

Centaur Technologies Ltd

Tomlinson Road
Leyland
Lancashire PR25 2DY
Tel: 01772 453107
e-mail: info@centaurroofing.co.uk
website: www.centaurroofing.co.uk



Agrément Certificate
14/5169
Product Sheet 1

CENTECH PU ROOFING SYSTEMS

CENTECH PU 10 SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Centech PU 10 System, a liquid-applied, moisture-activated, glassfibre-reinforced polyurethane, for use as a roof waterproofing system on new and existing flat, including completely flat, and pitched roofs with limited access.

(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 the building (see section 6).

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

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

Durability — under normal service conditions the unprotected system will provide a durable waterproof covering with a service life of at least 10 years (see section 11).

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: 3 November 2014

Simon Wroe
Head of Approvals — Materials

Claire Curtis-Thomas
Chief Executive

Certificate amended on 19 November 2014 to include update to wording on Page 1, paragraph 1.

The BBA is a UKAS accredited certification body — Number 1113. 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.

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

©2014

tel: 01923 665300
fax: 01923 665301
e-mail: clientservices@bba.star.co.uk
website: www.bbacerts.co.uk

Regulations

In the opinion of the BBA, the Centech PU 10 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:	Test data indicate that on suitable substructures the use of the system will enable a roof to be unrestricted under this Requirement. See section 7 of this Certificate.	
Requirement:	C2(b)	Resistance to moisture
Comment:	Tests indicate that the system meets this Requirement. See section 6.1 of this Certificate.	
Regulation:	7	Materials and workmanship
Comment:	The system is acceptable. See section 11 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 use of the system satisfies the requirements of this Regulation. See sections 10.1 and 11 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 the system, when applied to a non-combustible substrate, can be regarded as having low vulnerability under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. See section 7 of this Certificate.	
Standard:	3.10	Precipitation
Comment:	Tests indicate that the use of the system will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See section 6.1 of this Certificate.	
Standard:	7.1(a)	Statement of sustainability
Comment:	The product 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

Regulation:	23(a)(b)(i)	Fitness of materials and workmanship
Comment:	The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.	
Regulation:	28(b)	Resistance to moisture and weather
Comment:	Tests indicate that the use of 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
Comment:	Test data indicate that on suitable substructures the use of the system will enable a roof to be unrestricted under the requirements of this Regulation. See section 7 of this Certificate.	

Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 2007

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

See section: 3 *Delivery and site handling* (3.2, 3.3 and 3.4) and 13 *Precautions* of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of the Centech PU 10 System, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs and balconies*.

1 Description

1.1 The Centech PU 10 System consists of a first layer of Centech PU (embedment coat) applied at the rate of 1.0 to 1.6 litres per m² (dependent on substrate texture) including a reinforcing layer of Centech Glass Fibre Mat, and a second layer of Centech PU applied at a rate of 0.5 litres per m², achieving an overall minimum thickness of 1.2 mm. The components of the system are:

- Centech PU — a single-component, liquid-applied, moisture-triggered, hybrid polyurethane available in light grey and mid grey colours
- Concrete Sealer — a one-part primer for priming concrete and other surfaces prior to application of the polyurethane coating
- Centech PVC/ Reactivation Primer — a one-part primer for priming PVC and polyurethane substrates, and previously-applied Centech PU systems
- Centech SA Membrane Primer — a one-part primer for priming substrates prior to installing the Centech SA Carrier/VCL Membrane
- Epoxy Damp Tolerant Concrete Primer — a two-part primer for priming damp concrete
- Masonry Bonding Primer — a one-part primer for the preparation of porous substrates
- Epoxy Metal Primer — a two-part primer for adhering Centech PU to metal substrates and for spot priming of areas of corroded metal after preparation
- Centech Glass Fibre Mat — a 225 g·m⁻² non-woven glassfibre reinforcing mat for use as a reinforcement embedded in the polyurethane while still wet, and for use in strips to cover individual cracks, joints or details
- Centech Flexible Tape — a flexible polyamide reinforcement for dynamic movement cracks and joints, available in 50 m rolls in either 7.5 cm or 15 cm widths.

1.2 Centech PU has the following nominal characteristics:

Specific gravity (g·cm ⁻³)	1.5
Drying time per coat at 20°C, 50% RH (hours)	
touch time	2–4
through cure	7–8
Flashpoint (°C)	34
Colours	light grey and mid grey.

1.3 Ancillary items also for use with the system but outside the scope of this Certificate are:

- Centech High Foam Insulation Adhesive
- Centech Single Pack Low Foam Insulation Adhesive
- Centech PIR Insulation
- Centech SA Carrier/VCL
- Centech GRP Drip Trims, Edge Trims, Termination Bar and Flashing Bar
- Centech PU Sealant.

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 operated by the manufacturer are being maintained.

3 Delivery and site handling

3.1 Centech PU is delivered to site in cans bearing the Certificate holder's details, product name, hazard labelling, batch number and the BBA logo incorporating the number of this Certificate.

3.2 The components are delivered to site as shown in Table 1.

Table 1 Delivery units

Component	Unit of delivery
Centech PU (light grey, mid grey)	15 litre can
Concrete Sealer	5 litre tin
Centech PVC/ Reactivation Primer	5 litre tin
Centech SA Membrane Primer	5 litre tin
Epoxy Damp Tolerant Concrete Primer (Part A)	2.5 litre in a 5 litre plastic tub
Epoxy Damp Tolerant Concrete Primer (Part B)	1.5 litre in a 2.5 litre tin
Masonry Bonding Primer	5 litre container
Epoxy Metal Primer (Part A)	3 litre in a 5 litre tin
Epoxy Metal Primer (Part B)	1 litre in a 1 litre tin
Centech Glass Fibre Mat	Boxed 127 m x 0.95 m (approx 120 m ²) roll, or box of four 127 m x 0.31 m rolls

3.3 The Centech PU and primer containers must be kept tightly sealed and must be stored in a cool, ventilated place and away from ignition sources and other chemicals. Storage temperatures of between 0°C and 25°C will give the product a shelf-life of 8 months; at higher temperatures the shelf-life will reduce progressively. Once opened, Centech PU will start to cure, forming a skin. It may be possible to remove the skin and use the remaining product.

3.4 Centech PU and primers are all classified under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (CHIP4)/Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009* and bear the appropriate hazard warning label. The flashpoints and hazard warning label classifications are given in Table 2.

Table 2 Flashpoints and hazard classification

Material	Flashpoint (°C)	Classification
Centech PU	34	Harmful, Dangerous for the environment
Epoxy Damp Tolerant Concrete Primer (Part A)	25	Harmful, Irritant, Dangerous for the environment
Epoxy Damp Tolerant Concrete Primer (Part B)	25	Harmful, Dangerous for the environment
Concrete Sealer	25	Harmful, Flammable ⁽¹⁾
Centech PVC/ Reactivation Primer	-4	Harmful, Flammable ⁽¹⁾
Centech SA Membrane Primer	21	Harmful, Flammable ⁽¹⁾
Epoxy Metal Primer (Part A)	25	Harmful, Dangerous for the environment
Epoxy Metal Primer (Part B)	25	Harmful, Dangerous for the environment

(1) These components should be stored in accordance with *The Dangerous Substances and Explosive Atmospheres Regulations 2002*.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Centech PU 10 System.

Design Considerations

4 Use

4.1 The Centech PU 10 System is satisfactory for use as a roof waterproofing membrane on new and existing flat, including completely flat, and pitched limited access roofs.

4.2 The system is suitable for use on the following substrates:

- concrete
- fibre-cement
- mastic asphalt
- wood
- single-ply membranes (PVC, TPO and EPDM)
- liquid, bituminous roof coatings
- glass-reinforced polyester
- metal
- polyurethane foam insulation boards in conjunction with carrier membrane
- reinforced bitumen membranes, including mineral surfaced
- polyurethane roof coatings.

4.3 The liquid system must not be applied directly to polystyrene insulation products.

4.4 Limited access roofs are defined for the purposes 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, special precautions, such as additional protection to the membrane, must be taken.

4.5 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. Completely flat roofs are defined for the purpose of this Certificate as those having a finished fall of less than 1:80. Pitched roofs are defined as those having falls in excess of 1:6.

4.6 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.

4.7 Decks to which the product is to be applied must comply with the relevant requirements of BS 6229 : 2003, BS 8217 : 2005 and, where appropriate, *NHBC Standards* 2014 Chapter 7.1.

4.8 Insulation systems or materials used in conjunction with the system must be suitable for the specification and be either:

- as described in BS 8217 : 2005, or
- the subject of a current BBA Certificate and used in accordance with, and within the limitations of, that Certificate.

5 Practicability of installation

Installation of the system must be carried out only 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 roof to comply with the requirements of the national Building Regulations:

England and Wales — Approved Document C, Requirement C2(b), Section 6

Scotland — Mandatory Standard 3.10, clauses 3.10.1⁽¹⁾⁽²⁾ and 3.10.7⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic)

(2) Technical Handbook (Non-Domestic)

Northern Ireland — Regulation 28(b).

6.2 The system is impervious to water and, when used as described, will give a weathertight roofing system capable of accepting minor movement without damage.

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 ENV 1187 : 2002 and classified in accordance with BS EN 13501-5 : 2005, a system comprising a 9 mm calcium silicate board, an embedment first coat of Centech PU applied at 1.0 litre per m², reinforced with Centech Glass Fibre Mat reinforcement, and a topcoat of Centech PU applied at 0.5 litres per m², achieved a B_{ROOF}(t4) classification.

7.2 The designation of other specifications, eg when used on combustible substrates, 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⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic)

(2) Technical Handbook (Non-Domestic)

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

8 Adhesion

8.1 The adhesion of the system to substrates listed in section 4.2 of this Certificate 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 carrier membranes on insulation, the resistance to wind uplift is dependent on the cohesive strength of the insulation.

9 Resistance to foot traffic

Results of tests indicate that the systems can accept, without damage, normal foot traffic and light concentrated loads associated with installation and maintenance, and pedestrian traffic on defined walkways (see Table 3). However, reasonable care should be taken to avoid puncture by sharp objects or concentrated loads. In cases of doubt advice is available from the Certificate holder.

Table 3 Dynamic and static indentation

Test	Result	Method
Dynamic indentation		EOTA TR 006
unaged		
hard substrate ⁽¹⁾		
23°C	I ₃	
–30°C	I ₄	
soft substrate ⁽²⁾ at 23°C	I ₂	
heat aged ⁽³⁾		
hard substrate ⁽¹⁾ at –30°C	I ₄	
UV aged ⁽⁴⁾		
hard substrate ⁽¹⁾ at –10°C	I ₃	
Low temperature cure		
hard substrate ⁽¹⁾ at 23°C	I ₄	
High temperature cure		
hard substrate ⁽¹⁾ at 23°C	I ₄	
Static indentation unaged		EOTA TR 007
hard substrate ⁽¹⁾		
23°C	L ₄	
90°C	L ₄	
soft substrate ⁽²⁾ at 23°C	L ₂	
water exposure ⁽⁵⁾		
hard substrate ⁽¹⁾		
23°C	L ₄	
90°C	L ₄	

(1) Steel substrate.

(2) Bitumen felt on PIR insulation.

(3) Heat aged at 70°C for 100 days.

(4) UV aged at 50°C for an exposure of 400 MJ·m⁻².

(5) Water exposure at 60°C for 30 days.

10 Maintenance



10.1 The systems should be the subject of annual inspections, and roof drains kept clear, as is good practice with all membrane and liquid-applied flat roofing systems.

10.2 Any damage must be repaired in accordance with section 16 and the Certificate holder's instructions.

11 Durability



Results of accelerated weathering tests confirm that a satisfactory retention of properties is achieved. All available evidence indicates that the system should achieve an initial life expectancy of at least 10 years.

Installation

12 General

12.1 Installation of the Centech PU 10 System must be carried out only by specialist roofing contractors trained and approved by the Certificate holder.

12.2 The system must be at a temperature of, or greater than, 10°C for airless spray applications. All products must be applied when the air and substrate temperatures are greater than 3°C. Special precautions may be necessary when temperatures exceed 35°C, as shown in the Certificate holder's Technical Data sheets.

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

13 Precautions

13.1 Vapours from the system may cause irritation to the respiratory system and eyes. The system should be used only in areas with sufficient ventilation to prevent the build-up of vapours. Contact with the skin, eyes and clothing must be avoided. The supplier's instructions and the relevant safety regulations for working procedures must be adhered to at all times.

13.2 The system must not be allowed to get into the waste drainage system. Care must also be taken to prevent vapours entering the inside of the building, eg by closing doors and windows.

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 High pressure sand-blasting or water-jetting may be used to remove loose or flaking materials, but the substrate must be visibly dry before application of the system.

14.4 Damaged areas of the substrate (eg broken fibre-cement sheets, blistered bitumen or roofing felt) must be removed, replaced or repaired. Substrate defects (eg shallow-bottomed cracks and indentations) are filled using Centech PU.

14.5 Deck surfaces must be free from sharp projections, such as protruding fixing bolts or concrete nibs.

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

14.7 Where required, the substrate is primed with the appropriate primer, in accordance with the Certificate holder's instructions, at the coverage rate given in Table 4.

<i>Table 4 Primer application rates</i>	
Primer	Rate of coverage (m ² per litre)
Epoxy Damp Tolerant Concrete Primer	3.3–5
Concrete Sealer	5–10
Epoxy Metal Primer	6.7
Centech PVC/Reactivation Primer	10
Centech SA Membrane Primer	4–8
Masonry Bonding Primer	5–10

14.8 Epoxy Metal Primer is mixed at a ratio of 3 (Part A) to 1 (Part B).

14.9 Epoxy Damp Tolerant Concrete Primer is mixed at a ratio of 1.67 (Part A) to 1 (Part B).

14.10 Advice from the Certificate holder must be sought when treating dynamic cracks or movement joints.

15 Application

15.1 Application can be by roller, brush or airless spray. Brush application is normally used only for small roof areas and for embedding the Centech Glass Fibre Mat into the Centech PU at details.

15.2 Prior to application, checks should be made to ensure the substrate is dry (ie free from rainwater, surface condensation and frost) and that the prevailing weather and site conditions are correct. The following normal limitations apply:

- application must not take place when the relative humidity is in excess of 95%, or in fog
- the temperature/humidity must be such that there is no risk of surface condensation occurring before or during application
- air and substrate temperatures must be in excess of 3°C
- the Centech PU components must be conditioned at a temperature of 10°C or greater, for use in airless spray applications
- the primer, where used, must be cured
- the wind speed must be such that it does not interfere with the application or cause overspray. No attempt to spray should be made if the wind speed exceeds 6.7 m·s⁻¹ (15 mph), unless precautions such as the use of wind barriers are taken.

15.3 Work should only commence on an area if it can be carried out to the full thickness for that particular coat before weather changes occur. Where weather interrupts installation between layers, installation can proceed up to seven days without the need for Centech PVC/ Reactivation Primer.

15.4 If required, the substrate is primed and any local reinforcement applied. Once dry, the substrate will be ready for the main application of the system.

15.5 The system is applied at the coverage rate given in Table 5. The coverage rate for the embedment coat will vary with the roughness and absorbency of the substrate. Centech Glass Fibre Mat is embedded in the first coat while the membrane is still wet. Once the first coat is cured the second coat is applied. The finished dry thickness should be not less than 1.2 mm.

<i>Table 5 Coverage rates (litres per m²)</i>				
Layer	Substrate texture			
	Smooth	Intermediate	Rough	Very rough
First layer – embedment coat	1.00	1.2	1.5	1.6
Second layer – top coat	0.5	0.5	0.5	0.5

15.6 Random tests are carried out on the finished coating surface by cutting out small areas to measure finished cured thickness. Test areas must be repaired after the sample is taken (see section 16).

16 Repair

Should minor damage occur it can be effectively repaired by cleaning back to unweathered material, priming with Centech PVC/ Reactivation Primer if required, and recoating the damaged area with the full membrane at the application rates stated in section 15.

Technical Investigations

17 Tests

17.1 Tests were conducted on Centech PU 10 System and the results assessed to determine:

- water vapour transmission
- resistance to water penetration
- tensile strength and control
- tensile bond strength
- static indentation at 23°C and 90°C
- dynamic indentation at -20°C and 23°C
- fatigue cycling
- UV ageing for 10 year equivalent, followed by tensile strength and dynamic indentation
- heat ageing for 10 year equivalent, followed by tensile strength and fatigue cycling
- water exposure for 10 year equivalent, followed by tensile bond strength and static indentation
- low temperature cure, followed by tensile bond strength and dynamic indentation
- high temperature cure, followed by tensile bond strength and dynamic indentation.

17.2 Infra-red characterisation was carried out for reference purposes.

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 An assessment of practicability of installation was made from installation recommendations.

18.3 Data on fire performance were evaluated.

Bibliography

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

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

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

ENV 1187 : 2002 *Test methods for external fire exposure to roofs*

EOTA Technical Report TR-006 : May 2004 *Determination of the resistance to dynamic indentation*

EOTA Technical Report TR-007 : June 2003 *Determination of the resistance to static indentation*

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.