







## Impact strength



5.7 The panels have adequate resistance to the hard and soft body impacts likely to occur in practice and are satisfactory for use in the locations described in categories B to F of BS 8200 : 1985.

## 6 Behaviour in relation to fire



6.1 When tested to EN ISO 11925-2 : 2002 and EN 13823 : 2002 and classified in accordance with EN 13501-1 : 2002, the panels, depending on panel grade, colour groups, thickness and frame type, achieved the European Classes shown in Table 6.

Table 6 Reaction to fire classification

Panel grade	Frame type and panel thickness	Colour group		
		Unicolour	Metallics	Naturals and Wood Decors
Standard grade	Wood or metal frame, $\geq 6 \text{ mm}$	D-s2, d0	D-s2, d0	D-s2, d0
Fire resistant (FR) grade	Wood frame, 6 mm	B-s2, d0	—	—
	Wood frame, $\geq 8 \text{ mm}$	B-s2, d0	B-s2, d0	B-s2, d0
	Metal frame, 6 mm	B-s2, d0	—	—
	Metal frame, $\geq 8 \text{ mm}$	B-s1, d0	B-s1, d0	B-s1, d0

6.2 The results in Table 6 indicate that the classification of FR panels is better than the European Class of B-s3, d2. From an application point of view, this is equivalent to Class 0 national class as defined in the Approved Document B and Technical Booklet E in England and Wales and Northern Ireland respectively, and is within the 'low risk' category in accordance with Technical Handbooks, Section 2 in Scotland.

6.3 When determining the minimum distance between the sides of a building and the relevant boundary, any area of wall (with the appropriate fire resistance) covered by a combustible cladding is counted as an unprotected area amounting to half the actual area of the cladding.

6.4 Due consideration should always be given to any combustible materials behind the cladding which may become exposed in the event of a fire. Cavity barriers should be incorporated behind the cladding as required under the relevant building regulations.

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

## 7 Air and water penetration



7.1 The panels are suitable for use as drained and back-ventilated rainscreen provided that:

- adequate ventilation is allowed in accordance with BS 8200 : 1985 and BS 5250 : 2002. See section 3.12.
- where vertical runs exceed 20 m and/or where internal relative humidity conditions exceed 65% (maximum normal domestic) without an accompanying vapour check, additional ventilation openings (minimum 5000 mm<sup>2</sup> per horizontal metre run) are provided at vertical spacings of no more than 8 metres
- provision is made for water penetrating the cladding to drain away at the base.

7.2 The use of a vapour-permeable water barrier is recommended when the cladding is installed on a wall which is not fully watertight.

7.3 When insulation is incorporated behind open-jointed cladding (see section 10.2), the thermal resistance of the insulation may be reduced as it becomes wet. For these installations the use of a vapour-permeable water barrier in front of the insulation should be considered.

## 8 Maintenance



8.1 Annual maintenance inspections should be carried out to ensure that rainware is complete and in good order, that flashings, seals and fastenings are in place and are secure, and to establish whether maintenance painting is necessary.

8.2 Maintenance painting should be undertaken at appropriate intervals, or when inspections show it to be necessary. For advice on maintenance intervals and suitable paint systems, the Certificate holder should be consulted.

## 9 Durability



9.1 The durability and service life of the products will depend upon the building location, façade aspect, immediate environment, intended use of the building and the standard of maintenance.

9.2 Providing regular maintenance is carried out, as described in section 8 and in accordance with the Certificate holder's instructions, the products should have an ultimate service life in excess of 50 years.

9.3 In general, any colour change will be slight and uniform on any one elevation, and the product will have a decorative life of at least 15 years in heavily polluted areas and at least 20 years in other areas. A lower decorative life for dark colours is possible in exposed conditions.

## Installation

### 10 General

10.1 Installation of Trespa Meteon Panels and Fixings must be carried out in accordance with the manufacturer's instructions.

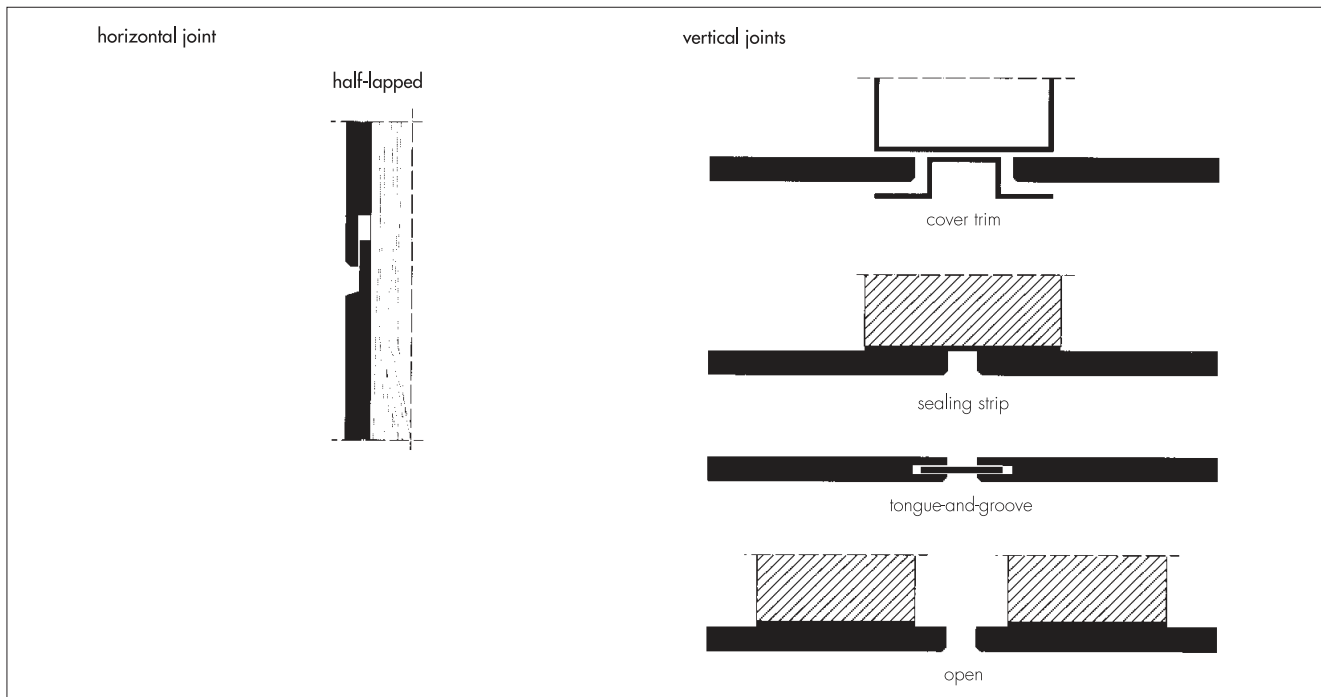
10.2 A minimum 10 mm wide gap must be allowed between all panel edges to accommodate hygrothermal movement (see section 3.11). Adequate provision must be also made for ventilation and drainage behind the cladding.

10.3 Panels may be joined with open or closed joints (see Figure 8). Closed joints may be achieved by use of a metal, plastic or rubber sealing strip behind adjoining panels, a tongue and groove joint, a half-lapped joint (panel thickness 8 mm minimum), or a cover trim. For all joints the manufacturer's recommendations must be observed. Care must be taken to ensure that closed jointing does not restrict panel movement. The use of sealants around the joints is not recommended.

10.4 Screws and rivets must be placed centrally in their holes. Screws should not be over-tightened and a 0.3 mm space should be left between rivet head and panel by using a pressure plate on the blind riveter. A gun with a special nose piece is available for this purpose.

10.5 When fixing a panel with rivets, a stepped drill can be used to make a 5 mm hole in the aluminium rail and a 10 mm expansion hole in the panel.

Figure 8 Types of joint



## Technical Investigations

### 11 Tests

11.1 An examination was made of test data relating to reaction to fire to EN 13501-1 : 2002.

11.2 In the assessment leading to the issue of the Dutch Agrément Certificate an examination was made of:

- hard and soft body impact strength
- UV resistance and colour fastness
- SO<sub>2</sub> resistance
- swelling and water absorption
- modulus of elasticity with four-part bending.

11.3 Under the assessment leading to the issue of Certificate 91/2628, which was replaced by Certificate 99/3629, tests were carried out by KIWA NV to determine the strength of the fixings.

### 12 Investigations

12.1 An inspection of the manufacturing operation and quality control procedures was undertaken by BDA-Intron B.V.

12.2 Under the assessment leading to the issue of Certificate No 91/2628 the following investigations were carried out:

- site visits were carried out to assess performance in use and practicability of installation
- an evaluation was made of the effectiveness of the system as a back-ventilated rainscreen with open or closed joints
- an evaluation was made of the durability and design strength of the fixings.

An evaluation of the durability and design strength of the fixings was also carried out as part of the assessment leading to the issue of the Dutch Agrément Certificate.

An examination was made of independent data relating to:

- hygrothermal behaviour
- emission of toxic substances
- durability.

## Bibliography

BS 5250 : 2002 *Code of practice for control of condensation in buildings*

BS 5268-2 : 2002 *Structural use of timber — Code of practice for permissible stress design, materials and workmanship*

BS 5268-5 : 1989 *Structural use of timber — Code of practice for the preservative treatment of structural timber*

BS 5628-1 : 2005 *Code of practice for the use of masonry — Structural use of unreinforced masonry*

BS 5628-3 : 2005 *Code of practice for the use of masonry — Materials and components, design and workmanship*

BS 6399-2 : 1997 *Loading for buildings — Code of practice for wind loads*

BS 8110-1 : 1997 *Structural use of concrete — Code of practice for design and construction*

BS 8110-2 : 1985 *Structural use of concrete — Code of practice for special circumstances*

BS 8118-1 : 1991 *Structural use of aluminium — Code of practice for design*

BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*

BS EN 438-7 : 2005 *High-pressure decorative laminates (HPL). Sheets based on thermosetting resins (usually called laminates). Compact laminate and HPL composite panels for internal and external wall and ceiling finishes*

BS EN 573-3 : 2009 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Chemical composition and form of products*

BS EN 1991-1-4 : 2005 *Eurocode 1 : Actions on structures — General actions — Wind actions*

BS EN 1992-1-1 : 2004 *Eurocode 2 : Design of concrete structures — General rules and rules for buildings*

BS EN 1992-1-2 : 2004 *Eurocode 2 : Design of concrete structures — General rules — Structural fire design*

BS EN 10088-1 : 2005 *Stainless steels — List of stainless steels*

BS EN 13501-1 : 2002 *Fire classification of construction products and building elements. Classification using test data from reaction to fire tests*

BS EN 13823 : 2002 *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

BS EN ISO 11925-2 : 2002 *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Single-flame source test*

## Conditions of Certification

### 13 Conditions

13.1 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.

13.2 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.

13.3 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
- remain covered by a valid Dutch Agrément Certificate; and
- are reviewed by the BBA as and when it considers appropriate.

13.4 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.

13.5 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.