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Agrément Certificate

13/5051

Product Sheet 7

TRIFLEX COLD LIQUID APPLIED WATERPROOFING AND SURFACING SYSTEMS

TRIFLEX PROTHAN SOLVENT-FREE ROOF WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Triflex ProThan Solvent-Free Roof Waterproofing System, for use on flat and pitched roofs with limited access, including green 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 Second issue: 9 April 2020

Originally certificated on 20 November 2013

Certificate amended on 23 September 2020 to update zero fall wording.


Hardy Giesler
Chief Executive Officer

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 MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

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 Triflex ProThan Solvent-Free 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 to a roof being 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 <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 the requirements of this Regulation. See sections 11.1 and 12 and the <i>Installation</i> 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, is 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)	Fitness of materials and workmanship
Comment:	(b)(i)	The system is acceptable. See section 12 and the <i>Installation</i> 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 (3.3)* of this Certificate.

Additional Information

NHBC Standards 2020

In the opinion of the BBA, the Triflex ProThan Solvent-Free 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*.

CE marking

The Certificate holder has taken the responsibility of CE marking the system in accordance with ETA 10/0254, issued by the DIBt under ETAG 005 : 2004, Parts 1 and 6.

Technical Specification

1 Description

1.1 The Triflex ProThan Solvent-Free Roof Waterproofing System is based on a two-component (base and hardener), solvent-free, liquid-applied polyurethane membrane, reinforced with Triflex 110 g Reinforcement, a polyester fleece with a nominal mass per unit area of 110 g·m⁻².

1.2 The system must only be installed when the ambient temperature is between 8°C and 35°C.

1.3 The system is applied to provide a waterproofing membrane with a minimum dry film thickness of 2.1 mm.

1.4 The system is the subject of ETA 10/0254, issued by Deutsches Institut für Bautechnik (DIBt). In accordance with ETAG 005 : 2004, Parts 1 and Part 6, the levels of use categories are:

External fire performance class	B _{ROOF} (t1) and B _{ROOF} (t4)
Reaction to fire Euroclass	E
Categorisation by working life	W3 (25 years)
Categorisation by climatic zones	M (moderate) and S (severe)
Categorisation by imposed loads	
most compressible substrate	P4
least compressible substrate	P4
Categorisation by roof slope	S1 (<5%) to S4 (>30%)
Categorisation by surface temperature	
lowest	TL4 (-30°C)
highest	TH4 (90°C)
Resistance to wind loads	>50 kPa
Statement on dangerous substances ⁽¹⁾	none contained.

(1) Dangerous substances as listed in the European Commission database.

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

- Triflex ProThan Detail — for use at details and for repairs
- Triflex Cleaner — cleaner used for cleaning tools, cleaning substrates and the reactivation of the cured Triflex ProThan membrane prior to overcoating when work is interrupted for periods in excess of 12 hours.

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, hot-melt membranes, solar reflective coatings, coated metals, plastics and timber/ply
- 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 smooth and 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.

2.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 by DEKRA (Certificate 80408283/4-3).

3 Delivery and site handling

3.1 The components of the system 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
Triflex ProThan	8 kg (Base + Hardener packs) 25 kg (Base + Hardener packs)
Triflex ProThan Detail	2.5 kg (Base + Hardener packs) 8 kg (Base + Hardener packs)
Triflex Cleaner	9 litre, 27 litre
Triflex 110 g Reinforcement	50 m (length) x 15, 20, 26.25, 35, 52.5, 70 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 Triflex 110 g Reinforcement must be stored flat in a dry, clean environment and protected from moisture.

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 Triflex ProThan Solvent-Free Roof Waterproofing System.

Design Considerations

4 General

4.1 The Triflex ProThan Solvent-Free Roof Waterproofing System is satisfactory for use as a fully adhered waterproofing layer on new and existing:

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

4.2 The system has been assessed for use on:

- concrete
- steel
- PU insulation⁽¹⁾
- bitumen felt.

(1) The cohesive strength of the insulation must be considered with respect to the resistance to wind loading of the system.

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 wild flower species.

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 2019* 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 Waterproofing Roofing 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 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 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 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 : 2003, 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 roofs meet or to comply with 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 Triflex ProThan Solvent-Free Roof Waterproofing System (green grey) applied at a rate of $3.11 \text{ kg}\cdot\text{m}^{-2}$, including Triflex 110 g Reinforcement, was classified in accordance with BS EN 13501-5 : 2005 as European Class B_{ROOF(t4)}⁽¹⁾.

(1) Fire test and classification reports, reference 321302 and 316531 respectively, conducted by Exova Warringtonfire. Report available from the Certificate holder.

7.2 In the opinion of the BBA, a roof incorporating the systems 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 and green 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 than 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

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 Triflex ProThan resin filled with aggregate can be applied and sealed with Triflex ProThan. The Certificate holder must be consulted for details.

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 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 Triflex ProThan Solvent-Free Roof Waterproofing System must be in accordance with 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 8 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 Triflex ProThan Detail in accordance with the Certificate holder's instructions. Where use of Triflex ProThan Detail is not practicable owing to the complexity of the detail, the Certificate holder must be consulted for an alternative solution.

13.7 All equipment must be cleaned with Triflex 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 Triflex ProThan resin base and hardener components are combined by completely emptying the hardener into the container of the base resin and mixing (using a slow speed agitator) for at least three minutes until homogeneous. The blended material is then transferred to another clean container and mixed again for at least one minute.

14.2 A layer of the mixed Triflex ProThan 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·m⁻².

14.3 Triflex 110 g Reinforcement 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 Triflex ProThan resin is applied, wet on wet, by roller at a minimum application rate of 1.0 kg·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 Triflex 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 Triflex 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 Triflex ProThan Solvent-Free 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 Test reports relating to the issue of ETA 10/0254 were assessed.

Bibliography

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

BS 8203 : 2017 *Code of practice for installation of resilient floor coverings*

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*

EN ISO 9001 : 2015 *Quality managements systems — Requirements*

ETAG 005 : 2000, Rev 2004 Part 1 *Guideline for European Technical Approval of Liquid Applied Roof Waterproofing Kits — General*

ETAG 005 : 2000, Rev 2004 Part 6 *Guideline for European Technical Approval of Liquid Applied Roof Waterproofing Kits — Specific Stipulations for Kits Based on Polyurethanes*

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.