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Agrément Certificate
15/5229
Product Sheet 1 Issue 4

BMI SEALOFLEX LIQUID-APPLIED ROOF WATERPROOFING SYSTEMS

SEALOFLEX ULTIMA STANDARD

This Agrément Certificate Product Sheet(1) relates to Sealoflex Ultima Standard, a one-part, liquid-applied modified polyurethane, for use as a roof waterproofing membrane system in new and refurbishment works on flat and pitched roofs with limited and pedestrian 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 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 Fourth issue: 11 October 2023

Hardy Giesler
Chief Executive Officer

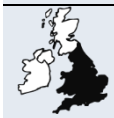
Originally certified on 26 August 2015

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 Sealoflex Ultima Standard, 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 system 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 system may enable a roof to be unrestricted under 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 system can satisfy 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 system 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:		When applied to a suitable substructure the system may enable a roof to be unrestricted under clause 2.8.1$^{(1)(2)}$ of this Standard. See section 2 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 3.10.6$^{(1)(2)}$. 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 -conversions**
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)(iii) (iv)(b)(i)**	**Fitness of materials and workmanship**
Comment:		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 the requirements of this Regulation. See section 3 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The system is restricted by this Regulation, in some circumstances. See section 2 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 by this Regulation. See section 2 of this Certificate.

Fulfilment of Requirements

The BBA has judged Sealoflex Ultima Standard to be satisfactory for use as described in this Certificate. The system has been assessed as a roof waterproofing system on new and existing flat and pitched roofs with limited and pedestrian access.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. Sealoflex Ultima Standard consists of:

- Sealoflex Ultima Waterproof Coating — a one-part, moisture-triggered modified-polyurethane waterproofing coating
- Sealoflex Ultima Standard Reinforcing Fabric — a 110 $g \cdot m^{-2}$ fine polyester fleece for system reinforcement
- Sealoflex Ultima Concrete Primer — for the preparation of concrete substrates prior to the application of the system
- Sealoflex Ultima Bitumen Primer — for the preparation of bitumen membranes and asphalt prior to the application of the system
- Sealoflex Ultima EP1 Primer — for the preparation of timber substrates and PVC waterproofing membranes prior to the application of the system
- Sealoflex Ultima TPO Primer — for the preparation of TPO waterproofing membranes prior to the application of the system
- Pyrobar and TA Underlays — self-adhesive/heat-activated, polyester-reinforced, styrene-butadiene-styrene (SBS)-modified bitumen membranes for use as a carrier membrane over insulation boards
- Sealoflex Ultima Quartz — kiln-dried silica, granule size 0.4 to 0.8 mm for use as an anti-skid additive in areas of pedestrian traffic in the Sealoflex Ultima anti-skid walkway system
- Sealoflex Ultima Wearcoat Clear — used to seal the applied Sealoflex Ultima Quartz.

The coating has the nominal characteristics of:

specific gravity ($g \cdot cm^{-3}$)	1.5
colour	mid grey.

The underlays have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of underlays

Characteristic (unit)	Underlays	
	Pyrobar	TA Underlay
thickness (mm)	4	2.3
width (m)	1	1
length (m)	10	10
roll weight (kg)	40	28

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:

- Thermazone Roofboard
- PUR adhesive
- joint reinforcement.

Applications

The system is intended for use a roof waterproofing system on new and existing flat and pitched roofs with limited and pedestrian access on the following substrates:

- concrete
- mastic asphalt
- metal
- reinforced bitumen membranes (including mineral surfaced)
- wood
- OSB3
- bitumen membranes
- PVC membranes
- TPO membranes
- insulation boards in conjunction with a carrier membrane.

Definitions for products and applications inspected

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

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

Product assessment – key factors

The system was assessed for the following key factors, and the outcomes of the assessments are 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 BS EN 13501-5 : 2016, the specifications given in Table 2 of this Certificate achieved B_{ROOF}(t4) for slopes below 10°.

Table 2 Tested system specifications for Sealoflex Ultima Standard

Layer	System(1)	System(2)
Substrate	18 mm plywood deck	18 mm plywood deck
Substrate primer	Icopal SA Primer(3) applied at a rate between 0.125 and 0.250 L·m^{-2}	Sealoflex Ultima EP1 Primer at 100 g·m^{-2}
AVCL	TorchSafe TA VCL Sanded(3)	—
Adhesive	Icopal Insulation Spray Adhesive(3) applied at a rate of 0.-044 L·m^{-2}	—
Insulation	Thermazone Roofboard(3) faced with mineral glass thicknesses between 30 to 160 mm	—
Primer	Sealoflex Ultima EP1 Primer at 100 g·m^{-2}	–
System	Sealoflex Ultima Waterproof Coating, with Sealoflex Ultima Standard Reinforcing Fabric embedded, applied at a thickness of 1.1 mm (1.8 kg·m^{-2})	Sealoflex Ultima Waterproof Coating, with Sealoflex Ultima Standard Reinforcing Fabric embedded, applied at a thickness of 1.1 mm (1.8 kg·m^{-2})

(1) Fire classification reports, reference 21472D and 21694D, issued by Warringtonfire Gent. Report available from the Certificate holder.
(2) Fire classification report, reference 21472B, issued by Warringtonfire Gent. Report available from the Certificate holder.

2.1.2 On the basis of data assessed, the specifications 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 protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC, a roof incorporating the system will also be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a relevant boundary.

2.1.4 The designation 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 notdeclared a reaction to fire classification for the system to BS EN 13501-1 : 2018.

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

2.2.3 In England, the system, when used in roof pitches of greater than 70°, excluding upstands, should not be used less than 1 m from a boundary, 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 should also be included in calculations of unprotected area.

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

2.2.5 In Scotland and Northern Ireland, for systems incorporating the products used on walls or on roofs with pitches greater than 70°, excluding upstands, that do not achieve the minimum Class E reaction to fire classification to BS EN 13501-1 : 2018, designers should seek guidance on the proposed use of the system from the relevant Building Control Body.

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
Sealoflex Ultima Standard	Watertightness to EOTA TR 003 : 2004	No leakage at 1 head of water for 24 hours	Pass
Sealoflex Ultima Standard Substrate	Delamination strength to EOTA TR 004 : 2004	≥ 50 kPa	
- concrete			Pass
- mastic asphalt			Pass
- bituminous membrane			Pass
- steel			Pass
- plywood			Pass
- foil-faced PIR insulation			Pass
- PVC-P membrane			Pass
- TPO membrane			Pass

3.1.2 On the basis of data assessed, Sealoflex Ultima Standard 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 adhesion of the system to the substrates given in the product description is sufficient to resist the effects of wind suction, thermal cycling, or other minor structural movements likely to occur in service.

3.2 Resistance to mechanical damage

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

Table 4 Mechanical damage tests

Product assessed	Assessment method	Requirement	Result
Sealoflex Ultima Standard Substrate - steel at 23°C - steel at –10°C - steel at –10°C cured at 0°C - steel at –10°C cured at 40°C - carrier membrane on PIR at 20°C	Dynamic indentation to EOTA TR-006 : 2004	Value achieved	 I_3 I_3 I_3 I_3 I_3
Sealoflex Ultima Standard Substrate - steel at 20°C - steel at 80°C - carrier membrane on PIR at 20°C	Static indentation to EOTA TR-007 : 2004	Value achieved	 L_4 L_4 L_4
Sealoflex Ultima Standard	Fatigue cycling to EOTA TR-008 : 2004	Watertight and less than 75 mm delamination from substrate after 500 cycles	Pass
Sealoflex Ultima Standard Direction A - control - cured at 0°C - cured at 40°C Direction B - control - cured at 0°C - cured at 40°C	Tensile strength to BS EN 12311-2 : 2013 at test speed 100 mm·min^{-1}	Value achieved	 883 N·(50 mm)$^{-1}$ 695 N·(50 mm)$^{-1}$ 819 N·(50 mm)$^{-1}$ 619 N·(50 mm)$^{-1}$ 498 N·(50 mm)$^{-1}$ 546 N·(50 mm)$^{-1}$
Sealoflex Ultima Standard Direction A - control - cured at 0°C - cured at 40°C Direction B - control - cured at 0°C - cured at 40°C	Elongation to BS EN 12311-2 : 2013 at test speed 100 mm·min^{-1}	Value achieved	 35.7% 35.9% 35.2% 43.4% 51.9% 45.4%

3.2.2 On the basis of data assessed, the system can accept, without damage, the limited foot traffic and light concentrated loads associated with installation, maintenance and pedestrian traffic on defined walkways. Reasonable care is required to avoid puncture by sharp objects or concentrated loads.

3.2.3 On the basis of data assessed, the system is capable of accepting minor structural movement while remaining weathertight.

4 Safety and accessibility in use

Data were assessed for the following characteristics.

4.1 Slip resistance

4.1.1 Results of slip resistance tests are given in Table 5.

Table 5 Slip resistance

Product assessed	Assessment method	Requirement	Result
Sealoflex Ultima Standard	Pendulum test value (PTV) to	High slip potential a PTV	
- dry	BBA internal method	of 0 – 24	75
- wet		Moderate slip potential a PTV of 25 – 35	43
Sealoflex Ultima Standard with Sealoflex Ultima Quartz		Low slip potential a PTV of 36+	
- dry			66
- wet			62

4.1.2 On the basis of data assessed, the system when installed with the anti-slip layer, has a satisfactory slip resistance in dry and wet conditions and so it is suitable for use in areas of pedestrian access.

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 6.

Table 6 Results of durability tests

Product assessed	Assessment method	Requirement	Result
Sealoflex Ultima Standard	Delamination strength	≥ 50 kPa	
Substrate	to EOTA TR 004 : 2004		
- concrete	Exposure to water for 90 days		Pass
- mastic asphalt	at 60°C to EOTA TR-012 : 2004		Pass
- bituminous membrane			Pass
- steel			Pass
- plywood			Pass
- - foil-faced PIR insulation			Pass
- PVC-P membrane			Pass
- TPO membrane			Pass
Sealoflex Ultima Standard	Dynamic indentation	Value achieved	
Substrate	to EOTA TR 006 : 2004		
- steel at –10°C	Heat aged 50 days at 80°C to EOTA TR-011 : 2004		I_3
- steel at –10°C	UV aged 400 MJ·m^{-2} at 50°C to EOTA TR 010 : 2004		I_3
Sealoflex Ultima Standard	Static indentation to EOTA TR 007 : 2004	Value achieved	
- steel at 80°C	Exposure to water for 90 days at 60°C to EOTA TR 012 : 2004		L_4
Sealoflex Ultima Standard	Fatigue cycling to EOTA TR 008 : 2004 Heat aged 50 days at 80°C	Watertight and less than 75 mm delamination from substrate after 50 cycles	Pass
Sealoflex Ultima Standard	Tensile strength to BS EN 12311-2 : 2013 at test speed 100 mm·min^{-1}	Value achieved	
Direction A	Heat aged 50 days at 80°C		898 N·(50 mm)$^{-1}$
Direction B	to EOTA TR 011 : 2004		641 N·(50 mm)$^{-1}$
Direction A	UV aged 400 MJ·m^{-2} at 50°C		955 N·(50 mm)$^{-1}$
Direction B	to EOTA TR-010 : 2004		586 N·(50 mm)$^{-1}$
Sealoflex Ultima Standard	Elongation to BS EN 12311-2 : 2013 at test speed 100 mm·min^{-1}	Value achieved	
Direction A	Heat aged 50 days at 80°C		26.8%
Direction B	to EOTA TR 011 : 2004		33.2%
Direction A	UV aged 400 MJ·m^{-2} at 50°C		33.2%
Direction B	to EOTA TR-010 : 2004		37.1%

8.3 Service life

Under normal service conditions, the system will have a life of at least 10 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.

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, and direction of falls.

9.1.4 Where traffic other than for installation of the system is envisaged, such as for maintenance access, for cleaning of gutters, etc, special precautions, such as additional protection to the membrane or installation of Sealoflex Ultima anti-skid walkway system, must be taken.

9.1.5 The structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance needs to be made for loading deflections to ensure that the free drainage of water is maintained.

9.1.6 Imposed loads, dead loads and wind loadings 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.

9.1.7 When bonding to insulation boards, the resistance to wind uplift 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.

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

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

9.2 Installation

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

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

9.2.3 Adhesion of the system will depend on the condition and cleanliness of the substrate, which must be visibly dry, sound and free from loose materials or contamination (eg moss or algae). Deck surfaces must be free from sharp projections, such as protruding fixing bolts or concrete nibs.

9.2.4 Damaged areas of substrate must be removed, replaced or repaired.

9.2.5 The majority of contamination is removed from the substrate by scraping and/or sweeping. Any remaining contamination is removed by suitable means such as power washing, grit blasting or mechanical abrasion.

9.2.6 Any areas of fungal growth, algae, moss etc must be treated with a suitable HSE-approved biocidal wash prior to installation of the system.

9.2.7 When required, the substrate is primed with the appropriate primer, in accordance with the Certificate holder's instructions, at the coverage rate given in Table 7.

Table 7 Primer application rates

Primer	Substrate	Rate of coverage
Sealoflex Ultima EP1 Primer	Timber	0.15 $L \cdot m^{-2}$
Sealoflex Ultima Bitumen Primer	Reinforced bitumen membranes	0.3 $L \cdot m^{-2}$
	Asphalt	0.3 $L \cdot m^{-2}$
Sealoflex Ultima Concrete Primer	Concrete	0.5 $kg \cdot m^{-2}$
Sealoflex Ultima TPO Primer	FPO/TPO	0.1 $L \cdot m^{-2}$

9.2.8 Sealoflex Ultima Waterproof Coating is applied either by roller or brush.

9.2.9 The first layer of the coating is applied at a minimum coverage rate of 0.9 $L \cdot m^{-2}$ (1.4 $kg \cdot m^{-2}$).

9.2.10 Sealoflex Ultima Standard Reinforcing Fabric is applied into the wet first layer and the surface rolled to ensure elimination of trapped air and saturation of the fabric. The next width of the reinforcing fabric is laid ensuring a side lap of a minimum75 mm over the previous reinforcing fabric.

9.2.11 Once the reinforcing fabric has been laid into the first layer, a second application of Sealoflex Ultima Waterproof Coating is applied at a minimum consumption of 0.5 $\ell \cdot m^{-2}$, achieving a minimum total membrane coverage rate of 1.4 $\ell \cdot m^{-2}$ (2.1 $kg \cdot m^{-2}$).

9.2.12 For pedestrian access areas, Sealoflex Ultima Quartz is applied by hand into the wet, additional layer of Sealoflex Ultima Waterproof Coating which has been applied above the cured membrane. Sufficient granules are applied to ensure full embedment of the granules. Once the waterproofing has cured, the excess granules are swept off the surface and the membrane is sealed with Sealoflex Ultima Wearcoat Clear.

9.2.13 Detailing and upstands are carried out in accordance with the Certificate holder's installation instructions (also see Annex A, section A.3 of this Certificate).

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 is carried out by installers 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. The following requirements apply in order to satisfy the performance assessed in this Certificate:

9.4.2 The roof 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 continued satisfactory performance.

9.4.3 The repair of minor damage to the system can be achieved effectively by cleaning back to the unweathered material and recoating the damaged area with the membrane at the total application rate stated in section 9.2.

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, transportation information, batch number and the BBA logo incorporating the number of this Certificate.

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

11.2.1 The resin and primer containers must be kept tightly sealed and must be stored out of direct sunlight, in a cool, ventilated place, away from ignition sources and other chemicals.

11.2.2 The resins will have a shelf life of 12 months when stored at temperatures between 5°C and 35°C. At higher temperatures, the shelf-life will reduce progressively.

11.3 The system components are delivered to site as given in Table 8.

Table 8 Component packaging

Component	Packaging
Sealoflex Ultima Waterproof Coating	4 or 15 litre containers
Sealoflex Ultima Standard Reinforcing Fabric	1 x 50 m, 0.25 x 50 m, or 0.1 x 50 m rolls
Sealoflex Ultima Bitumen Primer	4 or 20 litre containers
Sealoflex Ultima EP1 Primer	4 or 20 litre containers
Pyrobar and TA Underlays	10 m rolls
Sealoflex Ultima Quartz	25 kg bags

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 system 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).

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 and EN ISO 14001 : 2015 by TÜV NORD (Certificates 44 100 191677 and 44 104 191677 respectively).

Additional information on installation

A.1 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*.

A.2 When removing oil and grease contamination from the substrate prior to application, the advice of the Certificate holder must be sought on approved detergents.

A.3 Pot life and cure times will vary with ambient temperature and humidity conditions during installation. At 23°C and 50% RH, the open pot life is 2 to 3 hours; the container may be resealed for future use. The system is rainproof after 30 minutes. In cases of doubt, the Certificate holder's advice should be sought.

A.4 Detailing requirements, eg at service penetrations and movement joints, must be evaluated on a case-by-case basis. The Certificate holder has standard details or can advise of suitable details for a particular application.

Bibliography

BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — 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 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 12311-2 : 2013 *Flexible sheets for waterproofing — Determination of tensile properties. Part 2 : Plastic and rubber sheets for waterproofing*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*
BS EN 13501-5 : 2016 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests*

EN ISO 9001 : 2015 *Quality management systems — Requirements*

EN ISO 14001 : 2015 *Environmental management systems — Requirements with guidance for use*

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

EOTA Technical Report TR 003 : May 2004 *Determination of watertightness.*
EOTA Technical Report TR 004 : May 2004 *Determination of the resistance to delamination*
EOTA Technical Report TR-006 May 2004 *Determination of the resistance to dynamic indentation*
EOTA Technical Report TR-007 May 2004 *Determination of the resistance to static indentation*
EOTA Technical Report TR-008 : May 2004 *Determination of the resistance to fatigue movement*
EOTA Technical Report TR-010 : May 2004 *Exposure procedure for artificial weathering*
EOTA Technical Report TR-011 : May 2004 *Exposure procedure for accelerated ageing by heat*
EOTA Technical Report TR-012 : May 2004 *Exposure procedure for accelerated ageing by hot water*

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.

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