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Agrément Certificate

05/4287

Product Sheet 1 Issue 8

ARMOURPLAN WATERPROOFING SYSTEMS

ARMOURPLAN SM ROOF WATERPROOFING SYSTEMS

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Armourplan SM Roof Waterproofing Systems, comprising polyester-reinforced single-ply polyvinyl chloride (PVC) membranes, for use as mechanically fastened and loose-laid and ballasted waterproofing systems on flat or pitched roofs with limited access.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

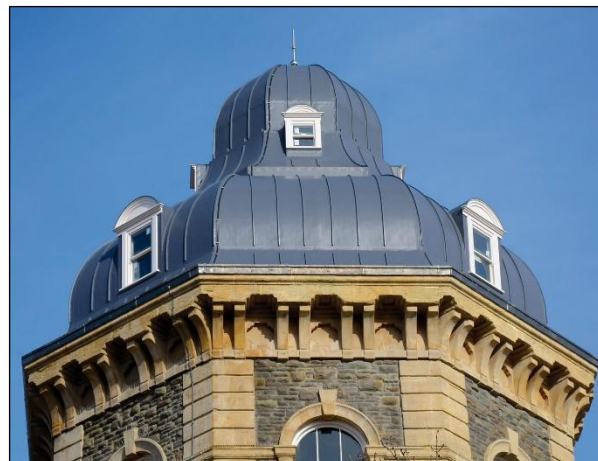
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

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 systems described herein. These systems 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 Eighth issue: 27 May 2025
Originally certified on 16 December 2005

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.

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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 the Armourplan SM Roof Waterproofing Systems, 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:	B4(1)	External fire spread
Comment:	The systems are restricted by this Requirement in some circumstances. See section 2 of this Certificate.	
Requirement:	B4(2)	External fire spread
Comment:	On a suitable substructure, the systems may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate.	
Requirement:	C2(b)	Resistance to moisture
Comment:	The systems, including joints, will enable a roof to satisfy this Requirement. See section 3 of this Certificate.	
Regulation:	7(1)	Materials and workmanship
Comment:	The systems are acceptable. See sections 8 and 9 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 systems satisfies this Regulation. See sections 8 and 9 of this Certificate.	
Regulation:	9	Building standards – construction
Standard:	2.8	Spread from neighbouring buildings
Comment:	The systems, when applied to a suitable substructure, may enable a roof to be unrestricted by this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.	
Standard:	3.10	Precipitation
Comment:	The systems, including joints, will enable a roof to satisfy this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.	
Standard:	7.1(a)	Statement of sustainability
Comment:	The systems 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:	Comments in relation to the systems 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)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The systems are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The systems, including joints, will enable a roof to satisfy this Regulation. See section 3 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The systems are restricted by this Regulation in some circumstances. See section 2 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		On a suitable substructure, the systems may enable a roof to be unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, the Armourplan SM Roof Waterproofing Systems, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs, terraces and balconies*.

In addition, in the opinion of the BBA, the systems, when installed and used in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the systems.

The *NHBC Standards* do not apply to refurbishment of existing roofs.

Fulfilment of Requirements

The BBA has judged the Armourplan SM Roof Waterproofing Systems to be satisfactory for use as described in this Certificate. The systems have been assessed as mechanically fastened and loose-laid and ballasted waterproofing systems on flat or pitched roofs with limited access.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the systems under assessment. The Armourplan SM Roof Waterproofing Systems consist of polyester ($120 \text{ g}\cdot\text{m}^{-2}$) reinforced flexible polyvinyl chloride (PVC) single-ply roof waterproofing membranes, available in SM120, SM150 and SM180 grades.

The systems have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of Armourplan SM Roof Waterproofing Systems

Characteristic (unit)	Grade		
	SM120	SM150	SM180
Thickness (mm)	1.2	1.5	1.8
Roll width (mm)	800 ⁽¹⁾ , 1060, 1600, 2120		1060, 2120
Roll length (m)	20		15
Mass per unit area (kg·m ⁻²)	1.6	2.0	2.4
Standard colours ⁽²⁾	white, mid-grey, light grey and slate grey		white and mid-grey
Plasticiser type	phthalate		

(1) Roll width 800 mm is not a manufactured product, but a centre cut of 1600 mm.

(2) Other colours are available on request.

Ancillary Items

The following ancillary items are essential to use with the systems and have been assessed with the systems:

- Armourplan PVC Contact Adhesive — a ready-to-use contact adhesive for adhering PVC roofing membranes to substrates
- IKOfix Fixing Range — mechanical fixings and pressure plates for attachment of membranes and insulation boards
- IKOfix Toothed Flatbar — steel fixing strips for membrane anchorage on mechanically fastened, inverted and ballasted systems
- Armourplan Coated Metal — a 0.6 mm galvanized steel sheet, coated with 0.6 mm of Armourplan PVC Membrane, for use in detailing
- IKO Ultra TO Underlay — a torch-on air and vapour control layer (AVCL) suitable for metal decks (IKOpro Quick Dry Primer, the subject of BBA Certificate 91/2671, is required)
- IKO Ultra HA Detailing Underlay — a self-adhesive AVCL (IKOpro Bonding Agent, the subject of BBA Certificate 91/2671, is required)
- Tanetech UV Detailing Liquid — a liquid-applied system for complex detailing (the subject of BBA Certificate 14/5178).

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

- Armourplan Detailing Membrane — a homogeneous or glass tissue reinforced PVC membrane for complex detailing
- Armourplan Walkway — a PVC membrane with a slip-resisting surface for use in areas of increased pedestrian traffic, such as for maintenance of plant
- Armourplan Cover Strips — a glass tissue and polyester scrim reinforced membrane cover strips for jointing coated metals and detailing
- Armourplan Pre-formed Corners — pre-formed internal and external corners
- Armourplan Outlet Pipes
- Armourplan Seam Cleaner — a preparation solvent for cleaning PVC roofing membranes as required (eg prior to welding)
- Armourplan PVC Standing Seam Profile — pre-formed PVC profile used to simulate a metal standing seam roof
- Armourflow Coated Metal — pre-coated flat metal sheet for fabrication of gutters, 1.2 mm thick steel with 1.2 mm thick Armourplan membrane
- Armourplan Drip Details — prefabricated drip details
- Armourplan Chase Termination Details — prefabricated chase termination details
- Membrane Pipe and Post Details — prefabricated bespoke details formed using Armourplan Detailing Membrane
- Armourprep — acetone-based preparation solution for PVC roofing membranes with heavy moisture contamination
- IKOpro High Performance PU Adhesive — for bonding insulation boards to the substrate
- IKOfix Aluminium Clamping Strips — aluminium clamping strips for upstand termination

- IKO Glass Universal Underlay — torch-on membrane suitable for use on concrete decks (IKOpro Quick Dry Primer is required)
- IKO Ultra T-O Air & Vapour Control Layer — a torch-applied, metal-lined AVCL (IKOpro Quick Dry Primer is required)
- IKO Ultra S-A Air & Vapour Control Layer — a self-adhesive, metal-lined AVCL (IKOpro Bonding Agent is required)
- Spectravap — a polyethylene AVCL
- IKOpro Bonding Agent — a self-adhesive AVCL primer
- IKOpro Quick Dry Bitumen Primer — a bituminous primer for torch-on and pour-and-roll AVCL applications
- Armourplan PVC Sealant — for sealing detail terminations
- Spectratex Separation Layer — a polyester separation and protection layer
- IKO enertherm PIR — a polyisocyanurate (PIR) board with mineral glass tissue facings on both sides, or alternatively coated on both sides with a tri-ply gastight aluminium multi-layer complex
- IKO MW — a stone wool insulation board.

Definitions for products and applications inspected

The following terms are defined for the purpose of this Certificate as:

- flat roof — a roof having a minimum finished fall of 1:80
- pitched roof — a roof having a fall in excess of 1:6
- limited access roof — a roof subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc.

Product assessment – key factors

The systems 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

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 When tested to CEN/TS 1187 : 2012, Test 4, and classified to EN 13501-5 : 2016, the constructions⁽¹⁾ given in Table 2 achieved B_{ROOF}(t4) for slopes below 10°.

Table 2 Systems tested to CEN/TS 1187 : 2012

Substrate ⁽²⁾	≥ 18 mm OSB3		
AVCL ⁽²⁾	0.3 mm Spectravap		
Insulation ⁽²⁾	Single layer of 50 to 140 mm 169 g·m ⁻² foil-faced PIR (32 kg·m ⁻³), mechanically fixed	Double layer of 140 + 50 to 140 + 100 mm 169 g·m ⁻² foil- faced PIR (32 kg·m ⁻³), mechanically fixed	Double layer of 50 to 140 mm 169 g·m ⁻² foil-faced PIR (32 kg·m ⁻³) + 20 to 200 mm EPS (25 kg·m ⁻³), mechanically fixed
Waterproofing	Armourplan SM120 or SM150, mechanically fixed		

(1) Extended application and classification reports, 21713C and 21713D, issued by warringtonfire, are available from the Certificate holder on request.

(2) These components are outside the scope of this Certificate.

2.1.2 On the basis of data assessed, the construction given in Table 3 will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a relevant boundary. Restrictions may apply at junctions with compartment walls.

2.1.3 The systems, when used in protected specifications, including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC, will also be unrestricted with respect to proximity to a relevant boundary under the national Building Regulations.

2.1.4 The classification and permissible areas of use of other specifications must be established in accordance with the requirements of the documents supporting the national Building Regulations.

2.2 Reaction to fire

2.2.1 The Certificate holder has not declared a reaction to fire classification for the systems in accordance with BS EN 13501-1 : 2018.

2.2.2 In England, the systems, when used for roof pitches of greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on residential buildings more than 11 m in height or on other buildings more than 18 m in height. Restrictions apply on assembly and recreational buildings. These constructions must also be included in calculations of unprotected area.

2.2.3 In Wales, the systems, when used for roof pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on other buildings more than 18 m in height or in some cases, on assembly and recreation buildings. These constructions must also be included in calculations of unprotected area.

2.2.4 In Northern Ireland, the systems, when used in pitches greater than 70°, excluding upstands, do not achieve the minimum Class E reaction to fire classification to BS EN 13501-1 : 2018, and designers must seek guidance on the proposed use of the systems from the relevant Building Control Body. These constructions must also be included in calculations of unprotected area.

2.2.5 In Scotland, the systems may be used without restriction in terms of height and proximity to a relevant boundary. However, restrictions on the overall construction may apply, depending on the reaction to fire classification achieved by the complete system, which must be established on a case-by-case basis.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

Table 3 Weathertightness

Product assessed	Assessment method	Requirement	Result
Armourplan SM120 mechanically fastened at 250 mm centres, 100 mm mineral wool insulation fastened with two fasteners per board, 0.75 profiled steel deck	Resistance to wind loads to ETAG 006 : 2000 (corrected result)	Value achieved per fastener	816 N

3.1.2 The watertightness, peel resistance of joints and tensile shear strength of the systems were assessed using test data from a representative related system.

3.1.3 On the basis of data assessed, the systems, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture into the inside of a building and enable a roof to comply with the requirements of the national Building Regulations.

3.1.4 The mechanically fastened systems will resist the effects of wind suction likely to occur in practice and remain weathertight.

3.1.5 The precise ballast requirement for loose-laid specifications must be calculated by a suitably qualified and experienced individual in accordance with the principles of BS EN 1991-1-4 : 2005 and its UK National Annex, but must not be below a minimum thickness of 50 mm. The use of concrete slabs on suitable protective supports must be considered in areas of high design wind loads.

3.1.6 The resistance to wind uplift of a mechanically fastened waterproofing layer is provided by the fasteners passing through the membrane into the substrate. The number and position of fixings will depend on a number of factors including:

- wind uplift forces to be restrained
- pull-out strength of the fasteners
- tensile properties of the membrane
- appropriate calculation of safety factors.

3.1.7 The wind uplift forces must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-4 : 2005 and its UK National Annex. On this basis, the number of fixings required must be established using a maximum permissible load of 0.677 kN per fixing.

3.2 Resistance to mechanical damage

3.2.1 Results of resistance to mechanical damage tests are given in Table 4.

<i>Table 4 Resistance to mechanical damage</i>			
Product assessed	Assessment method	Requirement	Result
Armourplan SM120	Tensile properties to BS EN 12311-2 : 2000	$\geq 650 \text{ N} \cdot (50 \text{ mm})^{-1}$	
	Longitudinal direction		Pass
	Transverse direction		Pass
	Elongation properties to BS EN 12311-2 : 2000	Value achieved	
	Longitudinal direction		17%
	Transverse direction		16%
	Resistance to tearing (nail shank) to BS EN 12310-1 : 1999	$\geq 150 \text{ N}$	
	Longitudinal direction		Pass
	Transverse direction		Pass

3.2.2 The static indentation of the systems was assessed using test data from a representative related system.

3.2.3 On the basis of data assessed, the systems can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance and the effects of minor movement likely to occur in practice while remaining weathertight.

3.2.4 Reasonable care must be taken to avoid puncture by sharp objects or concentrated loads. Where traffic in excess of this is envisaged, such as for maintenance of lift equipment, a walkway must be provided, for example, using concrete slabs supported on bearing pads.

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 systems were assessed.

8.2 Specific test data were assessed as given in Table 5.

Table 5 Durability			
Product assessed	Assessment method	Requirement	Result
Armourplan SM120	Dimensional stability to BS EN 1107-2 : 2001	Value achieved	
	Machine direction		-0.10%
	Cross direction		-0.10%
	Low temperature flexibility to BS EN 495-5 : 2000		
	From site ⁽¹⁾	≤ -20°C	Pass
	From site with additional heat ageing ⁽²⁾	≤ -10°C	Pass
	From site with additional UV ageing ⁽³⁾	≤ -10°C	Pass
	Dynamic indentation to EOTA TR-006 : 2004	Indenter size at which	
	From site ⁽¹⁾	sample remains watertight	10 mm
	From site with additional heat ageing ⁽²⁾		10 mm
	From site with additional UV ageing ⁽³⁾		6 mm

(1) Five years natural exposure.

(2) Five years natural exposure followed by heat ageing for 120 days at 80°C.

(3) Five years natural exposure followed by UVA ageing for 1200 MJ·m⁻² at 50°C with a cycle of five light hours/one hour water spray.

8.3 Service life

8.3.1 Under normal service conditions, the systems will have a life of at least 35 years provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 The service life can be extended to in excess of 40 years with periodic additional maintenance as stated in section 9.4.

8.3.3 In environments where the systems are in contact with organic solvents, the service life expectancy of the systems may be reduced. In cases of doubt, the advice of the Certificate holder should be sought, but such advice is outside the scope of this Certificate.

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 Decks to which the systems are to be applied must comply with the relevant requirements of BS 6229 : 2018 and, where appropriate, *NHBC Standards 2025*, Chapter 7.1.

9.1.3 Where traffic in excess of the pedestrian traffic for maintenance of the roof covering or cleaning of gutters is envisaged, additional protection to the membranes must be provided (see section 3).

9.1.4 For design purposes of flat roofs, twice the minimum finished fall must be assumed, unless a detailed structural analysis of the roof is available, including overall and local deflection, direction of falls, etc.

9.1.5 Dead loads, wind loads and imposed loads must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes (see also section 3 of this Certificate).

9.1.6 Insulation materials to be used in conjunction with the systems must be in accordance with the Certificate holder's instructions and be either:

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and be used in accordance with, and within the scope of, that Certificate.

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.

9.2.3 Installation of Armourplan SM Roof Waterproofing Systems must be carried out in accordance with the relevant clauses of the Certificate holder's instructions, BS 8000-0 : 2014, BS 8000-4 : 1989, the Single Ply Roofing Association (SPRA) *Single Ply : Design Guide*, and this Certificate.

9.2.4 Substrates to which the systems are applied must be sound, dry, clean and free from sharp projections such as nail heads and concrete nibs. When used over a rough substrate, a suitable protection layer must be placed over the substrate.

9.2.5 Installation must not be carried out during inclement weather (eg rain, fog or snow). When the temperature is below 0°C, suitable precautions against surface condensation must be taken in accordance with the Certificate holder's instructions.

9.2.6 When used over bitumen, bitumen-bound insulation products, coal tar, pitch or oil-based products, a separation layer must be interposed between the substrate and the membrane. In cases of doubt, the advice of the Certificate holder must be sought, but such advice is outside the scope of this Certificate.

9.2.7 Ballast or other bulk material must not be stored on one area of the roof prior to installation, to ensure localised overloading does not occur.

9.2.8 For mechanically fastened applications, the membrane is unrolled onto the substrate without undulations, with 110 mm minimum side laps and 60 mm minimum end laps.

9.2.9 The membrane is fixed to the deck (through insulation boards, where appropriate) in the joint overlaps prior to welding seams in accordance with the Certificate holder's instructions.

9.2.10 The membrane is fixed at the edges either by mechanically fastening using IKOfix Toothed Flatbar or by hot-air welding to mechanically fastened flashings of Armourplan Coated Metal.

9.2.11 For loose laid and ballasted applications, the membrane is loose laid over the substrate allowing for a minimum 60 mm overlap to subsequent sheets at the sides and ends.

9.2.12 The membrane must be fixed at the edges with IKOfix Toothed Flatbar or hot-air welded to mechanically fastened flashings of Armourplan Coated Metal.

9.2.13 A layer of Spectratex Separation Layer must be installed over the completed area of membrane roof and ballasted with suitable concrete paving slabs on proprietary support pads or a 50 mm depth of well-rounded gravel.

9.2.14 For installation of joints and flashing, the welding area must be dry and clean. If the membrane in the weld area has become contaminated, it must be cleaned in accordance with the Certificate holder's instructions.

9.2.15 Welding is achieved by automatic or hand-operated machines in accordance with the Certificate holder's instructions.

9.2.16 The welded width of the joint must be a minimum of 30 mm when welded with an automatic welding machine and a 40 mm final weld width when welded with hand-operated machines. On completion of the weld, the seam must be tested with a suitable metal probe, and any weakness repaired immediately.

9.2.17 The seam is tested with a metal probe to highlight poorly welded areas. Any such areas must be made good using hot-air welding.

9.2.18 Flashing and detailing must be carried out in accordance with the Certificate holder's instructions.

9.2.19 The NHBC requires that the systems, once installed, are inspected in accordance with *NHBC Standards 2025*, Chapter 7.1, Clause 7.1.12, including undergoing an appropriate integrity test, where required. Any damage to the membranes is repaired in accordance with section 9.4 of this Certificate and reinspected.

9.3 Workmanship

Practicability of installation was assessed by the BBA and on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the systems must be carried out only by installers trained and approved by the Certificate holder.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the systems 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 The systems must be the subject of six-monthly inspections and maintenance in accordance with BS 6229 : 2018, Chapter 7 and the Certificate holder's own maintenance requirements, where relevant, to ensure continued satisfactory performance.

9.4.2.2 In addition, a planned maintenance cycle, including inspections by the Certificate holder at minimum intervals of five years, must be introduced if an extended service life is required. The Certificate holder can advise on methods of extending the service life, but such advice is outside the scope of this Certificate. This could include the use of thicker membranes, specific maintenance requirements or localised replacement and repair.

9.4.2.3 In the event of damage, repairs are carried out by cleaning the area around the damage and applying a patch of the appropriate membrane in accordance with the Certificate holder's instructions.

10 **Manufacture**

10.1 The production processes for the systems 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 process was in accordance with the documented process, 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 systems are delivered to site in packaging bearing the system name, Certificate holder's name, membrane dimensions, article number and batch number.

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

11.2.1 Rolls must be stored horizontally, undercover and on a clean, level surface.

Supporting information in this Annex is relevant to the systems 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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the systems under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

CE marking

The Certificate holder has taken the responsibility of CE marking the systems in accordance with harmonised European Standard EN 13956 : 2012.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by BSI (Certificate Q 05233).

Bibliography

- BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — Code of practice*
- BS 8000-0 : 2014 + A1 : 2024 *Workmanship on construction sites – Introduction and general principles*
- BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*
- BS EN 495-5 : 2001 *Flexible sheets for waterproofing — Determination of foldability at low temperature — Plastic and rubber sheets for roof waterproofing*
- BS EN 1107-2 : 2001 *Flexible sheets for waterproofing — Determination of dimensional stability — Plastic and rubber sheets for roof waterproofing*
- BS EN 1991-1-1 : 2002 *Eurocode 1 — Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
- NA to BS EN 1991-1-1 : 2002 UK National Annex to *Eurocode 1— Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
- BS EN 1991-1-3 : 2003 + A1 : 2015 *Eurocode 1 — Actions on structures — General actions — Snow loads*
- NA + A1 : 15 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Snow loads*
- BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1 — Actions on structures — General actions — Wind actions*
- NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Wind actions*
- BS EN 12310-1 : 2000 *Flexible sheets for waterproofing — Bitumen sheets for roof waterproofing — Determination of resistance to tearing (nail shank)*
- BS EN 12311-2 : 2000 *Flexible sheets for waterproofing — Determination of tensile properties — Plastic and rubber sheets for roof waterproofing*
- BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*
- BS EN ISO 9001 : 2015 *Quality management systems — Requirements*
- EN 13956 : 2012 *Flexible sheet for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*
- EOTA TR-006 : 2004 *Determination of the resistance to dynamic indentation*
- ETAG 006 : 2000 *Systems of mechanically fastened flexible roof waterproofing membranes*

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.