

Alumasc Building Products Ltd

c/o The Alumasc Group plc
White House Works
Bold Rd, Sutton
St Helens, Merseyside
WA9 4JG

Tel: 01744 648400

e-mail: technical@alumascroofing.com

website: www.alumascroofing.com



Agrément Certificate

24/7153

Product Sheet 1 Issue 1

EUROROF CALTECH LIQUID APPLIED ROOF WATERPROOFING

CALTECH ALPHA

This Agrément Certificate Product Sheet⁽¹⁾ relates to Caltech Alpha, a liquid-applied, moisture-triggered, glass fibre-reinforced polyurethane, for use as a roof waterproofing system on new or existing flat roofs, including zero fall in protected specifications, with limited access.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

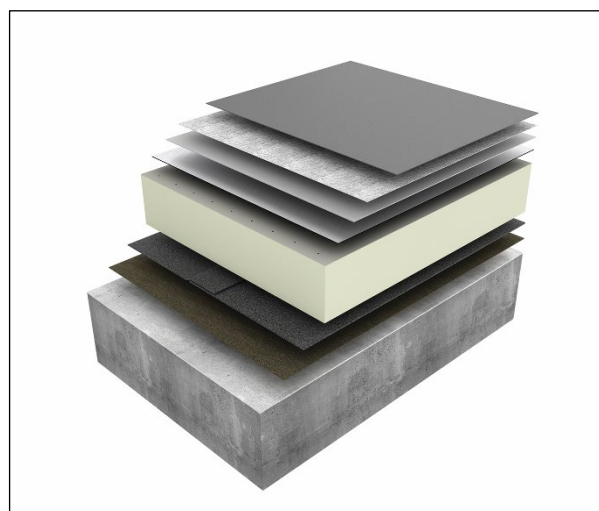
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

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 product described herein. This product 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 issue: 19 June 2024

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.

British Board of Agrément

1st Floor, Building 3, Hatters Lane
Croxley Park, Watford
Herts WD18 8YG

©2024

tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk

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 Caltech Alpha, 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(2) | External fire spread |
| Comment: | | On a suitable substructure, the system may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate. |
| Requirement: | C2(b) | Resistance to moisture |
| Comment: | | The system will enable a roof to satisfy this Requirement. See section 3 of this Certificate. |
| Regulation: | 7(1) | Materials and workmanship |
| Comment: | | The system is 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 system satisfies the requirements of this Regulation. See sections 8 and 9 of this Certificate. |
| Regulation: | 9 | Building standards – construction |
| Standard: | 2.8 | Spread from neighbouring buildings |
| Comment: | | The system, 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 system 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 system 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 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(1)(a)(i)(ii) | Fitness of materials and workmanship |
| Comment: | (iii)(iv)(b)(i) | The system is acceptable. See sections 8 and 9 of this Certificate. |

| | | |
|--------------------|--------------|--|
| Regulation: | 28(b) | Resistance to moisture and weather |
| Comment: | | The system will enable a roof to satisfy this Regulation. See section 3 of this Certificate. |
| Regulation: | 36(b) | External fire spread |
| Comment: | | On a suitable substructure, the system 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, Caltech Alpha, 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 system, 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 system.

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

Fulfilment of Requirements

The BBA has judged Caltech Alpha to be satisfactory for use as described in this Certificate. The system has been assessed as a roof waterproofing system on new or existing flat roofs, including zero fall in protected specifications, with limited access.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. Caltech Alpha consists of:

- Caltech Alpha — a single-component, liquid-applied, moisture-triggered, hybrid polyurethane available in mid grey and dark grey
- Caltech PU Primer/Sealer — a primer for priming polyvinyl chloride (PVC) and polyurethane (PU) substrates, and previously applied Caltech Alpha systems
- Eurorooft SA Primer — a primer for priming timber-based substrates
- Caltech Epoxy Damp Tolerant Concrete Primer — a two-component primer for priming damp concrete
- Caltech METprime — a two-component primer for adhering Caltech Alpha to metal substrates and for spot priming areas of corroded metal after preparation
- Caltech G-Mat Alpha — a 225 g·m⁻² non-woven glass fibre reinforcing mat for use as a reinforcement embedded in Caltech Alpha while still wet, and available for use in strips to cover individual cracks, joints or details.

The system has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of Caltech Alpha

| Characteristic | |
|--------------------------------------|---------------------|
| Specific gravity | 1.48 |
| Drying time per coat at 20°C, 50% RH | |
| touch time | 5 hours |
| through cure | 12 hours |
| Colours | mid grey, dark grey |

Ancillary Items

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

- Eurorof QC PU Insulation Adhesive
- Alumasc PIR Recovery Board
- Caltech Butyl Tape
- Caltech Quartz
- Alumasc Lite Anchor Clips
- Eurorof PU Insulation Adhesive
- Alumasc GTF Insulation
- Caltech Preparation Layer
- Alumasc GRP Drip Trims, Edge Trims, Termination Bar and Flashing Bar
- Alumasc Roofing Sealant.

Applications

The system is for use on new and existing flat roofs, including zero fall in protected roofs, with limited access on the following substrates:

- concrete (primed with Caltech Epoxy Damp Tolerant Concrete Primer)
- mastic asphalt (unprimed)
- bituminous roofing membranes (unprimed)
- steel (primed with Caltech METprime)
- timber (primed with Eurorof SA Primer)
- PVC (primed with Caltech PU Primer/Sealer)
- existing polyurethane coatings (primed with Caltech PU Primer/Sealer).

Definitions for products and applications inspected

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

- limited access roofs — a roof subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc
- flat roofs — a roof having a minimum finished fall of 1:80
- pitched roofs — a roof having a fall greater than 1:6
- zero fall roofs — a roof having a finished fall which can vary between 0 and 1:80.

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessment 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 given in Table 2 of this Certificate, achieved a B_{ROOF(t4)} classification for slopes below 10°.

Table 2 External fire spread classifications

| System Layer | System 1 | System 2 | System 3 |
|-------------------------------------|---|--|---|
| Substrate | 11 mm calcium silicate board ⁽¹⁾ | 12.5 mm Siniat Fibre Board ⁽¹⁾ | 12 mm calcium silicate board ⁽¹⁾ |
| Air and vapour control layer (AVCL) | — | — | Caltech Preparation Layer ⁽¹⁾ |
| Insulation | — | 50 mm PIR insulation ⁽¹⁾ (adhered with PIR insulation adhesive ⁽¹⁾) | 160 mm Alumasc GTF Insulation ⁽¹⁾ [adhered with Eurorooft QC PU Insulation Adhesive ⁽¹⁾] |
| Underlay | 4 mm Icopal Bituminous Membrane ⁽¹⁾ (fully bonded) | 0.6 mm InStar self-adhesive multilayer aluminium lined carrier/AVCL ⁽¹⁾ | Caltech Preparation Layer ⁽¹⁾ |
| Base layer | 1.33 mm Caltech Alpha (Caltech G-Mat Alpha embedded) | 1.0 mm Caltech Alpha (onto Eurorooft SA Primer and Caltech G-Mat Alpha embedded) | 1.0 mm Caltech Alpha (Caltech G-Mat Alpha embedded) |
| Top layer | 0.83 mm Caltech Alpha | 1.0 mm Caltech Alpha | 1.0 mm Caltech Alpha |

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

2.1.2 On the basis of data assessed, the constructions listed 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 When used in protected specifications including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC, a roof incorporating the system will also be unrestricted with respect to proximity to a relevant boundary by the documents supporting the national Building Regulations.

2.1.4 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.

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 |
|--|---|----------------|--------|
| Caltech Alpha | Watertightness to EOTA TR-003 : 2004 | No leakage | Pass |
| Caltech Alpha | Diffusion equivalent air layer thickness (s_d) to BS EN 1931 : 2000 | Value achieved | 7.98 m |
| Caltech Alpha | Delamination to EOTA TR-004 : 2004 | ≥ 50 kPa | Pass |
| - on concrete primed with Caltech Epoxy Damp Tolerant Concrete Primer | | | Pass |
| - on asphalt | | | Pass |
| - on bituminous membrane over PIR insulation | | | Pass |
| - on self-adhesive air and vapour control membrane (AVCL) over plywood primed with Eurorooft SA Primer | | | Pass |
| - on steel primed with Caltech METprime | | | Pass |
| - on day joint (primed with Caltech PU Primer/Sealer) | | | Pass |

3.1.2 On the basis of data assessed, the system will adequately resist the passage of moisture to the inside of a building and so satisfy the requirements of the national Building Regulations.

3.1.3 The adhesion of the system is sufficient to resist the effects of wind suction, elevated temperature and thermal shock conditions likely to occur in practice and remain weathertight.

3.1.4 The resistance to wind uplift for warm roofs will be dependent on the cohesive strength of the insulation and the method by which it is secured to the roof deck. This must be taken into account when selecting a suitable insulation material.

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 | |
|--|---|--|--|------|
| Caltech Alpha - on steel | Dynamic indentation to EOTA TR-006 : 2004 | Value achieved | | |
| | Control, tested at 23°C | | I ₄ | |
| | Control, tested at -20°C | | I ₄ | |
| | Cured at 3°C, tested at 23°C | | I ₄ | |
| | Cured at 35°C, tested at 23°C | | I ₄ | |
| Caltech Alpha - on bituminous membrane (on PIR insulation) | Control, tested at 23°C | | I ₃ | |
| Caltech Alpha - on steel | Static indentation to EOTA TR-007 : 2004 | Value achieved | | |
| | Control, tested at 23°C | | L ₄ | |
| | Control, tested at 23°C | | L ₃ | |
| Caltech Alpha | Tensile strength to BS EN ISO 527-4 : 1997 | Value achieved | | |
| | Control | | 6.9 MPa | |
| | Cured at 3°C | | 4.8 MPa | |
| Caltech Alpha | Elongation to BS EN ISO 527-4 : 1997 | Value achieved | | |
| | Control | | 4.0% | |
| | Cured at 3°C | | 4.9% | |
| Caltech Alpha | Cured at 35°C | | 4.7% | |
| | Caltech Alpha | Fatigue cycling to EOTA TR-008 : 2004 (1000 cycles) | Watertight and less than 75 mm delamination from substrate | Pass |

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

3.2.3 Where traffic in excess of the examples given in section 3.2.2 is envisaged, such as for maintenance of lift equipment, a walkway must be provided. Reasonable care must be taken to avoid puncture by sharp objects or concentrated loads.

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 system were assessed.

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

| Product assessed | Assessment method | Requirement | Result |
|--------------------------------|--|---|----------------------------------|
| Caltech Alpha - on concrete | Delamination to EOTA TR-004 : 2004 after exposure to water at 60°C for 60 days | ≥ 50 kPa | Pass |
| Caltech Alpha - on steel | Dynamic indentation to EOTA TR-006 : 2004 after heat ageing at 70°C for 200 days, tested at -20°C after UV ageing at 60°C for 1000 MJ·m ⁻² , tested at -10°C | Value achieved | I ₄ I ₄ |
| Caltech Alpha - on steel | Static indentation to EOTA TR-007 : 2004 after exposure to water at 60°C for 60 days, tested at 80°C | Value achieved | L ₄ |
| Caltech Alpha | Tensile strength to BS EN ISO 527-4 : 1997 after heat ageing at 70°C for 200 days after UV ageing at 60°C for 1000 MJ·m ⁻² | Value achieved | 8.0 MPa 12.6 MPa |
| Caltech Alpha | Elongation to BS EN ISO 527-4 : 1997 after heat ageing at 70°C for 200 days after UV ageing at 60°C for 1000 MJ·m ⁻² | Value achieved | 2.2% 2.4% |
| Caltech Alpha - on concrete | Fatigue cycling to EOTA TR-008 : 2004 after heat ageing at 70°C for 200 days (50 cycles) | Watertight and less than 75 mm delamination from substrate | Pass |

8.3 Service life

Under normal service conditions, the system will have a service life of at least 25 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

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 system is 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 structural analysis of the roof is available, including overall and local deflection and direction of falls.

9.1.4 The drainage systems for protected zero fall roofs must be correctly designed, and the following points must be addressed:

- provision made for access for maintenance purposes
- it is particularly important to identify the correct drainage points, to ensure that drainage is sufficient and effective.

9.1.5 Dead loads, wind loads 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.

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

- 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 limitations 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 of the system 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. Additional instructions and guidance are provided in Annex A of this Certificate.

9.2.3 Substrates on which the system is to be applied must be properly prepared in accordance with the Certificate holder's instructions.

9.2.4 Adhesion to the substrate will depend on the condition and cleanness of the substrate. Substrates must be visibly dry (ie free from rainwater, surface condensation and frost), sound and free from loose materials or contamination (eg moss or algae).

9.2.5 High pressure sand-blasting or water-jetting may be used to remove loose or flaking materials, but the substrate must be visibly dry before application of the system.

9.2.6 Damaged areas of the substrate (eg blistered bitumen or roofing felt) must be removed, replaced or repaired. Substrate defects (eg shallow-bottoms cracks and indentations) must be filled using Caltech Alpha.

9.2.7 Deck surfaces must be free from sharp projections, such as protruding fixing bolts or concrete nibs.

9.2.8 Gutters and outlets must be checked to ensure that they are, and remain, clear of all debris.

9.2.9 Where required, the substrate must be primed with the appropriate primer, in accordance with the Certificate holder's instructions, at the coverage rates given in Table 6.

Table 6 Primer application rates

| Component | Coverage rates (m ² ·l ⁻¹) |
|---|---|
| Caltech PU Primer/Sealer | 10 |
| Eurorof SA Primer | 4 to 8 |
| Caltech Epoxy Damp Tolerant Concrete Primer | 3.3 to 5 |
| Caltech METprime | 6 to 7 |

9.2.10 Caltech Epoxy Damp Tolerant Concrete Primer is mixed at a ratio of 1.67 (Part A) to 1 (Part B). Caltech METprime is mixed at a ratio of 3 (Part A) to 1 (Part B).

9.2.11 Advice from the Certificate holder must be sought when treating dynamic cracks or movement joints, but such advice is outside the scope of this Certificate.

9.2.12 Prior to application, the prevailing weather and site conditions must be correct. The following normal limitations apply:

- application must not take place when the relative humidity is in excess of 95%, or in fog
- the temperature/humidity must be such that there is no risk of surface condensation occurring before or during application
- air and substrate temperatures must be in excess of 3°C
- Caltech Alpha must be at a temperature of, or greater than, 10°C for airless spray applications
- special precautions may be necessary when temperatures exceed 35°C, as shown in the Certificate holder’s Technical Data Sheets
- the primer, where used, must be cured
- the wind speed must be such that it does not interfere with the application or cause overspray. No attempt to spray must be made if the wind speed exceeds 6.7 m·s⁻¹ (15 mph), unless precautions such as the use of wind barriers are taken.

9.2.13 Work must only commence on an area if it can be carried out to the full thickness for that particular coat before weather changes occur. Where weather interrupts installation between layers, installation can proceed for up to seven days, beyond which Caltech PU Primer/Sealer must be applied.

9.2.14 If required, the substrate is primed and any local reinforcement applied. Once dry, the substrate will be ready for the main application of the system.

9.2.15 Application of Caltech Alpha can be by roller, brush or airless spray. Brush application is normally used only for small roof areas and for embedding Caltech G-Mat Alpha into Caltech Alpha at details.

9.2.16 Caltech Alpha is applied at the coverage rates given in Table 7. The coverage rate for the embedment coat will vary with the roughness and absorbency of the substrate. Caltech G-Mat Alpha is embedded in the first coat while the coating of Caltech Alpha is still wet. Once the first coat is cured, the second coat is applied. The finished dry thickness must not be less than 1.7 mm.

Table 7 Coverage rates of Caltech Alpha (l·m⁻²)

| Layer | Substrate texture | | | |
|------------------------------|-------------------|--------------|-------|------------|
| | Smooth | Intermediate | Rough | Very rough |
| First layer – embedment coat | 1.0 | 1.2 | 1.5 | 1.6 |
| Second layer – top coat | 1.0 | 1.0 | 1.0 | 1.0 |

9.2.17 Random tests are carried out on the finished coating surface by cutting out small areas to measure finished cured thickness. Test areas must be repaired after the sample is taken in accordance with section 9.4 of this Certificate.

9.2.18 The NHBC requires that the system, once installed, is inspected in accordance with *NHBC Standards 2024*, Chapter 7, Clause 7.1.11, and undergoes an appropriate integrity test, where required. Any damage to the system assessed in this Certificate must be repaired in accordance with section 9.4 and reinspected in order to maintain system performance.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder’s information. To achieve the performance described in this Certificate, installation of the system must be carried out by contractors who have been trained and approved by the Certificate holder.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the system in use requires that it is 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 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, where relevant, to ensure continuous satisfactory performance.

9.4.3 In the event of damage, repairs must be carried out by cleaning back to unweathered material, priming with Caltech PU Primer/Sealer if required, and recoating the damaged area with the full membrane at the application rates given in Table 7 of this Certificate.

10 Manufacture

10.1 The production processes for the product 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 system components are delivered to site in packaging bearing the Certificate holder's details, product name, hazard labelling, batch number and the BBA logo incorporating the number of this Certificate.

11.2 The components of the system are delivered to site as shown in Table 8.

| Component | Unit of delivery |
|--|--|
| Caltech Alpha (mid grey, dark grey) | 15 litre cans |
| Caltech PU Primer/Sealer | 5 litre tins |
| Euroroof SA Primer | 5 litre tins |
| Caltech Epoxy Damp Tolerant Concrete Primer (Part A) | 2.5 litre in 5 litre plastic tubs |
| Caltech Epoxy Damp Tolerant Concrete Primer (Part B) | 1.5 litre in 2.5 litre tins |
| Caltech METprime (Part A) | 3 litre in 5 litre tins |
| Caltech METprime (Part B) | 1 litre in 1 litre tins |
| Caltech G-Mat Alpha | Boxed 127 m x 0.95 m (approx. 120 m ²) rolls, or boxed three/singly 127 m x 0.31 m rolls |

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

11.3.1 Caltech Alpha and all primer containers must be kept tightly sealed and stored in a cool, ventilated place, away from ignition sources and other chemicals.

11.3.2 Once opened, Caltech Alpha will start to cure, forming a skin. It may be possible to remove the skin and use the remaining product.

ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the product 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 components 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).

Additional information on installation

Installation should also be in accordance with the relevant clauses of Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*.

Bibliography

- 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 1931 : 2000 *Flexible sheets for waterproofing – Bitumen, plastic and rubber sheets for roof waterproofing – Determination of water vapour transmission properties*
- 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*
- BS EN 13501-1 : 2018 *Fire classification of construction products and building elements – Classification using data from reaction to fire tests*
- BS EN ISO 527-4 : 1997 *Plastics – Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites*
- 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 roof tests*
- EOTA TR-003 : 2004 *Determination of the watertightness*
- EOTA TR-004 : 2004 *Determination of the resistance to delamination*
- EOTA TR-006 : 2004 *Determination of the resistance to dynamic indentation*
- EOTA TR-007 : 2004 *Determination of the resistance to static indentation*
- EOTA TR-008 : 2004 *Determination of the resistance to fatigue movement*

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.