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Agrément Certificate
20/5753
Product Sheet 1

SEALOFLEX ENDURA WATERPROOFING SYSTEMS

SEALOFLEX ENDURA ROOF WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet(1) relates to the Sealoflex Endura Roof Waterproofing System, for use on flat (including zero fall) roofs and pitched roofs with limited access, including green roof, brown roof and roof garden specifications.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

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

KEY FACTORS ASSESSED

Weathertightness — the system will resist the passage of moisture to the interior of a building (see section 6).
Properties in relation to fire — the system may contribute to a roof being unrestricted under the national Building Regulations (see section 7).

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

Resistance to mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with installation and maintenance (see section 9).

Resistance to penetration by roots — the system will resist penetration by plant roots and rhizomes (see section 10).

Durability — under normal service conditions, the system will have a service life in excess of 25 years (see section 12).

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

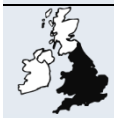
On behalf of the British Board of Agrément

Date of First issue: 10 August 2020

Hardy Giesler
Chief Executive Officer

Regulations

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



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

Requirement:	**B4(1)**	**External fire spread**
Comment:		The system, in some circumstances, is restricted by this Requirement. See sections 7.4 of this Certificate.
Requirement:	**B4(2)**	**External fire spread**
Comment:		On a suitable substructure, the system can enable a roof to be unrestricted under this Requirement. See sections 7.1 to 7.3 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The system can satisfy this Requirement. See section 6.1 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The system is acceptable. See section 12 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Durability, workmanship and fitness of materials**
Comment:		The use of the system satisfies the requirements of this Regulation. See sections 11.1 and 12 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	2.8	Spread from neighbouring buildings
Comment:		The system, when applied to a suitable substructure on flat roofs, can be regarded as having a low vulnerability and can contribute to a roof being unrestricted under this Standard, with reference to clause 2.8.1[(1)(2)]. See sections 7.1 to 7.3 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The system will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1[(1)(2)] and 3.10.7[(1)(2)]. See section 6.1 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		Comments 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(a)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The system is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The system can enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		On suitable substructures, the use of the system can enable a roof to be unrestricted under this Regulation. See sections 7.1 to 7.3 of this Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.2 and 3.3) of this Certificate.

Additional Information

NHBC Standards 2020

In the opinion of the BBA, the Sealoflex Endura 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 and balconies*.

The NHBC Standards do not cover the use of the system in the refurbishment of existing roofs.

Technical Specification

1 Description

1.1 The Sealoflex Endura Roof Waterproofing System is based on a reinforced, two-component, solvent-free, liquid-applied polymethylmethacrylate membrane. The system is comprised of the following components:

- Sealoflex Endura — a polymethylmethacrylate resin, available in Blue/Grey
- Sealoflex Endura Cat Powder — a benzoyl peroxide catalyst
- Sealoflex Endura Reinforcing Fabric — a polyester fleece with a nominal mass per unit area of 110 $g \cdot m^{-2}$.

1.2 Sealoflex Endura is available in winter and summer grades, for use where application temperatures are between 0 and 20°C, and 10 and 35°C respectively.

1.3 The system is applied to provide a waterproofing membrane with a minimum dry film thickness of 1.8 mm.

1.4 Ancillary items which may be necessary for installation of the system and which are included in this Certificate are:

- Sealoflex Endura Concrete Primer — a two-component, polymethylmethacrylate primer for use on porous substrates such as concrete, cementitious screeds and timber/plywood
- Sealoflex Endura Asphalt Primer — a two-component, polymethylmethacrylate primer for use on asphalt, other bituminous substrates, solar reflective coatings and hot melt membranes
- Sealoflex Endura Detail Coating — for use at details and for repairs, and the subject of Product Sheet 3 of this Certificate
- Sealoflex Endura Finish Coat — a two-component, polymethylmethacrylate-based decorative finish available in Stone Grey and Traffic Grey, as standard
- Sealoflex Endura Cleaner — cleaner used for cleaning tools, cleaning substrates and the reactivation of the cured Sealoflex Endura membrane prior to overcoating when work is interrupted for periods in excess of 12 hours.

1.5 Sealoflex Endura Detail Coating is available in winter and summer grades, for use where application temperatures are between -5 and 20°C, and 20 and 35°C respectively.

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

- primers and pre-treatments for certain open textured and porous cementitious substrates, glass, metals, render, insulation, coated metals and plastics
- primers and pre-treatments for certain single ply membranes based on PVC, PVC-P, FPO, TPO, TPE, CPE, EPDM, PIB, VET, EVA and rubber
- primers and pre-treatments for certain membranes and coatings based on polyurethane, polymethylmethacrylate, unsaturated polyester, epoxy, acrylic and polyurea
- anti-corrosion and etch primers for metals
- compounds for small and large scale filling, levelling and repair
- fibre reinforced detailing resin for complex, less critical and difficult-to-access details
- coloured anti-skid finishes.

Details of suitable products/specifications may be obtained from the Certificate holder.

2 Manufacture

2.1 The system components are manufactured by batch processes.

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

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

3 Delivery and site handling

3.1 The system components are delivered to site in packs consisting of liquid base resin and powder catalyst components. The packs bear a label that includes the component's name, health and safety information, and batch number. The components are available in the pack sizes detailed in Table 1.

Table 1 Pack sizes

Component	Pack sizes
Sealoflex Endura (Summer and Winter grades)	20 kg
Sealoflex Endura Detail Coating (Summer and Winter grades)	10 kg
Sealoflex Endura Cat Powder	100 g
Sealoflex Endura Concrete Primer	10 kg
Sealoflex Endura Asphalt Primer	10 kg
Sealoflex Endura Cleaner	9 litre
Sealoflex Endura Finish Coat	10 kg
Sealoflex Endura Reinforcing Fabric	50 m (length) x 15, 35 or 105 cm (widths) rolls.

3.2 The system components must be stored in a cool, dry location and protected from freezing temperatures and direct sunlight. When stored in accordance with the manufacturer's instructions they will have a shelf-life of at least six months. Rolls of Sealoflex Endura Reinforcing Fabric must be stored flat in a dry, clean environment and protected from moisture. Sealoflex Endura Cat Powder must be stored at a temperature below 30°C in closed containers, away from sources of ignition and protected from direct sunlight.

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

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Sealoflex Endura Roof Waterproofing System.

Design Considerations

4 General

4.1 The Sealoflex Endura Roof Waterproofing System is satisfactory for use as a fully adhered waterproofing layer on new and existing:

- exposed flat (including zero-fall) and pitched roofs with limited access
- protected and inverted roofs with limited access (including zero fall roofs)
- green roofs, brown roofs and roof gardens (including zero fall roofs).

4.2 The system has been assessed for use on concrete primed with Sealoflex Endura Concrete Primer, asphalt primed with Sealoflex Endura Asphalt Primer, and unprimed steel. The adhesion to, and compatibility with, other substrates must be confirmed by test (also see section 13.5).

4.3 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018 and, where appropriate, NHBC Standards 2020, Chapter 7.1.

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

- roof garden (intensive) — a roof with a substantial layer of growing medium with planting that can include shrubs and trees, generally accessible to pedestrians
- green roof (extensive) — a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wildflower species
- brown roof — a roof with a growing medium selected to allow indigenous plant species to inhabit the roof over time; no deliberate planting is undertaken.

4.5 Limited access roofs are defined for the purpose of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged, additional protection to the membrane must be provided as specified by the Certificate holder.

4.6 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80(1).

(1) *NHBC Standards* 2020 require a minimum fall of 1:60 for green roofs and roof gardens.

4.7 Pitched roofs are defined for the purpose of this Certificate as those having a fall greater than 1:6.

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

(1) NHBC Standards 2020 require a minimum fall of 1:60 for green roofs and roof gardens.

4.9 For design purposes, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc.

4.10 Dead loads, wind loading and imposed loads are calculated in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

4.11 Recommendations for the design of green roofs, brown roofs and roof garden specifications are available within the latest edition of *The GRO Green Roof Code - Green Roof Code of Best Practice for the UK*.

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

provision made for access for maintenance purposes

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

4.13 Insulation materials to be 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 the scope of that Certificate.

5 Practicability of installation

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

6 Weathertightness

6.1 The system will adequately resist the passage of moisture to the interior of a building and so satisfies the requirements of the national Building Regulations.

6.2 The system is impervious to water and will achieve a weathertight roof capable of accepting minor structural movement.

7 Properties in relation to fire

7.1 When tested to DD CEN/TS 1187 : 2012, Test 4, a composite build-up comprising 19 mm thick plywood primed with a synthetic rubber resin, 120 mm thick PIR Insulation board bonded to a vapour control membrane with a two-component PUR adhesive, a 0.6 mm thick bitumen carrier membrane, the Sealoflex Endura Roof Waterproofing System applied at a rate of 3.1 kg·m^{-2}, including Sealoflex Endura Reinforcing Fabric, was classified in accordance with BS EN 13501-5 : 2005 as European Class B_{ROOF}(t4).

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

- Protected or inverted roof specifications, including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC,
- a roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer 300 mm thick,
- irrigated roof gardens, green roofs and brown roofs.

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

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

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

8 Resistance to wind uplift

8.1 The adhesion of the system to the substrates given in section 4.2, including day joints, is sufficient to resist the effects of wind suction, thermal cycling or other minor structural movements likely to occur in service. Acceptable adhesion to other substrates should be confirmed by test.

8.2 The soil used in intensive planting should not be of a type that will be removed, or become localised, owing to wind scour on the site.

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

9 Resistance to mechanical damage

9.1 The system can accept the limited foot traffic and light concentrated loads associated with installation and maintenance. Reasonable care should be taken to avoid puncture by sharp objects or concentrated loads. Where traffic in excess of this is envisaged, such as for maintenance of lift equipment, additional protection to the membrane must be provided as specified by the Certificate holder. In areas of heavy foot traffic, an additional coat of Sealoflex Endura filled with aggregate can be applied and sealed with Sealoflex Endura Finish Coat. The Certificate holder must be consulted for details.

9.2 Results of testing for dynamic and static indentation are given in Table 2.

Table 2 Dynamic and static indentation

Test	Result	Method
Dynamic indentation		EOTA TR 006
concrete		
unaged	I_4	
UV aged(1) tested at –10°C	I_4	
heat aged(2) tested at –30°C	I_4	
steel		
unaged	I_4	
heat aged(2) tested at –30°C	I_4	
PU insulation		
unaged	I_4	
heat aged(2) tested at –30°C	I_4	
Static indentation		EOTA TR 007
concrete		
unaged	L_4	
water exposure(3) tested at 90°C	L_4	
steel		
unaged	L_4	
water exposure(3) tested at 90°C	L_4	
PU insulation		
unaged	L_4	
water exposure(3) tested at 90°C	L_4	

(1) UV aged using UVA lamps at an exposure of 1000 $MJ \cdot m^{-2}$ at 70°C.
(2) Heat aged for 200 days at 80°C.
(3) Water exposure for 180 days at 60°C.

10 Resistance to penetration by roots

The system will resist penetration by plant roots and rhizomes and can be used as a waterproofing system in green roof and roof garden specifications.

11 Maintenance

11.1 The system should be the subject of six monthly inspections and maintenance in accordance with BS 6229 : 2018, Chapter 7.

11.2 Green roofs, brown roofs and roof gardens must be the subject of regular inspections, particularly in autumn after leaf fall and in spring, to ensure unwanted vegetation and other debris are cleared from the roof and drainage outlets (see section 4.12). Guidance is available within the latest edition of *The GRO Green Roof Code - Green Roof Code of Best Practice for the UK*.

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

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

12 Durability

Under normal service conditions, the system will have a service life in excess of 25 years.

Installation

13 General

13.1 Installation of the Roof Waterproofing System must be in accordance with the relevant clauses of Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls* and the Certificate holder's instructions and this Certificate.

13.2 Installation should not be carried out during inclement weather, eg rain, fog or snow, and the ambient temperature at the time of laying must be between 0 and 35°C.

13.3 Substrates to which the system is to be applied must be sound, clean, frost-free, dry and free from sharp projections. The Certificate holder's advice must be sought with regard to the suitability of the substrate to receive the system, suitable cleaning procedures and the use of a proprietary surface cleaner/HSE approved fungicidal wash where required.

13.4 Previously coated areas must be checked for integrity and adequate adhesion to the substrate. Defects such as cracks and blisters must be repaired prior to application of the system in accordance with the Certificate holder's instructions.

13.5 Adhesion checks must be carried out to ensure that the system is compatible with the existing surfaces. The Certificate holder must be consulted for details of suitable test methods and requirements before use.

13.6 Detailing, such as at upstands, penetrations and joints, must be carried out using Sealoflex Endura Detail Coating in accordance with the Certificate holder's instructions. Where use of Sealoflex Endura Detail Coating is not practicable owing to the complexity of detail, the Certificate holder must be consulted for an alternative solution.

13.7 All equipment must be cleaned with Sealoflex Endura Cleaner.

13.8 Soil or other bulk material should not be stored on one area of the roof prior to installation, to ensure that localised overloading does not occur.

14 Procedure

14.1 The base component is mixed thoroughly using a slow speed agitator fitted with a suitable mixing paddle. The required quantity of catalyst is added and stirring is continued until the mixture is lump-free, and in any event for at least two minutes. The amount of catalyst required will depend on the ambient temperature, and the manufacturer's technical data sheet/product label must be consulted for the required amount.

14.2 A layer of the mixed Sealoflex Endura resin is applied with a lambswool roller to the clean, prepared and, if required, primed substrate at a minimum application rate of 2.0 $kg \cdot m^{-2}$.

14.3 Sealoflex Endura Reinforcing Fabric is rolled and embedded into the wet coating, avoiding creasing and trapped air. Adjacent lengths of the reinforcement must overlap by a minimum of 50 mm (100 mm if left over 12 hours), ensuring that there is sufficient coating to fully encapsulate it. Additional coating is applied if required.

14.4 A second coat of mixed Sealoflex Endura resin is applied, wet on wet, by roller at a minimum application rate of 1.0 $kg \cdot m^{-2}$.

14.5 At each stage the system should be checked to ensure that it has been applied to achieve the minimum consumption. If a localised area has been applied below the minimum consumption, the affected area must be removed and reinstated to specification.

14.6 If work is interrupted for periods in excess of 12 hours, the cured membrane must be reactivated by wiping with Sealoflex Endura Cleaner. Overcoating must proceed after evaporation of the cleaner has occurred (approximately 20 minutes), but within 60 minutes, otherwise the process must be repeated.

15 Repair

15.1 Areas of damaged system must be cut back to sound, well-adhering material and cleaned with Sealoflex Endura Cleaner.

15.2 After the cleaner has evaporated, the system is installed as described in section 14, ensuring that there is at least a 100 mm overlap over the existing sound material.

15.3 A check for adequate adhesion must be carried out once the system has cured.

Technical Investigations

16 Tests

Tests were conducted on samples of the Sealoflex Endura Reinforcing Fabric Roof Waterproofing System to determine:

- water vapour permeability/water vapour diffusion resistance coefficient (μ)
- tensile strength and elongation
- watertightness
- tensile bond strength
- resistance to fatigue
- crack bridging capability
- resistance to dynamic indentation
- resistance to static indentation
- resistance to low temperatures
- resistance to high temperatures
- effect of heat ageing
- effect of exposure to surface water
- effect of exposure to UV-A radiation
- resistance to penetration by roots/rhizomes.

17 Investigations

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

17.2 Data on fire performance were assessed.

17.3 Existing installations were visited to provide additional evidence of the system's in-service durability.

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 + A1 : 15 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Snow loads*
BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1 — Actions on structures — General actions — Wind actions*
NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Wind actions*

BS EN 13501-5 : 2005 + A1 : 2009 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests*

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

EOTA TR 006 *Determination of the resistance to dynamic indentation*
EOTA TR 007 *Determination of the resistance to static indentation*

18 Conditions

18.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- 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.

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

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

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

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

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

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

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

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