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Agrément Certificate
20/5797
Product Sheet 1 Issue 2

READYSEAL LIQUID APPLIED ROOF WATERPROOFING SYSTEMS

READYSEAL ROOF WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet(1) relates to the ReadySeal Roof Waterproofing System, a silane-terminated polyether for use as a roof waterproofing membrane on flat and pitched roofs with limited or pedestrian access and protected zero fall roofs in warm, cold, inverted, green roof, roof terraces and podium deck specifications.

(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

Hardy Giesler
Chief Executive Officer

Date of Second issue: 22 July 2024

Originally certified on 2 September 2020

Certificate amended on 7 January 2025 to revise section 2 and associated Building Regulations.

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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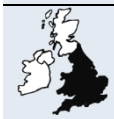
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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that the ReadySeal 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 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 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 this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	2.8	Spread from neighbouring buildings
Comment:		When applied to a suitable substructure, the system 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 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(1)(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(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(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 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, the ReadySeal 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.*

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 Standard 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 the ReadySeal Roof Waterproofing System to be satisfactory for use as described in this Certificate. The system has been assessed as a silane-terminated polyether for use as a roof waterproofing membrane on flat and pitched roofs with limited or pedestrian access and protected zero fall roofs in warm, cold, inverted, green roof, roof terraces and podium deck specifications.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. The ReadySeal Roof Waterproofing System consists of:

- ReadySeal — a single part, solvent-free, silane-terminated polyether waterproofing
- Radmat G120 Reinforcement Fleece — a needle punched glass fibre reinforcement for embedding into ReadySeal to aid in the reinforcement of construction details, flashing joints, cracks and gaps.

ReadySeal has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of ReadySeal

Characteristic (unit)	ReadySeal
Density ($g \cdot cm^{-3}$)	1.5
Installed system thickness (mm)	2.3
Colour	Telegrey 2 (RAL 7046)

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:

- ReadySeal Blocker Primer — a two-part primer used to prepare new and old reinforced bitumen membranes, dry and wet concrete and steel substrates prior to the installation of the system
- ReadySeal Pre-Wipes — pre-wetted wipes used to prepare part cured ReadySeal for the application of ReadySeal Surface Primer
- ReadySeal Surface Primer — a one part primer used to prepare part cured ReadySeal overlaps prior to the application of new ReadySeal
- ReadySeal Concrete Primer — a one part primer for concrete.

Applications

The system is intended for use on the following substrates:

- concrete (primed)
- cementitious screeds, including latex modified
- bituminous roofing membranes, including mineral surfaced, in cold and warm roof specifications (primed)
- steel (primed)
- plywood satisfying the requirements of BS 6229 : 2018
- oriented strand board (OSB) satisfying the requirements of BS 6229 : 2018.

The system is satisfactory for use in:

- inverted roof specifications on flat and zero fall roofs with limited access or pedestrian access
- protected warm and cold roof specifications, eg covered by pavers or other suitable protection on flat and zero fall roofs with limited or pedestrian access
- green roof specifications (extensive) on pitched, flat and zero fall roofs with limited access
- exposed warm and cold roof specifications on flat and pitched roofs with limited access
- roof terraces
- podium decks.

Definitions for products and applications inspected

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

- 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 subjected to increased access to that defined for a limited access roof, but not open to vehicular traffic
- flat roof — a roof having a minimum finished fall of 1:80(1)
- pitched roof — a roof having a fall in excess of 1:6
- zero fall roof — a roof having a minimum finished fall between 0 and 1:80(1)
- green roof — a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wildflower species
- invasive plant species — vegetation species having vigorous and/or invasive root systems likely to cause damage to components of the inverted roof insulation system and roof waterproofing
- root barrier — a root resistant membrane meeting the requirements of BS EN 13948 : 2007.

(1) *NHBC Standards* 2024 require a minimum fall of 1:60 for green roofs.

Product assessment – key factors

The system 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(1) to EN 13501-5 : 2016, the construction given in Table 2 of this Certificate achieved a classification of B_{ROOF}(t4) for slopes below 10°.

Table 2 Tested constructions

Substrate(2)	Optional air and vapour control layer (AVCL)(2)	Adhesive(2)	Insulation(2)	Waterproofing
≥ 18 mm plywood (510 kg·m^{-3})	Any bituminous AVCL achieving Class E or better to EN 13501-1 : 2018	Insta-Stick or Radmat A5196	≥ 50 mm FOAMGLAS T3+, adhered	2.3 mm ReadySeal Roof Waterproofing System

(1) External fire spread classification report, 21393E, issued by warringtonfire, available from the Certificate holder on request.
(2) This component is outside the scope of this Certificate.

2.1.2 On the basis of data assessed, the construction listed in Table 2 will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a relevant boundary.

2.1.3 A roof incorporating the system will also be unrestricted under the national Building Regulations with respect to a relevant boundary in the following circumstances:

- when protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC
- irrigated green roofs.

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.

2.1.5 If allowed to dry, plants used may allow flame spread 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.

2.2 Reaction to fire

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

2.2.2 On the basis of data assessed, a roof incorporating the system 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 pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on residential buildings more than 11 m in height or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions must also be included in calculations of unprotected area.

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

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

2.2.6 In Scotland, the use of the system is unrestricted with respect to building height and proximity to a relevant boundary. However, restrictions on the overall construction may apply, depending on the reaction to fire classification achieved by the complete system, which must be established on a case-by-case basis.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

Table 3 Results of weathertightness tests

Product assessed	Assessment method	Requirement	Result
ReadySeal Roof Waterproofing System	Watertightness to EOTA TR003 : 2004	No leakage	Pass
ReadySeal Roof Waterproofing System	Water vapour diffusion-equivalent air layer thickness (S_d) to BS EN 1931 : 2000 (23°C / 75% RH)	Value achieved	3.50 m
ReadySeal Roof Waterproofing System	Delamination to EOTA TR004 : 2004	≥ 50 kPa	
- on concrete			Pass
- on bitumen membrane			Pass
- on steel			Pass
- on timber			Pass
- on day joint on concrete			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
ReadySeal Roof Waterproofing System	Tensile strength to	Value achieved	
- control	BS EN ISO 527-4 : 1997		5.2 MPa
- cured at 2°C			5.4 MPa
- cured at 40°C			5.7 MPa
ReadySeal Roof Waterproofing System	Elongation to	Value achieved	
- control	BS EN ISO 527-4 : 1997		31%
- cured at 2°C			31%
- cured at 40°C			30%
ReadySeal Roof Waterproofing System	Dynamic indentation to EOTA TR006 : 2004	Value achieved	
- control, on steel	tested at 23°C		I_3
- cured at 2°C, on steel	tested at –30°C		I_3
- cured at 40°C, on steel	tested at 23°C		I_3
- control, on bitumen membrane on insulation	tested at 23°C		I_3
	tested at 20°C		I_3
ReadySeal Roof Waterproofing System	Static indentation to EOTA TR007 : 2004	Value achieved	
- on steel	tested at 23°C		L_4
- on bitumen membrane on insulation	tested at 80°C		L_4
	tested at 23°C		L_4
ReadySeal Roof Waterproofing System	Fatigue cycling to EOTA TR008 : 2004	Watertight and less than 75 mm delamination from the substrate	Pass
ReadySeal Roof Waterproofing System	Crack bridging capability to EOTA TR013 : 2004 tested at –30°C	No leakage	Pass

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 and the effects of minor structural movement 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 (for example, using concrete slabs supported on bearing pads). Reasonable care must be taken to avoid puncture of the system by sharp objects or concentrated loads.

3.3 Resistance to root penetration

In green roofs, when installed in accordance with this Certificate, the inverted roof insulation, water-flow-reducing layer (WFRL), and roof waterproofing layer will be adequately protected against root damage, subject to routine maintenance being carried out in accordance with this Certificate and as recommended by the Green Roof Organisation (GRO) *Code of Best Practice*.

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.

Table 5 Results of durability tests

Product assessed	Assessment method	Requirement	Result
ReadySeal Roof Waterproofing System - on concrete - on reinforced bitumen membrane - on steel - on timber	Delamination to EOTA TR004 : 2004 after exposure to water at 60°C for 216 days to EOTA TR012 : 2004	≥ 50 kPa	 Pass Pass Pass Pass
ReadySeal Roof Waterproofing System	Tensile strength to BS EN ISO 527-4 : 1997 after heat ageing at 80°C for 120 days after UV ageing at 120 MJ·m^{-2} to EOTA TR010 : 2004	Value achieved	 4.6 MPa 4.6 MPa
ReadySeal Roof Waterproofing System	Elongation to BS EN ISO 527-4 : 1997 after heat ageing at 80°C for 120 days after UV ageing at 120 MJ·m^{-2} to EOTA TR010 : 2004	Value achieved	 31% 36%
ReadySeal Roof Waterproofing System - on steel	Dynamic indentation to EOTA TR006 : 2004 after heat ageing at 80°C for 120 days, tested at –30°C after UV ageing at 120 MJ·m^{-2} to EOTA TR010 : 2004, tested at –10°C	Value achieved	 I_4 I_3
ReadySeal Roof Waterproofing System - on steel	Static indentation to EOTA TR007 : 2004 after exposure to water at 60°C for 216 days to EOTA TR012 : 2004	Value achieved	L_3
ReadySeal Roof Waterproofing System	Fatigue cycling to EOTA TR008 : 2004 after heat ageing at 80°C for 120 days	Watertight and less than 75 mm delamination from the substrate	Pass

8.3 Service life

8.3.1 Under normal service conditions, the system will have a life of at least 30 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 When fully protected and subjected to normal service conditions in an inverted roof specification with an open covering (eg aggregate pavers), the system will provide an effective barrier to the transmission of liquid water and water vapour for the life of the roof in which it is incorporated.

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 specified 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, BS 8217 : 2005 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 Structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance must be made for loading deflections to ensure that the free drainage of water is maintained.

9.1.5 Imposed loads, dead loading and wind loads must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

9.1.6 The ballast requirements for inverted roof specifications must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-4 : 2005 and its UK National Annex. The system must be ballasted with a minimum depth of 50 mm of aggregate. In areas of high wind exposure, the Certificate holder's advice must be sought, but this is outside the scope of this Certificate. Alternatively, concrete slabs on suitable supports can be used.

9.1.7 The growing medium used in green roofs and ballast on inverted/protected roofs must not be of a type that will be removed or become delocalised owing to wind scour experienced on the roof.

9.1.8 For green roofs, invasive non-native alien plant species as defined by UK Government guidance must not be used.

9.1.9 For green roofs finishes, to protect the roof waterproofing and any system components above the waterproofing, such as insulation or WFRL, invasive plant species must not be used. In particular, the following species must be excluded:

- invasive weeds including buddleia
- plants and grasses with aggressive rhizomes such as bamboo
- self-setting woody weeds such as sycamore and ash seedlings must be removed at early germination stage
- other woody plants which spread aggressively including rhododendron.

9.1.10 The Green Roof Organisation (GRO) can provide guidance on species not included in section 9.1.9 but such advice is outside the scope of this Certificate.

9.1.11 The drainage systems for inverted roofs, protected zero fall roofs and green roofs must be correctly designed, and the following points must 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 in accordance with the relevant clauses of BS 6229 : 2018
- dead loads for green roofs can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer.

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

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and be used in accordance with, and within the 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 must be carried out in accordance with the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989, this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 All of the system components must be applied when the air and substrate temperatures are greater than 0°C. Special precautions may be necessary when temperatures exceed 35°C. Advice must be obtained from the Certificate holder, but such advice is outside the scope of this Certificate.

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

9.2.5 Adhesion to substrates will depend on the condition and cleanness of the substrate. Substrates must be visibly dry, sound and free from loose materials, contamination (eg moss or algae) and sharp projections, such as concrete nibs.

9.2.6 Damaged areas of the substrate (eg blistered membrane) must be removed, replaced or repaired. Substrate defects (eg shallow-bottomed cracks and indentations) are filled in accordance with the Certificate holder's instructions.

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

9.2.8 All points of potential weakness such as splits, cracks, joints and crazed surfaces must be additionally reinforced in accordance with the Certificate holder's instructions prior to application of the main system.

9.2.9 Priming of substrates, if required, is carried out using an appropriate primer in accordance with the Certificate holder's instructions.

9.2.10 Application of the system can be by brush, roller or airless spray. Brush application is normally used only for small roof areas and, when used, for embedding the reinforcement fleece into ReadySeal at areas of detailing.

9.2.11 When using an airless spray to apply the system, 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 $m \cdot s^{-1}$ (15 mph), unless precautions such as the use of wind barriers are taken.

9.2.12 Whenever possible, the system must be applied to the upstands first, with the system including reinforcement extending a minimum of 75 mm on to the horizontal substrate.

9.2.13 When embedding the reinforcement fleece, ensure the substrate has been assessed with the advice of a Radmat technician with regard for the need for further preparation and/or use of an appropriate primer. Such advice is outside the scope of this Certificate.

9.2.14 The first coat of ReadySeal is applied at a rate of 1 $l \cdot m^{-2}$ and Radmat G120 Reinforcement Fleece embedded into the first coat while it is still wet using a soft brush to ensure a smooth application. Each run of reinforcement must overlap the previous run by at least 75 mm.

9.2.15 A second coat of ReadySeal is applied at a rate of 0.9 $l \cdot m^{-2}$, ensuring Radmat G120 Reinforcement Fleece is fully coated and a flat and level surface is achieved.

9.2.16 Detailing (eg upstands) is carried out in accordance with the Certificate holder's instructions.

9.2.17 The cure schedule of ReadySeal is given in Table 6.

Table 6 Cure schedule of ReadySeal

Film forming time at 25°C and 50% RH	30 minutes
Cure time for foot traffic at 25°C and 50% RH	5 hours
Full cure at 25°C and 50% RH	7 days

9.2.18 The NHBC requires that the system, once installed, are inspected in accordance with *NHBC Standards* 2024, Chapter 7.1, Clause 7.1.11, including undergoing an appropriate integrity test, where required. Any damage to the system assessed in this Certificate must be repaired in accordance with section 9.4 of this Certificate and reinspected, in order to maintain system performance.

9.3 Workmanship

Practicability of installation was assessed by the BBA and on the basis of the Certificate holder's instructions. To achieve the performance described in this Certificate, installation of the system must be carried out by specialist roofing contractors 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.

9.4.3 The system must be the subject of six-monthly inspections and maintenance in accordance with BS 6229 : 2018, and the Certificate holder's recommendations, where relevant, to ensure continued satisfactory performance. These inspections must be carried out by a suitably experienced and competent individual to ensure continued satisfactory performance. This must include an examination of the condition of the roof finishes and ensure that drain outlets and gutters are kept clear and unblocked.

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

9.4.5 For green roofs, to protect the waterproofing, invasive plant species (see clauses 9.1.9 and 9.1.10 of this Certificate) must be eliminated through maintenance.

9.4.6 The use of chemicals to control invasive species (eg, weed killers and pesticides) must be avoided. The removal of invasive species must be carried out by hand. If chemicals are to be used, they must first be checked for compatibility with the insulation, WFRL and roof waterproofing layer. The Certificate holder can advise on the suitability of a particular product, but such advice is outside the scope of this Certificate. Note, if using chemicals on a green roof, rainwater outlets may need to be disconnected from the main drainage system to prevent contamination of the local water system and/or harm to flora and fauna.

9.4.7 The use of chemical fertiliser (inorganic material of wholly or partially synthetic origin used to sustain plant growth) must be checked for compatibility with the insulation, water-flow- reducing layer and roof waterproofing layer. The Certificate holder can advise on the suitability of a particular product, but such advice is outside the scope of this Certificate.

9.4.8 In instances of a leak occurring in the roof waterproofing, it must be repaired following the removal of the protection/ballast layer, water flow-reducing layer and insulation boards. Correct reinstatement of these layers must be carried out with particular care and the advice of the Certificate holder must be sought, but such advice is outside the scope of this Certificate.

9.4.9 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, in accordance with the Certificate holder's instructions, at the recommended coverage rates given in sections 9.2.14 and 9.2.15.

10 Manufacture

10.1 The production processes for the system 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 ReadySeal is delivered to site in 20 kg cans containing 14.25 litres, with 27 cans per pallet. The can packaging bears the product name, the Certificate holder's name and address, batch number, Health and Safety data, application details 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 ReadySeal must be stored in the original packaging in a dry, ventilated, shaded area, protected from frost and away from sources of ignition.

11.2.2 The recommended storage temperature range is between 5 to 30°C.

† ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the system 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).

Additional Guidance

A.1 Reference relating to zero fall roofs must also be made to the appropriate clauses in Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*.

A.2 Additional guidance for inverted roof specifications is given in BBA Information Bulletin No 4 *Inverted roofs – Drainage and U value corrections.*

A.3 Recommendations for the design and maintenance of green roofs specifications are available within the latest edition of *The GRO Green Roof Code – Green Roof Code of Best Practice for the UK*.

Bibliography

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

BS 8000-0 : 2014 + A1: 2024 *Workmanship on construction sites — Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

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

BS EN ISO 527-4 : 1997 *Plastics — Determination of tensile properties — 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 roofs tests*

EOTA TR003 : 2004 *Determination of the watertightness*
EOTA TR004 : 2004 *Determination of the resistance to delamination*
EOTA TR006 : 2004 *Determination of the resistance to dynamic indentation*
EOTA TR007 : 2004 *Determination of the resistance to static indentation*
EOTA TR008 : 2004 *Determination of the resistance to fatigue movement*
EOTA TR010 : 2004 *Exposure procedure for artificial weathering*
EOTA TR012 : 2004 *Exposure procedure for accelerated ageing by hot water*
EOTA TR013 : 2004 *Determination of crack-bridging capability*

Conditions

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