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Agrément Certificate 16/5323

Product Sheet 1

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LEESON LIQUID-APPLIED ROOF WATERPROOFING SYSTEMS

LEESON WATERTITE ROOF WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Leeson Watertite Roof Waterproofing System, a moisture-triggered, glassfibre-reinforced aliphatic polyurethane, for use as a roof waterproofing membrane on new and existing flat and pitched roofs with limited and pedestrian access, inverted roofs and green (extensive) roofs.

(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 into a building (see section 6). **Properties in relation to fire** — the system can enable a roof to be unrestricted under the national Building Regulations (see section 7).

Resistance to wind uplift — the system will resist the effects of any likely wind suction acting on the roof (see section 8). **Resistance to mechanical damage** — the system will accept the limited foot traffic and loads associated with installation and maintenance (see section 9).

Resistance to root penetration — the system will adequately resist non-intrusive plant root penetration in green (extensive) roof specifications (see section 10).

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

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

On behalf of the British Board of Agrément

Como

Claire Custis- Monas

Date of Second issue: 4 April 2019
Originally certificated on 25 May 2016

John Albon Chief Scientific Officer Claire Curtis-Thomas
Chief Executive

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

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

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

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Regulations

In the opinion of the BBA, the Leeson Watertite 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(2) External fire spread

Comment: On suitable substructures, the system can enable a roof to be unrestricted under this

Requirement. See sections 7.1 to 7.4 of this Certificate.

Requirement: C2(b) Resistance to moisture

Comment: The system will enable a roof to satisfy this Requirement. See section 6.1 of this

Certificate.

Regulation: 7 Materials and workmanship (applicable to Wales only)
Regulation: 7(1) Materials and workmanship (applicable to England only)

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 substrate, can be regarded as having low

vulnerability under clause 2.8.1⁽¹⁾⁽²⁾ of this Standard. See sections 7.1 to 7.4 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 $0.12.1^{(1)(2)}\,\text{and}$ 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 will enable a roof to satisfy the requirements of this Regulation. See section

6.1 of this Certificate.

Regulation: 36(b) **External fire spread**

On suitable substructures, the use of the system can enable a roof to be unrestricted Comment:

under the requirements of this Regulation. See sections 7.1 to 7.4 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.

3 Delivery and site handling (3.1 and 3.3) of this Certificate. See section:

Additional Information

NHBC Standards 2019

In the opinion of the BBA, the Leeson Watertite 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.

Technical Specification

1 Description

- 1.1 The Leeson Watertite Roof Waterproofing System consists of:
- Leeson Watertite EC PU4923 a polyurethane base coat with a matt finish, available in grey
- Leeson Watertite UV PU4924 a polyurethane, UV-resistant top coat with a matt finish, available in a range of
- LeesonPrime PU4922 a moisture-curing urethane primer for use on concrete, steel and GRP substrates
- Epoxy Primer E5104 a two-pack, low-viscosity epoxy primer for use where a full seal of the underlying material is required. The product is used on mastic asphalt, reinforced bituminous membranes, wood, polyurethane foam, liquid roofing membranes and aluminium paint substrates
- E5198 Low Viscosity Two Pack Epoxy Primer a two-pack, low-viscosity, high-build epoxy primer for use where a full seal of the underlying material is required. The product is used on mastic asphalt, reinforced bituminous membranes, wood, polyurethane foam, liquid roofing membranes and aluminium paint substrates
- Leeson Reinforcing Mat a 225 g·m $^{-2}$ glassfibre chopped strand reinforcing mat.
- 1.2 The liquid-applied components have the nominal characteristics given in Tables 1 and 2.

Table 1 Nominal characteristics of waterproofing components						
Characteristic (unit)	Component					
	Leeson Watertite EC PU4923	Leeson Watertite UV PU4924				
Colour	grey	dark grey, mid grey, light grey, terracotta, copper green, white				
Percentage solids	89	84				
Viscosity at 23°C (mPa·s)	thixotropic	thixotropic				
Specific gravity (g·cm ⁻³)	1.37	1.38				

Table 2 Nominal characteristics of primers					
	Component				
Characteristic (unit)	LeesonPrime	Epoxy Primer	Epoxy Primer	E5198 Primer	E5198 Primer
	PU4922	E5104 Part A	E5104 Part B	Part A	Part B
Colour	light brown	various	brown	various	brown
Percentage solids	70	95	100	95	100
Viscosity at 23°C (mPa·s)	140	660	250	thixotropic	250
Specific gravity (g·cm ⁻³)	1.00	1.37	1.01	1.44	1.01

1.3 Bridging tape is an ancillary item for use as additional reinforcement in areas of potential weakness such as upstands, cracks and expansion joints.

2 Manufacture

- 2.1 The liquid components of the system are manufactured by a batch-blending process.
- 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 being operated by the manufacturer are being maintained.
- 2.3 The management system of Leeson Polyurethanes Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by the BBA (Certificate 10/Q018).

3 Delivery and site handling

3.1 The liquid components are delivered to site in packaging bearing the product name, company name, batch number, health and safety information and weight of contents in kilograms. The type of packaging for the liquid components is given in Table 3.

Table 3 Liquid components packaging and size				
Component	Packaging	Packaging size (litre)		
Leeson Watertite EC PU4923	clamp top tins	12.5, 15		
Leeson Watertite UV PU4924	clamp top tins	12.5, 15		
LeesonPrime PU4922	metal cans	5, 25		
Epoxy Primer E5104				
Part A	plastic pails	10		
Part B	metal cans	2		

- 3.2 The components must be stored in a dry, well-ventilated area, under cover, within the temperature range recommended by the Certificate holder and away from heat sources.
- 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 classification, labelling and packaging of substances and mixtures.* Users must refer to the relevant Safety Data Sheet(s).

Assessment and Technical Investigations

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

Design Considerations

4 General

- 4.1 The Leeson Watertite Roof Waterproofing System is satisfactory for use as a waterproofing layer on new and existing flat and pitched roofs with limited and pedestrian access, inverted roofs and green (extensive) roofs.
- 4.2 The system is suitable for use on the following substrates:
- concrete
- mastic asphalt
- bituminous roofing membranes
- steel
- wood
- liquid-applied roof waterproofing
- GRP
- aluminium paint.
- 4.3 Green roof (extensive) is defined for the purpose of this Certificate as a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wild flower species.
- 4.4 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.
- 4.5 Flat roofs are defined for the purpose of this Certificate as those with a minimum finished fall of 1:80⁽¹⁾. For design purposes, twice the minimum fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc. Pitched roofs are defined for the purpose of this Certificate as those having a fall in excess of 1:6. Zero fall roofs are those with a finished fall of between 0 to 0.7 degrees, reference should also be made to the appropriate clauses in Liquid Roofing and Waterproofing Association (LRWA) Note 7 Specifier Guidance for Flat Roofs.
- (1) NHBC Standards 2019 require a minimum fall of 1:60 for green roofs and roof gardens.
- 4.6 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* 2019, Chapter 7.1.
- 4.7 Structural decks for inverted and green roofs must be suitable to transmit the dead and imposed loads experienced in service.
- 4.8 Imposed loads, dead loading and wind 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.
- 4.9 Recommendations for the design of green roofs and roof garden specifications are available within the latest edition of the GRO Green Roof code *Green Roof Code of Best Practice for the UK*.
- 4.10 The drainage systems for inverted roofs, zero fall roofs, green 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 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*.

- 4.11 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 8217: 2005, or
- the subject of a current BBA Certificate and used in accordance with that Certificate.
- 4.12 The Certificate holder must be consulted for advice on suitable protection (eg pavers), depending on the use of the roof.

5 Practicability of installation

Installation of the system must only be carried out by specialist roofing contractors trained and approved by the Certificate holder.

6 Weathertightness



- 6.1 The system will adequately resist the passage of moisture into the building and enable a structure to comply with the requirements of the national Building Regulations.
- 6.2 The system is impervious to water and will give a weathertight roofing capable of accepting minor structural movement (see section 8).
- 6.3 To achieve a weathertight coating it is essential that the application rate is as quoted in the Certificate holder's literature for the relevant system.

7 Properties in relation to fire



- 7.1 When tested to DD CEN/TS 1187: 2012, Test $4^{(1)}$, a system comprising 12 mm calcium silicate board, a base coat of Leeson Watertite EC PU4923 at a coating rate of 1 e·m^{-2} , a layer of Leeson Reinforcing Mat, and a top coat of Leeson Watertite EC PU4924 at a coating rate of 1.75 e·m^{-2} , when classified to BS EN 13501-5: 2005, achieved B_{ROOF}(t4)⁽²⁾.
- (1) Test report reference WF 344309, conducted by Exova Warrington Fire. Reports available from the Certificate holder upon request.
- (2) Classification Report reference WF 344566, conducted by Exova Warrington Fire. Reports available from the Certificate holder upon request
- 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:
- a roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer 300 mm thick
- when protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC.
- 7.3 In the opinion of the BBA, the use of the system in irrigated green roofs or roof gardens will also be unrestricted under the national Building Regulations.
- 7.4 The designation of other specifications should be confirmed by:

England and Wales – test or assessment in accordance with Approved Document B, Appendix A, clause 1

Scotland – test to conform to Mandatory Standard 2.8, clause 2.8.1

Northern Ireland – test or assessment by a UKAS-accredited laboratory or an independent consultant with appropriate experience.

7.5 If allowed to dry, the plants used may allow flame spread across the roof. This should be taken into consideration when selecting the plants for the roof. Appropriate planting irrigation and/or protection must be applied to ensure that 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 listed in section 4.2 is sufficient to resist the effects of any wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.
- 8.2 Where the system is installed over insulation, the resistance to wind uplift is dependent on the cohesive strength of the insulation.
- 8.3 The ballast requirements for inverted specifications should be calculated by a suitably competent and experienced individual in accordance with the relevant parts of BS EN 1991-1-4: 2005 and its UK National Annex. The system should always be ballasted with a minimum depth of 50 mm of aggregate. In areas of high wind exposure, the Certificate holder's advice should be sought. Alternatively, concrete slabs on suitable supports can be used.
- 8.4 It should be recognised that the type of plants used in roof gardens could significantly affect the expected wind loads experienced in service.

9 Resistance to mechanical damage

- 9.1 The membranes 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 maintenance of lift equipment, a walkway should be provided.
- 9.2 Results of dynamic and static indentation tests are given in Table 4.

Table 4 Dynamic and static indentation				
Test	Result	Method		
Dynamic indentation				
control:				
steel substrate				
tested at 23°C	14			
tested at -20°C	14			
PU insulation substrate		EOTA TR-006		
tested at 23°C	l ₃			
heat aged ⁽¹⁾ :				
 tested at –20°C on steel 	14			
UV aged ⁽²⁾ :				
tested at -10°C on steel	14			
Static indentation				
control tested at 23°C:				
steel substrate	L ₃			
PU insulation substrate	L_3	EOTA TR-007		
water exposure ⁽³⁾ :				
 tested at 23°C on steel 	L ₄			
 tested at 90°C on steel 	L_2			

⁽¹⁾ Heat aged for 200 days at 80°C.

9.3 In pedestrian access areas, suitable protection, such as pavers, is used.

10 Resistance to root penetration

The system will resist non-intrusive root penetration, such as mosses, sedums and some wild flower species, and can be used in a roof waterproofing system for green roofs (extensive).

⁽²⁾ UV aged 1000 MJ·m⁻² at 50°C.

⁽³⁾ Water exposure at 60°C for 60 days.

11 Maintenance



- 11.1 The system must be subject to biannual inspections and maintenance in accordance with BS 6229 : 2018, Chapter 7, to ensure continued performance.
- 11.2 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 in accordance with section 16 and the Certificate holder's instructions.

12 Durability



Under normal service conditions, the Leeson Watertite Roof Waterproofing System will provide a durable waterproof covering with a service life of at least 25 years.

Installation

13 General

- 13.1 Installation of the Leeson Watertite Roof Waterproofing System is carried out in accordance with the Certificate holder's instructions and this Certificate.
- 13.2 The system must be applied when the air and substrate temperatures are greater than 5°C. Special precautions may be necessary when temperatures exceed 30°C, as shown in the Certificate holder's Technical Data Sheets.

14 Site and surface preparation

- 14.1 Substrates on which the system is to be applied must be properly prepared in accordance with the Certificate holder's instructions.
- 14.2 Adhesion to substrates will depend on the condition and cleanness of the substrate. Substrates must be visibly dry, sound and free from loose materials or contamination (eg moss or algae).
- 14.3 Substrates are high-pressure washed and rinsed to remove loose or flaking materials, but the substrate must be visibly dry before application of the system. Areas contaminated with moss and lichen are treated with a proprietary fungicidal wash and allowed to dry.
- 14.4 Damaged areas of the substrate (eg blistered bitumen roofing felt or degraded mastic asphalt) must be removed, replaced or repaired. The adhesion of existing liquid-applied coatings is checked and any defective area removed back to a firm edge. Substrate defects (eg shallow-bottomed cracks and indentations) are filled using a cementitious mortar.
- 14.5 Deck surfaces must be free from sharp projections, such as protruding fixing bolts and concrete nibs.
- 14.6 Gutters and outlets must be checked to ensure that they are, and remain, clear of all debris.
- 14.7 All points of potential weakness such as splits, cracks, joints and crazed surfaces must be reinforced in accordance with the Certificate holder's instructions prior to the application of the system.
- 14.8 Substrates are primed with the appropriate primer at the recommended coverage rate in accordance with the Certificate holder's instructions.

15 Application

- 15.1 Leeson Watertite EC PU4923 is applied to the substrate using a medium pile roller at a coverage rate of 1.0 $\text{e}\cdot\text{m}^{-2}$ (flat roof) or 0.5 $\text{e}\cdot\text{m}^{-2}$ (pitched roof). The application rate may need to be increased on uneven or porous substrates and the advice of the Certificate holder should be sought.
- 15.2 The reinforcement is laid out and rolled into the wet base coat. Adjacent widths of reinforcement are overlapped by a minimum of 20 mm.
- 15.3 The base coat is cured for a minimum of 16 hours at 20°C prior to application of the top coat. At lower temperatures this time should be increased in line with the recommendations of the Certificate holder. Providing the base coat surface is clean, there is no maximum over-coating time.
- 15.4 Prior to the application of Leeson Watertite UV PU4924 top coat, the base coat surface must be dry and free of contamination.
- 15.5 The top coat is applied at a coverage rate of $1.75 \, \ell \cdot m^{-2}$ on smooth surfaces, ensuring the embedment coat is totally covered. The top coat is cured for a minimum of 6 hours at 20°C (longer at lower temperatures) prior to trafficking.

16 Repair

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 application rates stated in section 15.

Technical Investigations

17 Tests

Tests were carried out and the results assessed to determine:

- watertightness
- water vapour transmission
- tensile properties
- delamination strength from concrete, primed concrete, primed steel, bitumen roofing membrane, primed wood, liquid-applied acrylic roof waterproofing, primed GRP and primed aluminium paint
- dynamic indentation
- static indentation
- fatigue cycling
- extremes of installation temperature (tensile strength and dynamic indentation repeated)
- UV ageing for 1000 MJ·m⁻² at 50°C (tensile strength and dynamic indentation)
- heat ageing at 80°C for 200 days (tensile strength, dynamic indentation and fatigue cycling repeated)
- water exposure at 60°C for 60 days (delamination strength and static indentation repeated).

18 Investigations

- 18.1 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.
- 18.2 A visit was made to a site in progress to assess the practicability of installation.
- 18.3 A visit was made to an existing site to assess the system in use.
- 18.4 Data on fire performance were evaluated.

Bibliography

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

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

BS EN 1991-1-1: 2002 Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings

NA to BS EN 1991-1-1: 2002 UK National Annex to Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings

BS EN 1991-1-3: 2003 + A1: 2015 Eurocode 1: Actions on structures — General actions — Snow loads

NA + A2 : 18 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to Eurocode 1: Actions on structures — General actions — Snow loads

BS EN 1991-1-4: 2005 + A1: 2010 Eurocode 1: Actions on structures — General actions — Wind actions

NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to Eurocode : Actions on structures — General actions — Wind actions

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

BS EN ISO 9001 : 2015 Quality management systems — Requirements

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

EOTA TR-006 May 2004 Determination of the resistance to dynamic indentation

EOTA TR-007 May 2004 Determination of the resistance to static indentation

Conditions of Certification

19 Conditions

19.1 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.

19.2 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.

19.3 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.

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

19.5 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.

19.6 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.