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Agrément Certificate
91/2604
Product Sheet 1

POLYROOF GRP ROOFING

POLYROOF 185 AND POLYROOF 185 NON-SLIP ROOF WATERPROOFING SYSTEMS

This Agrément Certificate Product Sheet⁽¹⁾ relates to Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems, for use as waterproofing systems on flat, zero-pitched or pitched roofs with limited access and internal gutters in warm, cold, inverted and green roof specifications. Polyroof 185 Non-slip is for use on verandas and terraces, or on walkways on flat 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 systems will resist the passage of moisture into the building (see section 6).

Properties in relation to fire — tests indicate that the systems will enable a roof to be unrestricted under Building Regulations (see section 7).

Resistance to wind uplift — the adhesion of the systems 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 systems will accept, without damage, the limited foot traffic and loads associated with installation, maintenance of the system and pedestrian traffic on defined walkways, verandas and terraces (see section 9).

Slip resistance — Polyroof 185 Non-Slip, when dry and wet, has a satisfactory slip resistance to enable its use in pedestrian areas (see section 10).

Durability — under normal service conditions the systems 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 systems described herein. These systems have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'John Albon'.

John Albon — Head of Approvals
Construction Products

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

Claire Curtis-Thomas
Chief Executive

Date of Second issue: 15 July 2015

Originally certificated on 19 March 1991

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.

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Regulations

In the opinion of the BBA, Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems, 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: | Test data indicate that on suitable non-combustible substructures the systems will 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: | Results of tests on the systems, including joints, indicate that they meet this Requirement. See section 6.1 of this Certificate. |
| Regulation: 7 | Materials and workmanship |
| Comment: | The systems are acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate. |



The Building (Scotland) Regulations 2004 (as amended)

| | |
|----------------------------|---|
| Regulation: 8(1)(2) | Durability, workmanship and fitness of materials |
| Comment: | The systems satisfy the requirements of this Regulation. See sections 11, 12.1 and 12.2 and the <i>Installation</i> part of this Certificate. |
| Regulation: 9 | Building standards applicable to construction |
| Standard: 2.8 | Spread from neighbouring buildings |
| Comment: | Test data indicate that on suitable non-combustible substructures the systems will 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: | Data for water resistance on the systems indicate that their use 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 systems 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: | All comments given for these systems 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 systems are acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate. |
| Regulation: 28(b) | Resistance to moisture and weather |
| Comment: | Data for water resistance on the systems indicate that their use will enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate. |
| Regulation: 36(b) | External fire spread |
| Comment: | Test data indicate that on suitable non-combustible substructures the use of the systems will be unrestricted by 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) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See sections: 3 *Delivery and site handling* (3.1 and 3.3) and 14 *Precautions of this Certificate*.

Additional Information

NHBC Standards 2014

NHBC accepts the use of Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems, provided they are installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 7.1 *Flat Roofs and balconies*.

Technical Specification

1 Description

1.1 Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems consist of a glassfibre reinforced polyester resin, cold-applied on site by the hand lay-up process to a minimum thickness of 1.5 mm. The non-slip grade incorporates a gritting agent in the topcoat to provide the non-slip surface.

1.2 The systems comprise:

- PolyBase — an unsaturated polyester resin for use as Polyroof basecoat
- Polyroof 185 Top Coat — an unsaturated polyester resin for use as Polyroof topcoat
- Polymat — a glassfibre chopped strand mat reinforcement
- Catalyst — an organic peroxide supplied in powder form
- Pigment — a thixotropic paste available in a number of colours
- Polygrit — a gritting agent to provide a non-slip surface on trafficked areas
- PolyBase/Polyroof 185 Accelerator — an additive to enable low-temperature application down to 1°C.

1.3 Ancillary materials used with the systems include:

- calibrated mixing containers
- measuring scoops for catalyst
- preformed glassfibre reinforced trims.

1.4 The standard Polyroof 185 Waterproofing System, when fully cured, has characteristics of:

| | |
|----------------------------------|----------|
| Hardness after 48 hours (Barcol) | 15 to 20 |
| Minimum tensile strength (MPa) | 50. |

2 Manufacture

2.1 The resins 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 operated by the manufacturer are being maintained.

2.3 The management system of Polyroof Products Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by the BBA (Certificate 11/Q021).

2.4 During site application site records are maintained and quality control samples are prepared (approximately every 2000 m²) for subsequent testing.

3 Delivery and site handling

3.1 PolyBase and Polyroof 185 Top Coat are supplied in 10 litre steel drums. The catalyst is supplied in 2.5 litre plastic containers, the pigment in 0.5 litre plastic containers, the accelerators in 0.5 litre tins and the gritting agent in 1 litre plastic containers indicating weight and product kit size. Each container bears the manufacturer's name and the BBA logo incorporating the number of this Certificate.

3.2 Glassfibre reinforcement is supplied in rolls wrapped in heavy-duty polythene.

3.3 Materials for the systems should be stored in sealed containers in dry conditions, at a temperature between 5°C and 25°C until ready for application. The topcoat, basecoat, catalyst and accelerators are classified under the *Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009* and carry the appropriate hazard warnings. The flashpoints and hazard classifications of the components and items are given in Table 1.

Table 1 Flashpoints and hazard classifications

| Material | Flashpoint (°C) | Classification |
|-----------------------------------|-----------------|------------------------------|
| PolyBase | 32 | Flammable, Harmful, Irritant |
| Polyroof 185 Top Coat | 32 | Flammable, Harmful, Irritant |
| Catalyst | not applicable | Harmful, Irritant, Oxidising |
| Pigment | 100 | not applicable |
| PolyBase/Polyroof 185 Accelerator | 32 | Flammable, Harmful, Irritant |

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems.

Design Considerations

4 General

4.1 Polyroof 185 Roof Waterproofing System is satisfactory for use as a waterproofing system on flat, zero-pitched or pitched roofs with limited access and internal gutters in warm, cold, inverted and green roof specifications. Polyroof 185 Non-slip is satisfactory for use on verandas, terraces or walkways on flat roofs.

4.2 Limited access roofs are defined for the purpose of this Certificate as those that are subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged, either Polyroof 185 Non-slip must be used or special precautions, such as additional protection to Polyroof 185, must be taken.

4.3 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. Zero-pitched roofs are defined for the purpose of this Certificate as those having a finished fall which can vary between 0° and 0.7°. Pitched roofs are defined as those having falls in excess of 1:6. When designing flat roofs, 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.

4.4 Polyroof 185 and Polyroof 185 Non-slip should only be applied to plywood and OSB3 (orientated strand board) substrates that are approved by the Certificate holder. Where written approval is given by the manufacturer, other substrates may be permitted, where appropriate, provided they comply with *NHBC Standards*, Chapter 7.

4.5 On zero-pitched roofs it is particularly important to identify the correct drainage points to ensure that the drainage provided is effective.

4.6 For green and inverted roofs, structural decks to which the system is to be applied must be capable of transmitting the dead and imposed loads experienced in service.

4.7 Dead loads and imposed loads for green and inverted roofs are calculated in accordance with BS EN 1991-1-1 : 2002 and BS EN 1991-1-3 : 2003, and their respective UK National Annexes.

4.8 The drainage system for green roofs must be correctly designed, and provision made for access for maintenance. Dead loads for green roofs could be dramatically increased if the drains become partially or completely blocked, causing waterlogging of the drainage soil layers.

4.9 In inverted roof specifications, the ballast requirements should be calculated in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex.

5 Practicability of installation

The systems must only be installed by contractors who have been trained and approved by the Certificate holder.

6 Weathertightness



6.1 The systems will adequately resist the passage of moisture to the inside of the building and so meet the requirements of the national Building Regulations.

6.2 The systems are impervious to water when used as described, and will give a weathertight roofing capable of accepting minor structural movements without damage.

7 Properties in relation to fire



7.1 A system comprising the Polyroof 185 system applied to a 18 mm thick plywood substrate, when tested to DD CEN/TS 1187 : 2012 Test 4 and classified to BS EN 13501-5 : 2005, is designated as B_{ROOF}(t4).

7.2 The system, when protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC, can be considered to be unrestricted under the various national Building Regulations.

7.3 The designation of other specifications (eg on combustible substrates) should be confirmed by:

England and Wales — test or assessment in accordance with Approved Document B, Appendix A, Clause A1

Scotland — test to conform to Technical Standard 2.8, clause 2.8.1

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

7.4 In the opinion of the BBA, when used in irrigated green roofs the systems will also be unrestricted.

7.5 If allowed to dry, plants used in a roof garden 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

The systems, applied in accordance with the Certificate holder's literature, have adequate resistance to the effects of wind suction likely to occur in practice, providing the plywood substrate is adequately fixed.

9 Resistance to mechanical damage

The standard system can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance. Reasonable care is required, however, to avoid puncture by sharp objects or concentrated loads. Results of testing for dynamic and static indentation are given in Table 2.

Table 2 Dynamic and static indentation on plywood substrate

| Test | Result | Method |
|---------------------------------|----------------|-------------|
| Dynamic indentation | | EOTA TR 006 |
| control at -10°C | I ₃ | |
| UV aged ⁽¹⁾ at -10°C | I ₄ | |
| Static indentation | | EOTA TR 007 |
| control | L ₄ | |
| water exposure ⁽²⁾ | L ₄ | |

(1) UV aged to EOTA TR 010 with a total energy of 1000 MJ·m⁻² at 50°C.

(2) Water exposure to EOTA TR 012 (180 days at 60°C).

10 Slip resistance

The Non-slip system has a satisfactory slip resistance in dry and wet conditions to allow it to be used in areas of pedestrian access.

11 Maintenance



The systems should be subjected to regular annual inspections and roof drains kept clear as is good practice with all membrane and liquid-applied roofing systems. In the case of inverted roofs, any vegetation must be removed and displaced gravel redistributed.

12 Durability



12.1 A GRP laminate constructed in accordance with the installation guide and formed in satisfactory weather conditions can be expected to maintain its integrity and show no measurable loss of physical properties for a period of 30 years. However, the system will have a minimum life expectancy of at least 25 years provided there is no abnormal movement of the roof structure and the roof is subject to the normal regular inspections and maintenance.

12.2 When fully protected and subject to normal service conditions in an inverted roof specification with an open covering (eg aggregate pavers), the systems can provide an effective barrier to the transmission of liquid water and water vapour for the design life of the roof in which they are incorporated. However, in situations where maintenance or repair of any of the components in the roof structure are necessary (eg the protection layer or insulation), the durability of the membrane may be reduced. In these circumstances the Certificate holder should be consulted.

12.3 An estimate cannot be given for the life of green roof specifications owing to the nature of use; however, under normal circumstances, it should be significantly greater than for exposed waterproof coverings.

13 General

13.1 Application of Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems must be carried out only by installers trained and approved by the Certificate holder, following the installation instructions of the Certificate holder.

13.2 The substrate to which the product is to be applied must be properly prepared in accordance with the Certificate holder's instructions. Adhesion to the substrate will depend on its condition and cleanness. The substrate should be dry, sound, and free from loose material or contamination (eg moss or algae).

13.3 All points of potential weakness, such as cracks, joints and other defects in the plywood, should be reinforced using an additional 100 mm wide strip of 450 g·m⁻² glassfibre reinforcement incorporated into the basecoat whilst wet.

13.4 A non-slip finish for use on verandas and terraces, or walkways on flat roofs, is achieved by the addition of Polygrit to the topcoat.

13.5 Polyroof's preformed glassfibre reinforced trims should be used when roofing details, eg upstands, are required.

14 Precautions

14.1 Vapours from the individual components of the systems, some of which contain styrene monomer, may cause sensitisation and irritation to the respiratory system, eyes and skin. The systems should be used only in areas with sufficient ventilation to prevent the build-up of vapour. Contact with the skin, eyes and clothes must be avoided. The Certificate holder's instructions and the relevant safety regulations for working procedures must be adhered to at all times.

14.2 Individual components must not be allowed to enter the drainage system.

15 Procedure

15.1 The systems should not be applied if the air or substrate temperature is outside the range of 5°C to 30°C, in damp or cold conditions which could cause surface condensation, during frost, or if there is a risk of rain. The curing time of the resin is dependent upon temperature, but may be modified by adjusting the catalyst content (see Table 3). With the inclusion of Accelerator, application may be carried out with the deck and air temperature as low as 1°C. The amount of catalyst used in the systems must not be less than 2% nor exceed 4%.

Table 3 Catalyst addition

| Temperature (°C) | Catalyst addition (%) |
|------------------|-----------------------|
| 5-10 | 4 |
| 10-15 | 3 |
| 15-20 | 2.5-3 |
| 20-25 | 2-2.5 |
| 30 | 2 |

15.2 The basecoat is prepared on site by mixing PolyBase with the catalyst in the correct proportions immediately prior to application (see Table 3). If PolyBase Accelerator is used, a full tin is stirred into the resin prior to the addition of the catalyst. The thoroughly-mixed base coat is applied to the prepared substrate, at a coverage rate of 1.2 litres per m² using a synthetic lambswool roller to ensure a uniform coating is obtained, sufficient to fully bond the glassfibre reinforcement to the substrate.

15.3 The glassfibre reinforcement is embedded into the freshly-applied basecoat by rolling until the reinforcement is thoroughly soaked. Further rolling is carried out, as required, using a metal paddle roller to consolidate and roll out air bubbles. The reinforcement should have a side overlap of at least 50 mm and a 50 mm overlap onto the preformed trims.

15.4 The PolyBase application is thoroughly inspected for thin areas and pinholes. If any are found, additional PolyBase is applied and consolidated.

15.5 The topcoat is applied as soon as it is possible to walk on the basecoat without disturbing the glass strands.

15.6 The topcoat is prepared on site by mixing Polyroof 185 Top Coat with the catalyst and a colour-pigmented paste in the correct proportions immediately prior to application (see Table 1). If Polyroof 185 Accelerator is used, a full tin is stirred into the resin prior to the addition of the catalyst. When thoroughly mixed, the topcoat should be applied at a coverage rate of 0.6 litres per m² using a fresh synthetic lambswool roller.

15.7 When the non-slip finish is required, grit is added to the topcoat after the pigment paste has been mixed in thoroughly. The grit is added at a rate of 120 g per litre of topcoat (a weight ratio of 1:10) and stirred in well before the catalyst is added. The topcoat including grit should be constantly mixed during application to ensure that the grit is evenly dispersed throughout. Alternatively the topcoat is applied and the grit is broadcast onto it whilst it is wet, and then over-rolled to embed the grit.

15.8 The topcoat is checked for uniformity of colour, any signs of pin-holing and uniformity of dispersion of grit for the non-slip finish. Any sub-standard areas should receive a further thin application of topcoat before the top layer of resin is cured.

16 Repair

16.1 In the event of damage, repair should be carried out in accordance with the Certificate holder's instructions. Repairs are made by cutting out the damaged section and grinding or sanding the surrounding area to a smooth surface extending 100 mm in each direction from the damaged area. The area to be covered should be thoroughly cleaned before application of the system. Application should be restricted to the repair area, with care taken not to overcoat existing areas.

16.2 The non-slip grade, where subject to heavy foot traffic, may lose some of the surface grit. This can be repaired by preparing the damaged area as described in section 16.1. The area to be covered should be thoroughly cleaned before the application of the base system. The topcoat, including grit, is then applied.

Technical Investigations

17 Tests

Tests were conducted on the Polyroof 185 and Polyroof 185 Non-slip Roof Waterproofing Systems and the results assessed to determine:

- watertightness
- water vapour transmission
- Barcol hardness
- tensile strength, control heat aged, UV aged and water exposure
- cross breaking strength, control, UV aged and two hour water boil
- tensile bond strength on plywood, control and heat aged
- dynamic indentation on plywood, control and UV aged
- static indentation on plywood, control and water exposure
- fatigue cycling, control and heat aged
- coefficient of friction
- dimensional stability.

18 Investigations

18.1 Existing data on the fire performance of the systems were examined.

18.2 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.

18.3 Visits were made to sites to examine the practicability of installation and performance in use.

18.4 User surveys have been carried out to determine the systems' performance in use.

Bibliography

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 *Eurocode 1 : Actions on structures — General actions — Snow loads*

NA to BS EN 1991-1-3 : 2003 UK National Annex to *Eurocode 1 : Actions on structures — General actions — Snow loads*

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

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

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

BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

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

EOTA Technical Report TR 006 (May 2004), *Liquid Applied Roof Waterproofing Kits (LARWK) — Determination of the resistance to dynamic indentation*

EOTA Technical Report TR 007 (May 2004), *Liquid Applied Roof Waterproofing Kits (LARWK) — Determination of the resistance to static indentation*

EOTA Technical Report TR 010 (May 2004), *Liquid Applied Roof Waterproofing Kits (LARWK) — Exposure procedure for artificial weathering*

EOTA Technical Report TR 012 (May 2004), *Liquid Applied Roof Waterproofing Kits (LARWK) — Exposure procedure for accelerated ageing by hot water*

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.