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Agrément Certificate
19/5638
Product Sheet 1 Issue 2

ALPOLIC PANELS

ALPOLIC/FR AND A2 CLADDING PANELS

This Agrément Certificate Product Sheet(1) relates to ALPOLIC/fr and A2 Cladding Panels, flat aluminium composite panels, used in back ventilated and drained rainscreen cladding systems, to provide a decorative and protective façade over external masonry, steel- and timber-frame walls of new and existing domestic and non-domestic buildings. Their use is restricted in some cases.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

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 Agrément

Date of Second issue: 15 January 2026
Originally certified on 11 April 2019

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

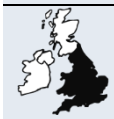
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that ALPOLIC/fr and A2 Cladding 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 Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**A1**	**Loading**
Comment:		The products can contribute to satisfying this Requirement. See section 1 of this Certificate.
Requirement:	**B3(4)**	**Internal fire spread (structure)**
Comment:		The products can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	**B4(1)**	**External fire spread**
Comment:		The products may be restricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment		The products can contribute to satisfying this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**7(2)**	**Materials and workmanship**
Comment:		The products may be restricted by this Regulation. See section 2 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		The products can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**8(3)**	**Fitness and durability of materials and workmanship**
Comment:		The products may be restricted by this Regulation. See section 2 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	1.1(a)(b)	Structure
Comment:		The products can contribute to a construction satisfying this Standard, with reference to clauses 1.1.1[(1)(2)], 1.1.2[(1)(2)] and 1.1.3[(1)(2)]. See section 1 of this Certificate.
Standard:	2.4	Cavities
Comment:		The products can contribute to satisfying by this Standard, with reference to clause 2.4.2[(1)(2)]. See section 2 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The products may be restricted by this Standard, with reference to clauses 2.6.4[(1)(2)], 2.6.5[(1)] and 2.6.6[(2)]. See section 2 of this Certificate.

Standard:	2.7	Spread on external walls
Comment:		The products may be restricted by this Standard, with reference to clause 2.7.1[(1)(2)]. See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 3.10.1[(1)(2)], 3.10.5[(1)(2)] and 3.10.6[(1)(2)]. See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards – conversion**
Comment:		All comments given for the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1[(1)(2)] and Schedule 6[(1)(2)].

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

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

Regulation:	**23(1)(a)(i) (iii)b(i)**	**Fitness of materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**23(2)**	**Fitness of materials and workmanship**
Comment:		The products may be restricted by this Regulation. See section 2 of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The products can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**30**	**Stability**
Comment:		The products can contribute to satisfying this Regulation. See section 1 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread – structure**
Comment:		The products can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The products may be restricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2026

In the opinion of the BBA, ALPOLIC /fr and A2 Cladding Panels, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Part 6 *Superstructure (excluding roofs),* Chapter 6.9 *Curtain walling and cladding.*

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

Fulfilment of Requirements

The BBA has judged ALPOLIC /fr and A2 Cladding Panels to be satisfactory for use as described in this Certificate. The products have been assessed as back-ventilated and drained rainscreen cladding to provide a decorative and protective

façade over external masonry, steel- and timber-frame walls of new and existing domestic and non-domestic buildings. Their use is restricted in some cases.

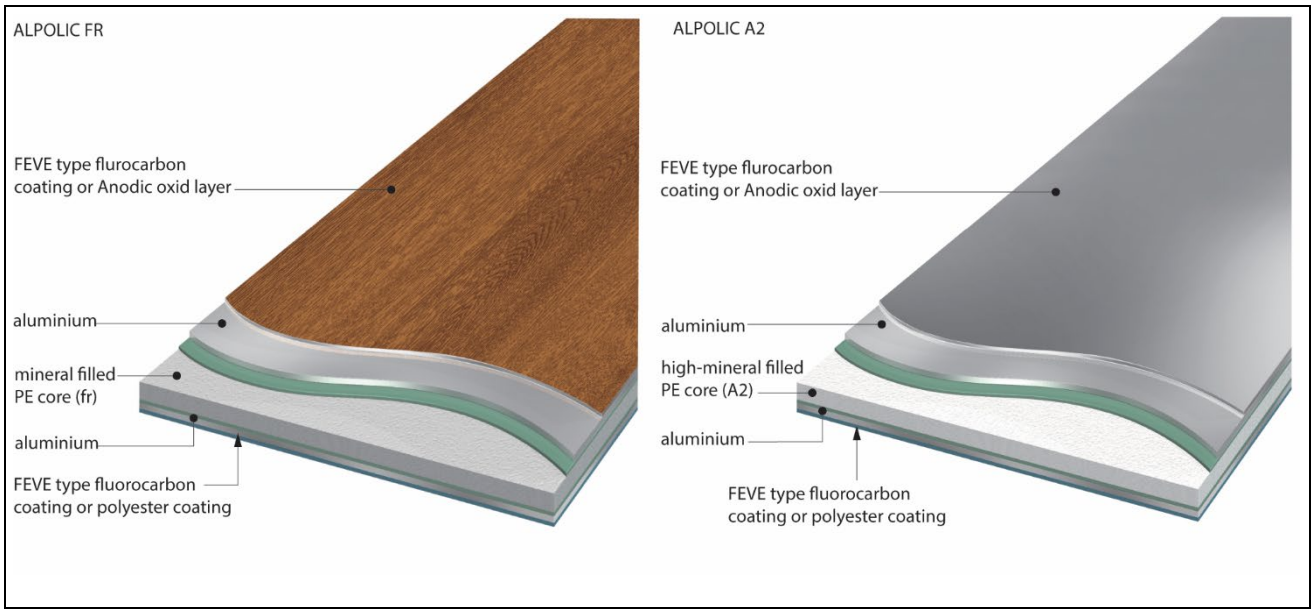
ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. ALPOLIC/fr and A2 Cladding Panels consist of:

- Flat aluminium composite products comprising two 0.5 mm thick aluminium sheets bonded by an adhesive film to either side of a 3 mm thick core of low-density polyethylene filled with inorganic fillers. The exposed face is coated with either a minimum of 22 µm layer of FEVE (fluoroethylene vinyl ether) paint or an 8 µm anodic oxide layer; a polyester-based wash coating protects the unexposed face (see Figure 1).

Figure 1 ALPOLIC panel build-up



- The products are available in two grades, differentiated by the composition of the product core: /fr (grey) and A2 (white), each containing a different percentage of combustible material. Each is available with either a two-layer or three-layer outer coating. Full details and characteristics are given in Table 1.

Table 1 Products: dimensions and characteristics

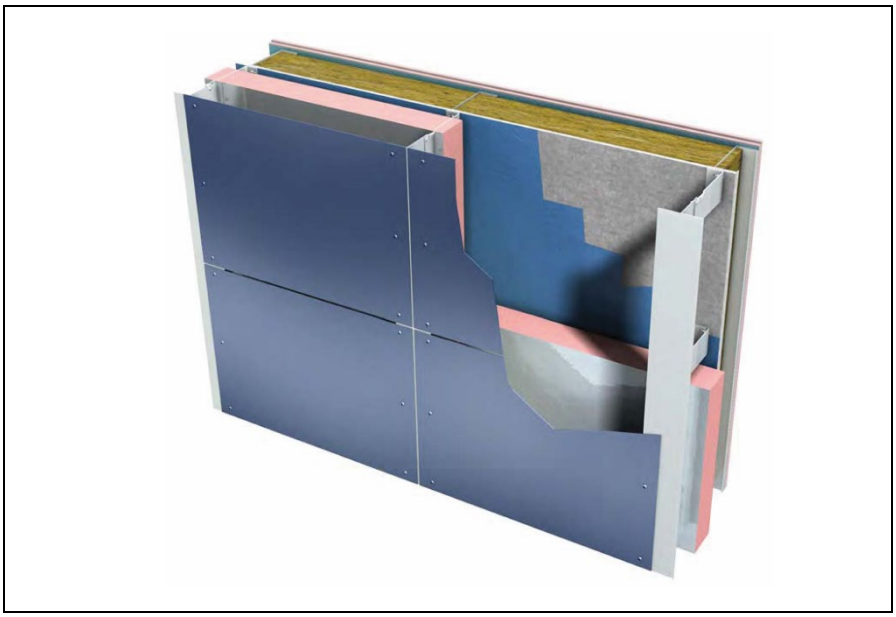
Characteristic (unit)	ALPOLIC/fr		ALPOLIC A2	
Standard widths (mm)	1035, 1285, 1535, 1785, 2050 (± 2 mm)		1000, 1250, 1500, 1750, 2015 (± 2 mm)	
Standard lengths (mm)	1800 to 7200 (± 1 mm/m)			
Overall thickness (mm)	4 ± 0.2			
Mass per unit area ($kg \cdot m^{-2}$)	7.6 ± 0.6		8.4 ± 0.8	
Colours	Solid, Metallic, Sparkling, Prismatic and NaturArt (Patterns) Series and ReAL Anodized = Anodised oxide layer (Non-Etched, Standard-Etched, Brite, Brushed)			
Exposed face	FEVE 3-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Top coat / clear coat ≤ 22 µm / ≤ 28 $g \cdot m^{-2}$ Or FEVE 2-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Or Anodised oxide layer (≥ 8 µm)		FEVE 3-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat 25 µm / 41 $g \cdot m^{-2}$ Top coat / clear coat ≤ 22 µm / ≤ 28 $g \cdot m^{-2}$ Or FEVE 2-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Or Anodised oxide layer (≥ 8 µm)	
Aluminium sheet	Thickness 0.5 mm			
	Aluminium alloy 3105-H44 or 3005-H44	Aluminium alloy 5005-H14/H22/H24 or 1050/1085-H18	Aluminium alloy 3105-H44 or 3005-H44	Aluminium alloy 5005-H14/H22/H24 or 1050/1085-H18
Epoxy resin (coating)	Applied between the polymeric adhesive and aluminium sheet (approx. 10 µm / approx. 15 $g \cdot m^{-2}$)			
Adhesive film	Applied between the core and aluminium sheet (approx. 35 µm / approx. 33 $g \cdot m^{-2}$)			
Core	Thickness 3 mm			
	Thermoplastic low-density PE filled with inorganic fillers (black)		Thermoplastic low-density PE highly filled with inorganic fillers (white or light grey)	
Adhesive film	Applied between the core and aluminium sheet (approx. 35 µm / approx. 33 $g \cdot m^{-2}$)			
Epoxy resin (coating)	Applied between the polymeric adhesive and aluminium sheet (approx. 10 µm / approx. 15 $g \cdot m^{-2}$)			
Aluminium sheet	Thickness 0.5 mm			
	Aluminium alloy 3105-H44 or 3005-H44	Aluminium alloy 5005-H14/H22/H24 or 1050/1085-H18	Aluminium alloy 3105-H44 or 3005-H44	Aluminium alloy 5005-H14/H22/H24 or 1050/1085-H18
Reverse (unexposed) face	FEVE 3-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Top coat / clear coat ≤ 22 µm / ≤ 28 $g \cdot m^{-2}$ Or FEVE 2-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Or Primer (polyester-based wash coating) ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Or Anodised oxide layer (≥ 8 µm)		FEVE 3-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Top coat / clear coat ≤ 22 µm / ≤ 28 $g \cdot m^{-2}$ Or FEVE 2-layer coating: Conversion coat Primer ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Base coat ≤ 25 µm / ≤ 41 $g \cdot m^{-2}$ Or Primer (polyester-based wash coating) ≤ 20 µm / ≤ 38 $g \cdot m^{-2}$ Or Anodised oxide layer (≥ 8 µm)	

Ancillary Items

The Certificate holder recommends the following ancillary items for use with the products, but these materials have not been assessed by the BBA and are outside the scope of this Certificate.

- blind rivets – 5 x 12 and 4.8 x 11 mm, AlMg3 rivets with a zinc-plated mandrel, 5 mm diameter and in lengths depending on the specific application
- aluminium sub-frame (rails, wall brackets and fixings)
- substrate anchors — used to fix wall brackets to the substrate wall (specification dependent on the strength of the substrate)
- substrate wall
- insulation — rigid or semi-rigid insulation boards
- breather membrane
- cavity barriers
- protective cavity mesh
- thermal-break pads.

Figure 2 ALPOLIC cladding panels and typical fixing system (outside the scope)



Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessments is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Resistance to impact

The products' resistance to impact was assessed and the result is shown in Table 2.

Table 2 Resistance to hard and soft body impact

Product assessed	Assessment method	Requirement	Result
ALPOLIC/fr Dimensions: L 1800 x H 1200 mm (hard body) L 600 x H 1200 mm (soft body) Thickness: 4 mm Subframe: Vertical aluminium rails at 600 mm centres	ETAG 034 : 2012, Part 1	Value achieved	Suitable for use in Categories(1) I to IV

(1) The Use Categories are defined in ETAG 034 : 2012, Part 1 as:

- Category I — a zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use
- Category II — a zone liable to impacts from thrown or kicked objects, but in public locations where the height of the kit will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care
- Category III — a zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects
- Category IV — a zone out of reach from ground level.

1.1.2 On the basis of data assessed, the products are suitable for use in the categories shown in Table 2.

1.2 Wind loading

1.2.1 The design dynamic wind load resistance of the products was assessed and the results are given in Table 3.

Table 3 Design dynamic wind load resistance

System assessed	Assessment method	Requirement	Result (kPa)(1)
ALPOLIC/fr panels Dimensions: L 2500 x H 1500 mm Thickness: 4 mm Subframe: Vertical rails at 840 mm distance Fixings: Rivets at 300 mm vertical distance and at 480 mm horizontal distance Rivets at 500 mm vertical distance and 840 mm horizontal distance	EAD 090034-00-0404 : 2016	Value achieved	 2.6 kPa 1.7 kPa

(1) Obtained by applying a safety factor of 2 to the test failure value.

1.2.2 On the basis of data assessed, the products can achieve the design dynamic wind load resistance given in Table 3.

1.3 Mechanical properties

1.3.1 The mechanical characteristics of the products were assessed, and the results are given in Table 4.

Table 4 Characteristic bending properties

Product assessed	Assessment method	Requirement	Result
	Characteristic bending stress $\sigma_{B,max}$	Value achieved	($N \cdot mm^{-2}$)
ALPOLIC/fr panels	ETAG 034 : 2012		147.01
ALPOLIC A2 panels			148.52
	Characteristic bending stiffness per length EJ		($N \cdot m^2 \cdot m^{-1}$)
ALPOLIC/fr panels	ETAG 034 : 2012		239.91
ALPOLIC A2 panels			201.92

1.3.2 The products' characteristic pull through resistance was tested and the results are shown in Table 5.

Table 5 Characteristic pull through resistance(1)(2)(3)

Product assessed	Assessment method	Requirement	Result (N)
ALPOLIC/fr panel	EAD 090062-00-0404	Value achieved:	
Fixings: rivets		Panel corner	937.68
		Panel edge	956.77
ALPOLIC A2 panel		Value achieved:	
Fixings: rivets		Panel corner	947.51
		Panel edge	1077.50

(1) For design value calculations, a partial factor of 2.4 must be applied.
(2) The characteristic pull-through values given in Table 5 may be adopted for fixed point holes on the product (6 mm diameter).
(3) Pull-through resistance for sliding point holes must be disregarded.

1.3.2.1 On the basis of data assessed, characteristic pull-through values given in Table 5 may be adopted for fixed point holes (6 mm diameter).

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The products achieved the reaction to fire classifications given in Table 6.

Table 6 Reaction to fire classifications

Product assessed	Assessment Method/Report	Construction[1]	Result
ALPOLIC A2 cladding panels with FEVE coating: 3-layer FEVE coating or 2-layer FEVE coating Colour: any	EN 13501-1 : 2018 / MPA 903 4238 024-81[2]	Subframe: metal profiles mineral wool ≥ 50 mm and density of 60 kg·m^{-3} of A2 classification or better Joints: with or without panel joints ≤ 20 mm	A2-s1, d0
Reverse side (facing into the cavity) of the ALPOLIC A2 panels with FEVE coating: 3-layer FEVE coating or 2-layer FEVE coating		Cavity: ≥ 40 mm Mechanical fixings	A2-s1, d0
Alpolic A2 core (white or grey)	BS EN 13501-1 : 2018 / SK169 - 2[2]	Core in insolation	A2-s1, d0
ALPOLIC / fr panels with FEVE coating: 3-layer FEVE coating: or 2-layer FEVE coating: Colour: any	EN 13501-1 : 2018 / MPA 903 4238 024-83[2]	Subframe: metal profiles mineral wool ≥ 50 mm and density of 60 kg·m^{-3} of A2 classification or better Joints: with or without panel joints ≤ 20 mm	B-s1, d0
Reverse side facing into the cavity) of the ALPOLIC /fr panels with FEVE coating: 3-layer FEVE coating: or 2-layer FEVE coating: or Primer (polyester-based wash coating)		Cavity: ≥ 40 mm Mechanical fixings	B-s1, d0

(1) Outside the scope of this Certificate
(2) Copies available from the Certificate holder on request.

2.1.2 Annex E.3 of ETAG 034 states that the results achieved for the constructions given in Table 6 remain valid, without further testing, for:

- greater dimensions (height and width) of cladding elements
- higher density of fixings
- greater cavity depths
- aluminium or steel subframes
- greater thicknesses of mineral wool insulation with the same density and the same or better reaction to fire classification.

2.1.3 The classification and permissible areas of use of other constructions must be established by a suitably experienced and competent individual in accordance with the documents supporting the national Building Regulations.

2.1.4 Constructions achieving A2-s1, d0 in Table 6 of this Certificate, with no components less than A2-s1,d0, are unrestricted in terms of building height and proximity to a relevant boundary.

2.1.5 Constructions achieving B-s1, d0 in Table 6 are unrestricted in terms of building height and proximity to a relevant boundary, except on buildings described in sections 2.1.6 to 2.1.8 of this Certificate.

2.1.6 In England, constructions achieving B-s1, d0 in Table 6 must not be used on residential buildings more than 11 m in height or on other buildings with a storey 18 m or more in height.

2.1.7 In Wales and Northern Ireland, constructions achieving B-s1, d0 in Table 6 must not be used on buildings with a storey 18 m or more in height.

2.1.8 In Scotland, constructions achieving B-s1, d0 in Table 6 must not be used 1 m or less from a relevant boundary, or on buildings with a storey 11 m or more above the ground. Restrictions also apply on some entertainment, assembly, hospital and residential care buildings. The products must also be included in calculations of unprotected area.

2.1.9 Designers must refer to the relevant national Building Regulations guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers (which must not impede drainage and ventilation pathways), service penetrations and combustibility limitations for other materials and components used in the overall wall construction (for example, thermal insulation).

2.2 Resistance to fire

Where a wall incorporating the products is required to achieve a period of fire resistance, its performance must be confirmed by a suitably experienced and competent individual or by a test from a suitably accredited laboratory.

3 Hygiene, health and the environment

Data were assessed for the following characteristic.

3.1 Weathertightness

3.1.1 The design of the products was assessed against the requirements of EAD 090062-01-0404. The products are suitable for use in back ventilated and drained cladding systems.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 Specific test data were assessed as given in Table 7.

Table 7 Durability

Product assessed	Assessment method	Requirement	Result
ALPOLIC A2 panel (all finishes) Dimensions: L 305 (± 1.2) x H 76 (± 0.8) mm Thickness: 4 mm	Torque peel strength on control and after hygrothermal testing to ASTM D1781/D1781M EOTA TR 038 : 2012	No significant deterioration	Pass
FEVE type fluorocarbon 3-layer coating	Moisture resistance to BS EN ISO 6270-1 : 2001, BS 3900-F9 : 2001	No damage and minor bubbling at edge of plate	Pass
	Corrosion resistance: salt fog test for 1000 hours to BS EN ISO 9227 : 2012 and assessment to BS EN ISO 1670 : 2007	No evidence of corrosion or blistering	Pass
	UV resistance to BS EN ISO 4892-3 : 2000 and assessment to BS 3900 Parts D8-D10 : 1986.	No significant deterioration	Pass
	Cross cut test BS EN ISO 2409 : 2013	No detachment of coating ("0" classification)	Pass
	Abrasion resistance to BS EN 13523-16 : 2004	Value achieved	49 mg
	Scratch resistance to BS EN ISO 15184-1 : 2012	Value achieved	≤ 2.1 kg

8.3 Service life

8.3.1 Under normal service conditions, the products will have a life in excess of 30 years provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 The performance of the colour coating will depend upon the colour chosen, the building location, the façade aspect and the immediate environment. In a non-corrosive atmosphere, the products will retain a good appearance in excess of 20 years. In coastal or severe industrial environments, this may be reduced.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Design wind actions must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. Due consideration must be given to the higher-pressure coefficients applicable to corners of the building as recommended in this Standard (see Annex A.1 of this Certificate).

9.1.3 The adequacy of the substrate wall to which the products are fixed is outside the scope of this Certificate and must be verified by a suitably experienced and competent individual. The wall must have sufficient strength to resist independently the loads imparted directly by the products, and the wind actions normally experienced in the UK, as well as any in-plane force effects. It must be weathertight and reasonably airtight and designed and constructed in accordance with the requirements of the national Building Regulations and Standards given below. The contribution of the products to the stability of the substrate wall is assumed to be negligible:

- masonry walls must be designed and constructed in accordance with the relevant recommendations of BS EN 1996-1-1 : 2022, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006, and their UK National Annexes, PD 6697 : 2019, and BS 8000-0 : 2014 and BS 8000-3 : 2020
- steel-frame walls must be structurally sound, and designed and constructed in accordance with BS EN 1993-1-1 : 2022, BS EN 1993-1-2 : 2005 and BS EN 1993-1-3 : 2006, and their UK National Annexes
- timber-frame walls must be designed and constructed in accordance with BS EN 1995-1-1 : 2004 and BS EN 1995-1-2 : 2004 and their UK National Annexes, and PD 6693-1 : 2019, with workmanship in accordance with BS 8000-5 : 1990, and preservative-treated in accordance with BS EN 351-1 : 2023 and BS 8417 : 2011.

9.1.4 The designer must ensure that:

- the supporting sub-frame has sufficient stiffness, such that its deformation does not affect the performance of the products
- the design of the cladding, sub-frame and their fixings have adequate resistance to the applied actions and in accordance with the relevant codes and Standards, such as to limit mid-span(1) deflections to span/200 and cantilever(2) deflections to span /150
- the products are fixed to the sub-frame using the specified fixing mechanisms (see point above)
- the specified fixings of the panel to the sub-frame have adequate tensile and pull-out strength to resist the applied actions
- fixing of the support brackets to the supporting wall has adequate tensile pull-out strength and corrosion resistance. An appropriate number of site-specific pull-out tests must be conducted on the wall as appropriate to determine the minimum pull-out resistance to failure of the fixings, as well as their characteristic pull-out resistance in accordance with the guidance given in BS EN 1990 : 2023.

(1) Vertical distance between the fixing brackets.
(2) Vertical distance between the bracket and the end of the rail sub-frame.

9.1.5 The fixings defined as ancillary items in this Certificate must be used to attach the panels to the support frame. The design must ensure adequate capacity against wind suction actions.

9.1.6 The designer must ensure the cladding system is designed with appropriate compartmentation of the cavity, and in accordance with the requirements of the *NHBC Standards* 2026, Chapter 6.9.

9.1.7 Designers, planners, contractors and/or installers must ensure that the design of the installation is in accordance with the Certificate holder's instructions and the information given in this Certificate. All design aspects must be checked by a suitably experienced and competent individual in accordance with the requirements of the relevant national Building Regulations and Standards. For advice on specific construction details, eg flue pipe penetrations, the Certificate holder must be consulted, but such advice is outside the scope of this Certificate.

9.1.8 Ventilation and drainage must be provided behind the panels. As the panels are open-jointed, the clear cavity between the back of the panel and the wall (or insulation if installed on the wall) must be at least 40 mm wide and ensure that a minimum ventilation area of 5000 mm^2 per metre run is provided at the building base point and at the roof edge. Horizontal and vertical joint gaps between the panels must be 10 mm wide. All ventilation openings around the periphery of a cladding system incorporating the panels must be suitably protected with a mesh or a perforated sheet or similar, to prevent the ingress of birds, vermin and insects (see also section 9.2.12 and Figure 3). A single fixed point is required per panel to control thermal movement.

9.1.9 The panels must be mounted to allow for thermal expansion movement. When the panels are secured, allowance for expansion must be made.

9.1.10 To allow for longitudinal expansion, a minimum gap of 10 mm between adjacent support rails must be provided. The panels must not straddle this gap.

9.1.11 As the panels are open-jointed, any insulation installed behind the cladding must be suitably fixed to the supporting wall to resist forces generated by wind actions and the insulation's self-weight. Insulation should be of a rigid or semi-rigid type (eg boards) and, where its performance could be diminished by moisture, a suitable vapour permeable membrane must be provided over its outer face.

9.1.12 Thermal and moisture movement must be considered and accommodated by the inclusion of movement joints. Movement joints must be detailed by a suitably experienced and competent design engineer in accordance with the structural movement of the building, the appropriate Codes and Standards and the Certificate holder's recommendations.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 Installation must be carried out at temperatures of between 5 and 25°C.

9.2.4 Based on a preliminary survey of the wall and the architectural/structural design, a grid layout for the sub-frame (wall brackets and vertical rails) is prepared.

9.2.5 Accurate positioning and installation of the supporting frame is essential.

9.2.6 The products are mechanically fastened to aluminium rails using aluminium rivets forming an open-jointed cladding system.

9.2.7 The supporting subframe must have sufficient stiffness, such that its deformation does not affect the performance of the product. The product does not enhance the structural performance of the substrate wall.

9.2.8 If significant colour variations between batches is likely, it may be necessary to mix the product from different pallets so as to obtain a uniform shade over the façade.

9.2.9 Vertical joints to allow for movement must be provided through the cladding and subframe support system. The actual spacing and position of the joints must coincide with movement joints in the substrate wall and allow for the same degree of movement. They must extend throughout the full height of the building including parapets etc. Movement joints in the structure of the building must be carried through to the face of the cladding.

9.2.10 Suitable cavity barriers must be installed behind the cladding as necessary, to comply with the relevant national Building Regulations relating to fire safety.

9.2.11 The substrate wall to which the products are fixed must be weathertight and reasonably airtight, to satisfy the requirements of the relevant national Building Regulations.

9.2.12 The air space between the back of the products and the supporting wall or insulation must be at least 40 mm wide and allow for conventional building tolerances. Guidance on recommended cavity widths and opening joint widths between products is given in *NHBC Standards* 2026, Chapters 6.2 and 6.9. The ventilation pathway behind the cladding must not be allowed to become blocked and openings should be suitably protected, or baffled, to prevent the ingress of birds, vermin and rain (see also section 2 of this Certificate).

9.2.13 Vertical support rails are fixed to the brackets with the top fixing tight and the remainder of the fixings sufficiently free to allow for movement. In addition, an expansion gap between adjacent vertical rails must be provided.

9.2.14 The products are riveted to vertical rails with vertical and horizontal gaps between products of between 10 and 20 mm. Rivets are fixed, commencing at the middle of each side working to the corners, at spacings of a maximum 500 mm along the supporting rails, ensuring a minimum edge distance of 16 mm.

9.2.15 To allow for thermal expansion, the products must be provided with 6 and 8.5 mm drill holes for fixed and sliding point fixing, respectively. The fixed point should be arranged as close as possible to the centre of the product. Rivets are centrally placed in the drill holes and tightened by using a distance gauge (distance ≥ 0.3 mm).

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information and a site visit to witness an installation. To achieve the performance described in this Certificate, installation of the products must be installed by a competent general builder, or a contractor, experienced with these types of products.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the products in use requires that they are suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 The following requirements apply in order to satisfy the performance assessed in this Certificate.

9.4.2.1 To maintain the products' appearance, annual maintenance (or as recommended by the Certificate holder depending on environmental conditions) is required. Maintenance must ensure that protective cavity mesh, gutters and downpipes are clear and in a good state, and that ancillary features such as flashings and seals are in place and secure.

9.4.2.2 The products must be cleaned using hot and cold water with a mild cleaning agent using a non-abrasive pad or sponge. General household cleaners should not be used. For more difficult chemical soiling, the Certificate holder's specialist advice must be sought.

9.4.2.3 After washing, the surface must be thoroughly rinsed with clean water, and the rinsed surface air-dried or wiped with a squeegee or lint-free cloth. Abrasive pads such as wools or sandpapers, must not be used.

10 Manufacture

10.1 The production processes for the products have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production processes were in accordance with the documented processes, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site in wooden crates and wrapped in protective sheets bearing product details, size, quantity, identification code, manufacturing references and colour.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The products must be stored indoors in wooden crates using a flat or vertical rack system. If using the vertical rack system, care must be taken in placing a rubber mat on the bottom, leaning products closely against an inclined backing material within 10°. The protective film on the products must be removed as soon after installation as possible.

11.3 The products must be handled with care to avoid damage. They must be lifted off a stack rather than slid across each other. For temporary support during installation, polystyrene or foam wedges may be used.

11.4 Care must be exercised when handling the products to avoid injury from sharp edges. Protective clothing should be worn and all health and safety rules observed.

†ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

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

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of ISO 9001 : 2015 by TÜV Rheinland (Certificate 011001600503)

Additional information on installation

A.1 In accordance with BS EN 1990 : 2002 + A1 : 2005 and its UK National Annex, it is recommended that a partial load factor of 1.5 is applied to the calculated wind actions to determine the design wind load to be resisted by the cladding system (see section 9.1.9 of this Certificate).

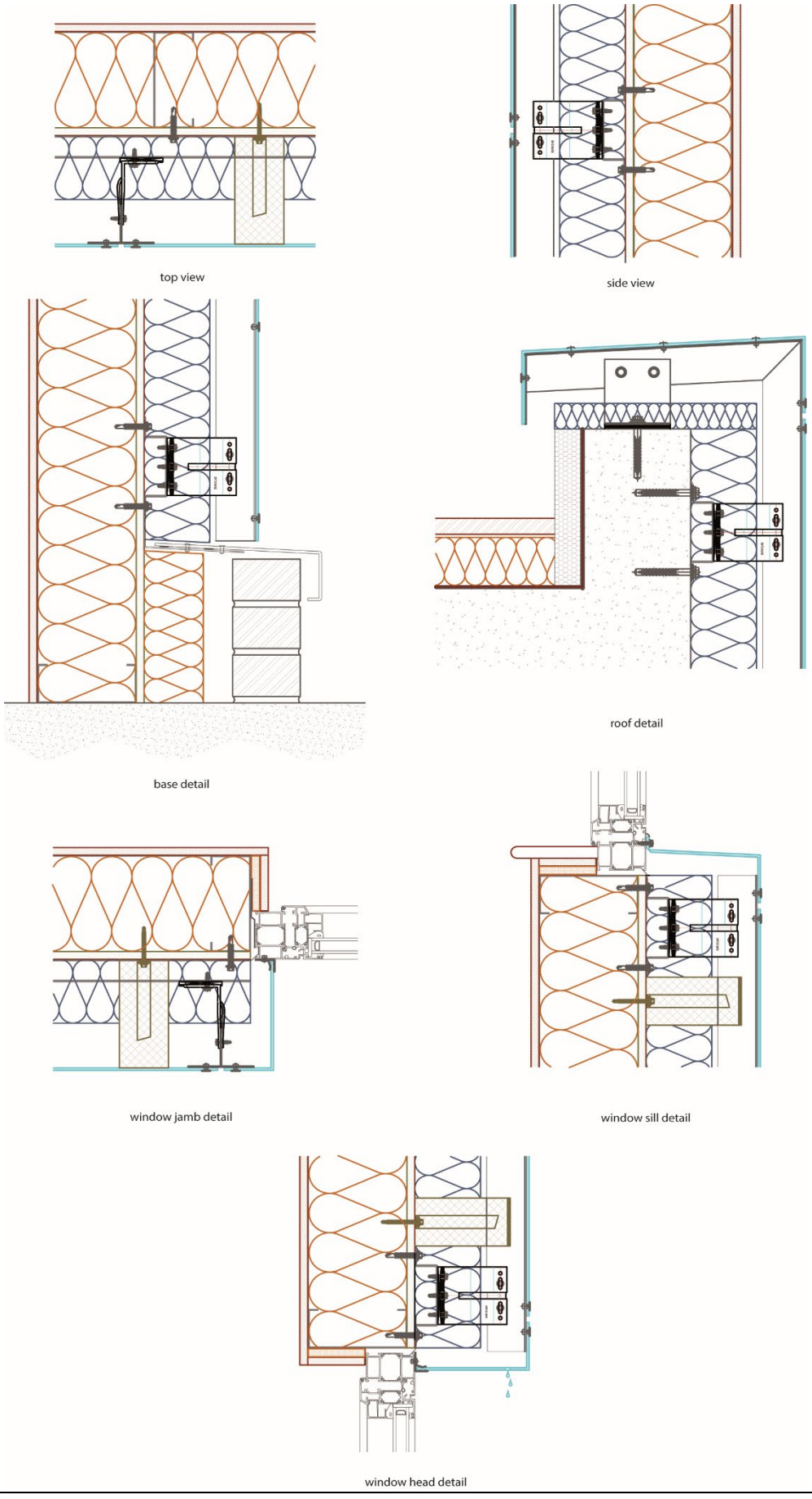
A.2 Wall brackets are fixed to the substrate using appropriate fixings. Vertical spacing between wall brackets should be as specified.

A.3 If required, a rigid or semi-rigid insulation, protected by a suitable breather membrane, can be installed on the substrate wall. The thickness of the insulation should be such as to ensure a minimum of 40 mm ventilation cavity width at the back of the product.

A.4 A mesh should be installed in accordance with the Certificate holder's instructions around the periphery of the cladding system, permitting adequate ventilation as specified in section 9 but preventing the intrusion of rodents.

A.5 Typical installation details are given in Figure 3 .

Figure 3 Typical installation details



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Conditions

1 This Certificate:

- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- 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
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

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.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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.

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

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 or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

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