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Agrément Certificate

14/5085

Product Sheet 1 Issue 4

RADMAT SINGLE-PLY ROOF WATERPROOFING SYSTEMS

ESHAPLAN MF SINGLE-PLY PVC ROOF WATERPROOFING MEMBRANES

This Agrément Certificate Product Sheet⁽¹⁾ relates to Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes, a range of single-ply polyester-reinforced PVC membranes, for use as mechanically fastened waterproofing on flat and 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 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 Fourth issue: 28 October 2024

Originally certified on 19 February 2014

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 Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes, 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 use of the products is restricted by this Requirement in some circumstances. See section 2 of this Certificate.	
Requirement:	B4(2)	External fire spread
Comment:	On suitable substructures, the use of the products may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate.	
Requirement:	C2(b)	Resistance to moisture
Comment:	The products, including joints, will enable a roof to satisfy 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.	



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:	The use of the products satisfies the requirements of this Regulation. See sections 8 and 9 of this Certificate.	
Regulation:	9	Building standards – construction
Standard:	2.6	Spread to neighbouring buildings
Standard:	2.7	Spread on external walls
Comment:	The use of the products is restricted under clauses 2.6.4 ⁽¹⁾⁽²⁾ and 2.7.1 ⁽¹⁾⁽²⁾ of these Standards in some circumstances. See section 2 of this Certificate.	
Standard:	2.8	Spread from neighbouring buildings
Comment:	The products, when applied to a suitable substructure, may enable a roof to be unrestricted by this Standard, with reference to 2.8.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.	
Standard:	3.10	Precipitation
Comment:	The products, including joints, will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽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 in relation to 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)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The products, including joints, will enable a roof to satisfy this Regulation. See section 3 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The products are restricted by this Regulation in some circumstances. See section 2 of this Certificate.
Regulation	36(b)	External fire spread
Comment:		On suitable substructures, the products may enable a roof to be unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes, 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 products, 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 document and the suitability of the substrate to receive the products.

The *NHBC Standards* do not cover the refurbishment of existing roofs.

Fulfilment of Requirements

The BBA has judged Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes to be satisfactory for use as described in this Certificate. The products have been assessed for use as mechanically fastened waterproofing on flat and pitched roofs with limited access.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes are polyester-reinforced, flexible, polyvinyl chloride (PVC) single-ply roof waterproofing membranes.

The products have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes

Characteristic (unit)	Components
Thickness (mm)	1.2, 1.5, 1.8 and 2.0
Roll length (m)	15 and 20
Roll width (m)	1.06, 1.65 and 2.12
Mass per unit area (kg·m ⁻²)	1.56 (1.2 mm), 1.95 (1.5 mm), 2.34 (1.8 mm) and 2.6 (2.0 mm)
Colour (lower face)	Standard Grey (RAL 7001)
Colour (upper face)	Standard Grey (RAL 7001), Anthracite Grey (RAL 7015), Stone Red (RAL 3011), White (RAL 9010), Blue (RAL 5005), Green (RAL 6004), Turquoise Green (RAL 5018)

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:

- PVC coated metal – 0.6 mm galvanized steel sheet, coated with 0.6 mm of Eshaplan PVC compound for use in detailing
- Eshaplan PVC internal and external corners – prefabricated corner units
- Polyester fleeces 120 and 300 g·m⁻² – for use as a separation layer for mechanical and chemical protection
- Glass fleece 120 g·m⁻² – for use as a separation layer between the membranes and EPS insulation boards
- Mechanical fasteners and tubular washers.

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 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

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 DD CEN/TS 1187 : 2012, Test 4 and classified to BS EN 13501-5 : 2005, the construction given in Table 2 of this Certificate achieved B_{ROOF}(t4) for slopes under 10°.

Table 2 Results of external fire spread tests

Substrate	Air and vapour control layer (AVCL)	Insulation	Waterproofing membrane
18 mm plywood ⁽¹⁾	Netofol VCL ⁽¹⁾ , mechanically fixed	120 mm Thermazone Foilboard Insulation ⁽¹⁾ , mechanically fixed	1.2 mm Eshaplan MF (Grey)

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

2.1.2 On the basis of data assessed, the construction given in Table 2 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 classification and permissible areas of use of other specifications must be confirmed by reference to 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 products in accordance with EN 13501-1 : 2018.

2.2.2 On the basis of data assessed, the products will be restricted in use under the documents supporting the national Building Regulations, in some cases.

2.2.3 In England, the products, when used in pitches 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 recreation buildings. These constructions must also be included in calculations of unprotected area.

2.2.4 In Wales, the products, when used in pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions must also be included in calculations of unprotected area.

2.2.5 In Northern Ireland, when used in pitches greater than 70°, excluding upstands, the products do not achieve the minimum Class E reaction to fire classification to EN 13501-1 : 2018, and designers must seek guidance on the proposed use of the products from the relevant Building Control Body.

2.2.6 In Scotland, the use of the products is unrestricted with respect to building 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 Results of weathertightness tests

Product assessed	Assessment method	Requirement	Result
Eshaplan MF (1.2 mm)	Watertightness to EN 1928 : 2000 10 kPa pressure	No leakage	Pass
Eshaplan MF (1.2 mm)	Water vapour transmission rate to BS 3177 : 1959 (25°C / 75% RH)	Value achieved	1.81 g·m ⁻² ·day ⁻¹
Eshaplan MF	Water absorption to MOAT 65 : 4.3.13 : 2001	≤ 2%	Pass
Eshaplan MF	Peel resistance of joints to EN 12316-2 : 2000 Machine direction Cross direction	150 N·(50 mm) ⁻¹	Pass Pass
Eshaplan MF	Shear strength of joints to EN 12317-2 : 2000 Machine direction Cross direction	Value achieved	715 N·(50 mm) ⁻¹ 877 N·(50 mm) ⁻¹
Eshaplan MF	Interlaminar peel strength to EN 12316-2 : 2000 Machine direction Cross direction	≥ 80 N·(50 mm) ⁻¹	Pass Pass
0.75 mm thick profiled steel deck 100 mm of mineral wool insulation fastened with two fasteners per board 1.2 mm Eshaplan MF, width 1060 mm, mechanically fastened at 250 mm centres using • 4.8 mm by 140 mm fasteners and 82 mm by 40 mm metal plates	Dynamic wind uplift to ETAG 006 : 2000 (corrected result)	Value achieved per fastener	600 N
0.75 mm thick profiled steel deck 100 mm of mineral wool insulation fastened with two fasteners per board 1.2 mm Eshaplan MF, width 1060 mm, mechanically fastened at 250 mm centres using • 4.8 mm by 140 mm fasteners and plastic plates	Dynamic wind uplift to ETAG 006 : 2000 (corrected result)	Value achieved per fastener	600 N
0.75 mm thick profiled steel deck 100 mm of mineral wool insulation fastened with two fasteners per board 1.2 mm Eshaplan MF, width 1500 mm, mechanically fastened at 250 mm centres using • 4.8 mm by 140 mm fasteners and 82 mm by 40 mm metal plates	Dynamic wind uplift to ETAG 006 : 2000 (corrected result)	Value achieved per fastener	780 N
0.75 mm thick profiled steel deck 100 mm of mineral wool insulation fastened with two fasteners per board 1.2 mm Eshaplan MF, width 1500 mm, mechanically fastened at 250 mm centres using • 4.8 mm by 140 mm fasteners and plastic plates	Dynamic wind uplift to ETAG 006 : 2000 (corrected result)	Value achieved per fastener	660 N

3.1.2 On the basis of data assessed, the products, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture into the interior of a building and so satisfy the requirements of the national Building Regulations.

3.1.3 On the basis of data assessed, the products will sufficiently resist the effects of wind suction likely to be experienced in the UK.

3.2 Resistance to mechanical damage

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

Table 4 Results of resistance to mechanical damage tests			
Product assessed	Assessment method	Requirement	Result
Eshaplan MF	Tensile strength to EN 12311-2 : 2000	Value achieved	
	Machine direction		1205 N·(50 mm) ⁻¹
	Cross direction		1205 N·(50 mm) ⁻¹
Eshaplan MF	Elongation to EN 12311-2 : 2000	Value achieved	
	Machine direction		20.0%
	Cross direction		20.5%
Eshaplan MF	Low temperature foldability to EN 495-5 : 2000	Value achieved	
	Machine direction		< -40°C
	Cross direction		< -35°C
Eshaplan MF	Tear strength (nail shank) to EN 12310-1 : 1999	≥ 150 N	
	Machine direction		Pass
	Cross direction		Pass
Eshaplan MF	Resistance to impact to EN 12691 : 2006	Value achieved	
	Aluminium substrate		800 mm
	EPS 150 substrate		2000 mm
Eshaplan MF	Resistance to dynamic indentation to MOAT 65 : 4.3.9 : 2001	Value achieved	
	Perlite substrate		I ₁₀
	EPS (20 kg·m ⁻³) substrate		I ₁₀
Eshaplan MF	Resistance to static indentation to MOAT 65 : 4.3.8 : 2001	Value achieved	
	Concrete substrate		L ₂₀
	EPS (20 kg·m ⁻³) substrate		L ₂₀

3.2.2 On the basis of data assessed, the products can accept the limited foot traffic and light concentrated loads associated with installation and maintenance while remaining weathertight. Reasonable care must be taken to avoid puncture by sharp objects or concentrated loads.

3.2.3 Where regular traffic is envisaged, such as for maintenance of lift equipment, a walkway must be provided, eg using concrete slabs supported on bearing pads. The advice of the Certificate holder must be sought on the most appropriate method to be used with the amount of traffic involved; however, such advice is outside the scope of this Certificate.

3.2.4 The products are capable of accepting minor structural movement while remaining weathertight.

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

The products comprise PVC and polyester, which can be recycled.

8 Durability

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

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

Table 5 Results of durability tests

Product assessed	Assessment method	Requirement	Result
Eshaplan MF	Dimensional stability to EN 1107-2 : 2001	Value achieved	
	Machine direction		-0.6%
	Cross direction		0.0%
Eshaplan MF	Low temperature foldability to EN 495-5 : 2000	Value achieved	
	after heat ageing at 70°C for 168 days		
	Machine direction		< -35°C
	Cross direction		< -35°C
	after UVA ageing for 1000 hours		
	Machine direction		< -35°C
Eshaplan MF	Shear strength of joints to EN 12317-2 : 2000	Value achieved	
	after water soak at 60°C for 7 days		
	Machine direction		748 N·(50 mm) ⁻¹
	Cross direction		905 N·(50 mm) ⁻¹
	after heat ageing at 80°C for 28 days		
	Machine direction		807 N·(50 mm) ⁻¹
Eshaplan MF	Peel strength of joints to EN 12316-2 : 2000	Value achieved	
	after water soak at 60°C for 7 days		
	Machine direction		229 N·mm ⁻¹
	Cross direction		270 N·mm ⁻¹
	after heat ageing at 80°C for 28 days		
	Machine direction		307 N·mm ⁻¹
	Cross direction		278 N·mm ⁻¹

8.3 Visits to existing sites, one installed during the mid-1970s and two during the early 1990s, were carried out and samples were taken to assess the durability of the products under normal service conditions.

8.4 Service life

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

8.4.2 In environments where the products are in contact with organic solvents, the life expectancy of the membranes may be reduced. In cases of doubt, the advice of the Certificate holder must be sought.

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 products are to be applied must comply with the relevant requirements of BS 6229 : 2018 and, where appropriate, *NHBC Standards 2024*, Chapter 7.1.

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

9.1.4 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.

9.1.5 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 resisted
- pull-out strength of fasteners
- tensile properties of membranes
- appropriate calculation of safety factors.

9.1.6 A minimum distance of 250 mm between fasteners must be observed at all times. This may require the use of narrower membranes to obtain the correct number of fasteners per square metre.

9.1.7 The wind uplift forces must be calculated by a suitably experienced and competent individual, in accordance with 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 0.6 kN per fixing.

9.1.8 Insulation materials to be used in conjunction with the products must be in accordance with the Certificate holder's instructions and be:

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

9.1.9 Contact with bituminous, coal tar and oil-based products must be avoided as the products are not compatible with lower grades of bitumen. If contact with such products is likely, a separating layer must be interposed before installing the waterproofing sheet. Where doubt arises, the advice of Certificate holder must be sought but such advice is outside the scope of this 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 of Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes must be carried out in accordance with the relevant clauses of BS 8000-0 : 2014 and BS 8000-4 : 1989, the Certificate holder's instructions and this Certificate.

9.2.3 Substrates to which the products are to be 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.

9.2.4 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.

9.2.5 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.

9.2.6 The products are unrolled onto the substrate without undulations, with 110 mm minimum side laps and 50 mm minimum end laps.

9.2.7 The products are fixed to the deck (through insulation boards, where appropriate) in the joint overlaps, prior to welding of the seams in accordance with the Certificate holder's instructions.

9.2.8 The products are fixed at the edges by mechanically fastening using flatbar or PVC-coated metal, or by hot-air welding.

9.2.9 The installation of joints and flashing via hot-air welding must include the following:

9.2.9.1 Joints are made using either automatic or hand-operated machines, with the temperature set in accordance with the Certificate holder's instructions.

9.2.9.2 The lap area must be dry and clean. If the product in the weld area has become contaminated, it must be cleaned in accordance with the Certificate holder's instructions.

9.2.9.3 The welded width of the joint must be a minimum of 40 mm for field welds and detailing. Care must be taken that overheating of the product does not occur, as possible impairment of the product may result.

9.2.9.4 Flashings are to be formed in accordance with the Certificate holder's instructions.

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

9.2.10 The NHBC requires that Eshaplan MF Single-Ply PVC Roof Waterproofing Membranes, once installed, are inspected in accordance with *NHBC Standards 2024*, Chapter 7.1, Clause 7.1.11, including undergoing an appropriate integrity test, where required. Any damage to the products must be repaired in accordance with section 9.4 of this Certificate and reinspected, in order to maintain product performance.

9.3 Workmanship

The 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 products must be carried out by installers trained and approved by the Certificate holder.

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 achieve the performance assessed in this Certificate:

9.4.2.1 The products must be the subject of six-monthly inspections and maintenance in accordance with the recommendations made in 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 the event of damage, repairs must be carried out in accordance with the Certificate holder's instructions. Any damage is repaired by cleaning around the affected area and applying a patch of the appropriate product in accordance with the Certificate holder's instructions and section 9.2 of this Certificate.

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 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 products are delivered to site in rolls wrapped in polythene, on pallets bearing the manufacturer's name and address, product identification, dimensions, batch number and the BBA logo incorporating the number of this Certificate.

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 on their side, on a clean, level surface and under cover.

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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the products 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 products in accordance with harmonised European Standard EN 13956 : 2012.

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the products in accordance with Designated Standard EN 13956 : 2012.

Additional information on installation

A.1 Additional guidance on installation can be found in the Single Ply Roofing Association (SPRA) *Single Ply : Design Guide*.

Bibliography

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials*

BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — Code of practice*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*

BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for 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 13501-5 : 2005 + A1 : 2009 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests*

DD CEN/TS 1187 : 2012 *Test methods for external fire exposure to roofs*

EN 495-5 : 2001 *Flexible sheets for waterproofing — Determination of foldability at low temperature — Plastic and rubber sheets for roof waterproofing*

EN 1107-2 : 2001 *Flexible sheets for waterproofing — Determination of dimensional stability — Plastic and rubber sheets for roof waterproofing*

EN 1928 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

EN 12310-1 : 2000 *Flexible sheets for waterproofing — Determination of resistance to tearing (nail shank) — Bitumen sheets for roof waterproofing*

EN 12311-2 : 2000 *Flexible sheets for waterproofing — Determination of tensile properties — Plastic and rubber sheets for roof waterproofing*

EN 12316-2 : 2000 *Flexible sheets for waterproofing — Determination of peel resistance of joints — Plastic and rubber sheets for roof waterproofing*

EN 12317-2 : 2000 *Flexible sheets for waterproofing — Plastic and rubber sheets for roof waterproofing*

EN 12691 : 2006 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to impact*

EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*

EN 13956 : 2012 *Flexible sheets for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*

ETAG 006 : 2000 *Systems of mechanically fastened flexible roof waterproofing membranes*

MOAT 65 : 2001 *UEAtc Technical Guide for the Assessment of Non-Reinforced, Reinforced and/or Backed Roof Waterproofing Systems made of PVC*

Conditions of Certificate

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
- 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.

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.

British Board of Agrément

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