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Agrément Certificate

22/6057

Product Sheet 1

TREMCO CPG UK LIQUID-APPLIED ROOF WATERPROOFING SYSTEM

ALPHAGUARD PUMA LIQUID-APPLIED ROOF WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the AlphaGuard PUMA Liquid-Applied Roof Waterproofing System, for use as an elastomeric roof waterproofing membrane on new and existing flat roofs with limited access, including those with protected zero falls, and pitched roofs including green roof and roof garden specifications.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations and additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Weathertightness — the system will resist the passage of moisture into the interior of a building (see section 6).

Properties in relation to fire — the system may enable a roof to be unrestricted under the national Building Regulations (see section 7).

Adhesion — the adhesion of the system is sufficient to resist the effects of any likely wind suction and the effects of thermal or other minor movement likely to occur in practice (see section 8).

Resistance to mechanical damage — the system is capable of accepting, without damage, the limited foot traffic and loads associated with installation and in service (see section 9).


Resistance to root penetration — the system has satisfactory resistance to penetration by plant roots (see section 10).

Durability — under normal service conditions, the system will provide a durable waterproof covering with a service life of at least 25 years (see section 12).

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 5 May 2022


Hardy Giesler
Chief Executive Officer

Certificate amended on 27 May 2022 to correct email address and generic title.

The BBA is a UKAS accredited certification body – Number 113.

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

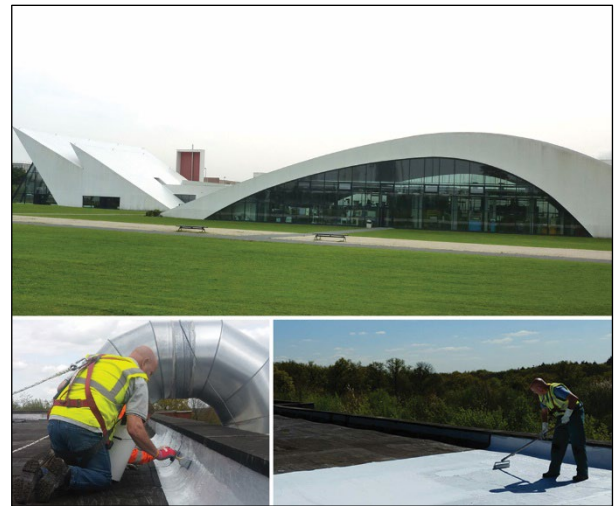
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Regulations

In the opinion of the BBA, the AlphaGuard PUMA Liquid-Applied Roof Waterproofing System, if installed, used, and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(1)	External fire spread
Comment:		The system is restricted by this Requirement in some circumstances. See section 7.4 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		On suitable substructures, the use of the system may enable a roof to be unrestricted under this Requirement. See sections 7.1 to 7.4 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The system will enable a roof to satisfy this Requirement. See section 6 of this Certificate.
Requirement:	7(1)	Materials and workmanship
Comment:		The system is acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship, and fitness of materials
Comment:		The use of the system satisfies the requirements of this Regulation. See sections 11.1, 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings
Comment:		The system is restricted under clause 2.6.4 ⁽¹⁾⁽²⁾ of this Standard in some circumstances. See section 7.5 of this Certificate
Standard:	2.8	Spread from neighbouring buildings
Comment:		The system, when applied to a suitable substrate, may enable a roof to be unrestricted under this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See sections 7.1 to 7.3 and 7.5 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The use of the system will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See section 6.1 of this Certificate.
Standard:	7.1(a)	Statement of suitability
Comment:		The system can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments given for the system 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(a)	Fitness of materials and workmanship
Comment:	(b)(i)	The system is acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The system will enable a roof to satisfy the requirements of this Regulation. See section 6 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		On suitable substructures, the use of the system may enable a roof to be unrestricted under the requirements of this Regulation. See sections 7.1 to 7.3 of this 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.

See section: *3 Delivery and site handling* of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, the AlphaGuard PUMA Liquid-Applied Roof Waterproofing System, 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*.

CE marking

The Certificate holder has taken the responsibility of CE marking the system, in accordance with ETA 05/0208 issued by DIBt and ETAG 005, Parts 1 and 4.

1 Description

1.1 The AlphaGuard PUMA Liquid-Applied Roof Waterproofing System is a cold-applied system, based on a polyurethane modified methacrylate (PUMA) resin, reinforced with an embedded non-woven polyester mat to provide a waterproofing membrane with a minimum dry film thickness of 2.3 mm, including the polyester mat.

1.2 The system comprises:

- AlphaGuard PUMA (WP) — a two-component, flexible polyurethane modified methacrylate resin-based roof waterproofing membrane
- AlphaGuard PUMA (TC) — a two-component, flexible, UV resistant methyl methacrylate resin-based coloured topcoat for use over AlphaGuard PUMA (WP)
- AlphaGuard PUMA Concrete Primer — a two-component, low viscosity methyl methacrylate-based primer for use on concrete substrate.
- AlphaGuard PUMA Thix — a two-component, high-viscosity flexible polyurethane modified methacrylate resin-based roof waterproofing membrane for detailing applications.
- AlphaGuard PUMA Catalyst — a 50% dibenzoyl peroxide catalyst powder for use with AlphaGuard PUMA (WP), AlphaGuard PUMA (TC), AlphaGuard PUMA Concrete Primer and AlphaGuard PUMA Thix.
- AlphaGuard PUMA Reinforcement fabric - a non-woven polyester fabric with a nominal weight per unit area of 165 g·m⁻², for use as an embedded reinforcement in AlphaGuard PUMA.

1.3 The system is the subject of ETA 05/0208, issued by Deutsches Institut für Bautechnik (DIBt). The levels of Use Categories in accordance with ETAG 005, Parts 1 and 4 include:

- | | |
|---|---|
| • reaction to fire | Euroclass E |
| • external fire performance | B _{ROOF} (t1)/B _{ROOF} (t4) |
| • categorisation by working life | W3 (25 years) |
| • categorisation by climatic zones | M (moderate) and S (severe) |
| • categorisation by imposed loads | P4 |
| • categorisation by roof slope | S1 to S4 |
| • categorisation by surface temperature | lowest TL4 (-30°C), highest TH4 (90°C). |

1.4 Other items or components which may be used with the system, but which are outside the scope of this Certificate, are:

- specialist primers
- AlphaGuard PUMA Accelerator — for use at temperatures below 0°C
- AlphaGuard PUMA Cleaner — for cleaning tools.

Also, concrete repair products are available for uses described in section 13.5. Details of suitable products/specifications must be obtained from the Certificate holder.

2 Manufacture

2.1 The system components are manufactured using batch-blending processes

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

3 Delivery and site handling

3.1 The system components are delivered to site as detailed in Table 1. When correctly stored in unopened containers, the resin and catalyst components listed will have a shelf-life of at least six months. The appropriate technical data sheet must be consulted for the correct storage conditions.

Table 1 Weights and packaging

Component	Weight (kg)	Packaging type
AlphaGuard PUMA (WP)	13, 25	Metal pails
AlphaGuard PUMA Thix	5, 25	Metal pails
AlphaGuard PUMA (TC)	20	Metal pails
AlphaGuard PUMA Concrete Primer	20	Metal pails
AlphaGuard PUMA Catalyst	25	Cardboard boxes

3.2 AlphaGuard PUMA reinforcement fabric is available in rolls 100 m x 1 m and 100 m x 0.15 m.

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

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the AlphaGuard PUMA Liquid-Applied Roof Waterproofing System.

Design Considerations

4 Use

4.1 The AlphaGuard PUMA Liquid-Applied Roof Waterproofing System is satisfactory for use on new and existing roofs with limited access in:

- inverted roof specifications in flat, zero fall and pitched roof specifications
- protected roof in flat, zero fall and pitched roof specifications, eg covered by paving or other suitable protection
- green roof and roof garden in flat, zero fall and pitched roof specifications
- exposed roof in flat and pitched roof specifications.

4.2 The system is suitable for use on the following substrates:

- concrete (primed and unprimed)
- bituminous substrates (unprimed)
- steel (unprimed).

4.3 Limited access roofs are defined for the purpose of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged, special precautions, such as additional protection to the membrane, must be taken.

4.4 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80⁽¹⁾. Zero fall roofs are defined for the purpose of this Certificate as those having a finished fall which can vary between 0 and 1:80⁽¹⁾. Reference should also be made to the appropriate clauses in Liquid Roofing and Waterproofing Association (LRWA) Note 7 — *Specifier Guidance for Flat Roof Falls*. Pitched roofs are those having falls in excess of 1:6.

(1) *NHBC Standards 2022* require a minimum fall of 1:60 for green roof and roof gardens.

4.5 When designing flat roofs, twice the minimum finished fall should be assumed unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc.

4.6 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018, BS 8217 : 2018 and, where appropriate, *NHBC Standards 2022*, Chapter 7.1.

4.7 For green roofs, roof gardens and inverted roofs, the structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Dead loads, wind loading, and imposed loads must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

4.8 In inverted roof specifications, the ballast requirements must be calculated by a suitably experience and competent individual in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex.

4.9 The drainage systems for inverted roofs, zero fall roofs or green roofs and roof gardens must be correctly designed, and the following points should be addressed:

- provision made for access for maintenance purposes
- for zero fall roofs, it is particularly important to identify the correct drainage points, to ensure that drainage is sufficient and effective
- dead loads for green roofs can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer
- additional guidance for inverted roof specifications is given in BBA Information Bulletin No 4 *Inverted roofs – Drainage and U value corrections*.

4.10 Recommendations for the design of green roofs and roof garden specifications are available within the latest edition of the GRO Green Roof Code — *Green Roof Code of Best Practice for the UK*.

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

- as described in the relevant clauses of BS 8217 : 2018, or
- the subject of a current BBA Certificate and used in accordance with, and within the scope of, that Certificate.

4.12 The NHBC requires that the waterproofing membranes, once installed, are inspected in accordance with *NHBC Standards 2022*, Chapter 7.1, Clause 7.1.12, and undergo an appropriate integrity test, where required. Any damage to the membrane is repaired in accordance with section 15 of this Certificate and reinspected.

5 Practicability of installation

The system must only be installed by installers who have been trained and approved by the Certificate holder.

6 Weathertightness



The system will adequately resist the passage of moisture to the inside of the building and enable a roof to satisfy the relevant requirements of the national Building Regulations.

7 Properties in relation to fire



7.1 When tested in accordance with CEN/TS 1187 : 2012 and classified in accordance with EN 13501-5 : 2016, a system comprising a 12 mm thick fibre cement board with a density of $1800 \text{ kg}\cdot\text{m}^{-3}$, AlphaGuard PUMA Concrete Primer applied at between 300 and $500 \text{ g}\cdot\text{m}^{-2}$ (dry), AlphaGuard PUMA (WP) applied in two coats at a total application rate of $2800 \text{ g}\cdot\text{m}^{-2}$ (dry) reinforced with AlphaGuard PUMA reinforcement fabric, and AlphaGuard PUMA (TC) (Grey) applied at $300 \text{ g}\cdot\text{m}^{-2}$ (dry), in a flat position (0°), achieved a classification of $\text{B}_{\text{ROOF}}(\text{t}4)$ and so is unrestricted with respect to proximity to a boundary by the documents supporting the national Building Regulations.

7.2 In the opinion of the BBA, a roof incorporating the system will also be unrestricted under the national Building Regulations on the following circumstances:

- when protected by an inorganic covering listed in the Annex of Commission Decision 2000/553/EC
- a roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer 300 mm thick
- irrigated green roofs and gardens.

7.3 The designation and permissible areas of use of other specifications and colours should be confirmed by reference to the requirements of the documents supporting the national Building Regulations.



7.4 In England and Wales, when used in pitches of greater than 70° , excluding upstands, the system should not be used on buildings that have a storey at least 18 m above ground level and contain: one or more dwellings, an institution, a room for residential purposes (excluding any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.



7.5 In Scotland, when used in pitches of greater than 70° , excluding upstands, the system should not be used on buildings that have a storey more than 11 m above ground level.

7.6 If allowed to dry, plants used may allow the spread of flame across the roof. This must be taken into consideration when selecting suitable plants for the roof. Appropriate planting, irrigation and/or protection must be applied to ensure the overall fire-rating of the roof is not compromised.

8 Adhesion

8.1 The adhesion of the system to the substrates listed in section 4.2 and day joints is sufficient to resist the effects of wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.

8.2 Where the system is installed over a carrier membrane bonded or fixed to insulation, the resistance to wind uplift will be dependent on the adhesion of the carrier to the insulation or cohesive strength of the components and the method by which they are secured to the roof deck.

8.3 In roof garden specifications, the soil used should not be of a type that will be removed or become localised due to wind scour.

8.4 It should be recognised that the type of plants used in roof gardens could significantly affect the expected wind loads experienced in service.

9 Resistance to mechanical damage

9.1 The system is capable of accepting, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance, and pedestrian traffic on defined walkways. However, reasonable care should be taken to avoid puncture by sharp objects or concentrated loads. In cases of doubt, advice is available from the Certificate holder.

9.2 The system is impervious to water and, when used as described in this Certificate, will give a weathertight roofing capable of accepting minor movement without damage.

10 Resistance to root penetration

The system will resist penetration by plant roots and can be used as a waterproofing system in green roof and roof garden specifications. Advice on suitable planting specifications should be sought from the Certificate holder.

11 Maintenance



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

11.2 Maintenance should include checks and operations to ensure that the membrane and drainage outlets are free from the build-up of silt and other debris, and that protection layers, e.g., walkways (where applicable), are in good condition.

11.3 In the event of the system being contaminated by oil, grease or other chemicals, the advice of the Certificate holder must be sought.

11.4 Where damage has occurred, it must be repaired at the earliest opportunity in accordance with section 15 and the Certificate holder's instructions.

11.5 Green roofs must be the subject of regular inspections, particularly in autumn after leaf fall and in spring, to ensure that unwanted vegetation and other debris are cleared from the roof and drainage outlets. Guidance is available within the latest edition of *The GRO Green Roof Code — Green Roof Code of Best Practice for the UK*.

12 Durability



12.1 Under normal service conditions, the system will provide a durable waterproof covering with a service life of at least 25 years.

12.2 The colour fastness of the system including AlphaGuard PUMA (TC) has not been assessed and repeated application may be required to maintain the required colour at shorter intervals.

12.3 An estimation cannot be given for the life of green roof specifications owing to the nature of use; however, under normal circumstances, it should be significantly greater than for exposed waterproof coverings.

Installation

13 General

13.1 The system must be installed in accordance with the Certificate holder's instructions and this Certificate.

13.2 The area to be waterproofed must be dry and free from dirt, grease, oil and other contaminants that could impair the adhesion of the system. Steel surfaces must be free from rust.

13.3 Deck surfaces must be free from sharp projections, eg concrete nibs.

13.4 On concrete surfaces, residual humidity must be $\leq 4\%$ prior to the application of AlphaGuard PUMA (WP) or AlphaGuard Concrete Primer. Laitance and other loose material must be thoroughly removed by suitable mechanical means, eg shot blasting.

13.5 Damaged areas of the substrate (e.g., blistered bitumen or roofing felt) must be removed, replaced or repaired. Damaged concrete surfaces must be repaired using a suitable repair product compatible with the system. The Certificate holder must be consulted for suitable products.

13.6 Detailing, eg upstands and penetrations, is carried out in accordance with the Certificate holder's instructions.

13.7 Tools should be cleaned with a suitable cleaning solvent before the products cure.

14 Procedure

Priming

14.1 When required, concrete surfaces should be primed with AlphaGuard PUMA Concrete Primer.

14.2 AlphaGuard PUMA Concrete Primer must be thoroughly stirred prior to addition of the catalyst to ensure uniform distribution of the paraffin contained in the product.

14.3 The required quantity of catalyst (50% dibenzoyl peroxide powder) is then added and thoroughly mixed using a slow speed drill fitted with a suitable mixing blade. The amount of catalyst powder required is dependent on the ambient temperature, as detailed in Table 2.

Table 2 AlphaGuard PUMA Concrete Primer – PUMA catalyst addition by temperature

Ambient temperature (°C)	Catalyst addition (% by weight of primer)
30	1
20	2
10	4
0	6

14.4 After the catalyst has been stirred in, the primer is poured onto the substrate in stripes and evenly spread over the substrate using a short pile roller or squeegee to achieve a coverage rate of between 300 and 500 g·m⁻² until saturation occurs resulting in a continuous film of primer. On very porous surfaces, a second coat of primer may be required.

14.5 When a continuous primer film is achieved, fire-dried graded quartz sand (0.3 to 0.7 mm) is broadcast into the wet primer at a rate of 300 to 500 g·m⁻².

Waterproofing membrane — AlphaGuard PUMA (WP)

14.6 AlphaGuard PUMA (WP) must be thoroughly stirred prior to addition of the catalyst to ensure uniform distribution of the paraffin contained in the product.

14.7 The required quantity of catalyst (50% dibenzoyl peroxide powder) is then added and thoroughly mixed using a slow speed drill fitted with a suitable mixing blade. The amount of catalyst powder required is dependent on the ambient temperature as detailed in Table 3.

Table 3 AlphaGuard PUMA (WP), AlphaGuard PUMA Thix and AlphaGuard PUMA (TC) — catalyst addition by temperature

Ambient temperature (°C)	Catalyst addition (g)			
	AlphaGuard PUMA (WP)		AlphaGuard PUMA Thix	AlphaGuard PUMA (TC)
	13.25 kg Pail	25 kg Pail	25 kg Pail	10 litres
30	85	170	250	80
20	170	340	350	100
10	350	700	600	200
0	520	1000	1000	300

14.8 After the catalyst has been stirred in, the mixed AlphaGuard PUMA (WP) is poured onto the substrate and evenly spread using a short pile roller or squeegee to achieve a coverage rate of at least 1.2 kg·m⁻².

14.9 AlphaGuard PUMA reinforcement fabric with a nominal weight per unit area of 165 g·m⁻² is then bedded into the wet AlphaGuard PUMA (WP) and a second layer of AlphaGuard PUMA (WP) is applied wet on wet over the fabric at a minimum application rate of 1.6 kg·m⁻², to achieve an overall minimum application rate of AlphaGuard PUMA (WP) of 2.8 kg·m⁻² and a minimum dry film thickness of 2.3 mm.

Topcoat

14.10 When AlphaGuard PUMA (WP) is fully cured, AlphaGuard PUMA (TC) can, if required, be applied.

14.11 The topcoat must be thoroughly stirred prior to addition of the catalyst to ensure uniform distribution of the paraffin contained in the product.

14.12 Due to a short pot life, only small quantities of AlphaGuard PUMA (TC) should be mixed at any time. The required quantity of catalyst (50% dibenzoyl peroxide powder) is added and thoroughly mixed using a slow speed drill fitted with a suitable mixing blade. The amount of catalyst powder required is dependent on the ambient temperature as detailed in Table 3 for 22 kg of the product.

14.13 Once mixed the product must be immediately poured onto the cured AlphaGuard PUMA (WP) and spread with a paint roller to achieve a minimum coverage of 300 g·m⁻².

15 Repair

Damaged areas of the system should be repaired as soon as practicable to maintain the waterproofing integrity by cutting back the damaged area to sound material and reinstating the system to the original specification as described in sections 13 and 14, ensuring a minimum 100 mm overlap over the cleaned and prepared existing coating. The Certificate holder must be consulted for details.

16 Tests

Tests were carried out and the results assessed to determine:

- watertightness
- water vapour transmission
- tensile properties
- delamination strength to concrete, steel, bituminous surface
- delamination strength of day joints
- resistance to dynamic indentation
- resistance to static indentation
- resistance to fatigue cycling
- effect of heat ageing on tensile characteristics, dynamic indentation, and fatigue cycling (for 200 days at 80°C)
- effect of UV-A radiation on tensile characteristics and dynamic indentation at -10°C (1000 MJ·m⁻² total exposure at 60°C)
- effect of water exposure on delamination strength and static indentation at 90°C (for 30 and 180 days at 60°C)
- effect of extremes of installation temperatures (0 and 30°C)
- abrasion resistance
- resistance to root penetration
- external roof fire exposure.

17 Investigations

17.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

17.2 Independent reports relating to external fire exposure to roofs tests were assessed.

17.3 Independent test reports relating to the issue of ETA 05/0208 were assessed.

Bibliography

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

BS 8217: 2018 *Reinforced bitumen membranes for roofing — Code of practice*

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+A2:18 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*

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

EN 13501-5 : 2016 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests*

EN 13948 : 2007 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to root penetration*

ETAG 005: 2004 - *Guideline for European technical approval of liquid applied roof waterproofing kits*

ETAG 005: 2004 – *Guideline for European technical approval of liquid applied roof waterproofing kits – Part 1: General*

ETAG 005: 2004 – *Guideline for European technical approval of liquid applied roof waterproofing kits – Part 4: SPECIFIC Stipulations for kits based on flexible unsaturated polyester*

18 Conditions

18.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation, or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- must be read, considered, and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

18.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

18.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

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

18.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

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

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