

Sika Limited

Sika House
Miller Street
Preston
Lancashire PR1 1EA

Tel: 01772 259781 Fax: 01772 255670

e-mail: liquidplastics@uk.sika.com

website: www.liquidplastics.co.uk



Agrément Certificate

20/5848

Product Sheet 1

SIKA LIQUID PLASTICS LIQUID-APPLIED ROOF WATERPROOFING SYSTEMS

SIKALASTIC RAPID-721

This Agrément Certificate Product Sheet⁽¹⁾ relates to Sikalastic Rapid-721, a polymethyl methacrylate liquid-applied roof waterproofing system for use on exposed flat and pitched roofs with limited access, green roofs on flat, zero fall and pitched roofs and roof garden specifications on flat and zero fall 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 to the interior of a building (see section 6).

Properties in relation to fire — the system may enable a roof to be unrestricted under the national 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 mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with installation and maintenance (see section 9).

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

Durability — under normal service conditions, the system will provide a durable roof waterproofing with a service life in excess of 25 years (see section 12).

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

On behalf of the British Board of Agrément

Date of First issue: 12 February 2021



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.

British Board of Agrément

Bucknalls Lane
Watford
Herts WD25 9BA

tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk

©2021

Regulations

In the opinion of the BBA, Sikalastic Rapid-721, 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 section 7.4 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		On suitable substructures, the use of the system can enable a roof to be unrestricted under this Requirement. See sections 7.1 to 7.3 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The system will enable a roof to satisfy this Requirement. See section 6 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		The system, in some circumstances, is restricted by this Requirement. See section 7.3 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 system is acceptable and satisfy 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:	2.6	Spread to neighbouring buildings
Comment:		The system is restricted under clause 2.6.4 ⁽¹⁾⁽²⁾ of this Standard in some circumstances. See section 7.5 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		The system, when applied to a suitable substructure, can be regarded as having low vulnerability under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. 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 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)(i)	Fitness of materials and workmanship
Comment:	(iii)(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 will enable a roof to satisfy the requirements of this Regulation. See section 6 of this Certificate.
Regulation:	36b	External fire spread
Comment:		On suitable substructures, the use of the system can enable a roof to be unrestricted under the requirements of 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 sections: 3 *Delivery and site handling* (3.1 and 3.3) of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, Sikalastic Rapid-721, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards, Part 7 Roofs, Chapter 7.1 Flat roofs, terraces and balconies*.

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

Registered office

The registered office of the Certificate holder is Sika Limited, Watchmead, Welwyn Garden City, Hertfordshire AL7 1BQ (registered in England under company number 226822).

Technical Specification

1 Description

1.1 Sikalastic Rapid-721 comprises the following components:

- Sikalastic Rapid-721 — a two-component polymethyl methacrylate waterproofing resin available in dark grey (RAL 7043)
- Sikalastic Rapid-721 Thixo — a thixotropic version of the standard resin, for use in detailing at upstands, corners, connections and other details, available in dark grey (RAL 7043)
- Sikalastic Rapid Fleece 110 — a 1.10 kg·m⁻² polyester fleece for use as a reinforcement
- Sikalastic Rapid Asphalt Primer — a non-pigmented primer based on a two-component fast-reactive polymethyl methacrylate resin, for the preparation of asphaltic and bituminous substrates
- Sikalastic Rapid Cementitious Primer — a non-pigmented primer based on a two-component fast-reactive and fast-curing polymethyl methacrylate resin, for the preparation of absorbent substrates such as concrete, screeds and timber.

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

- Sikalastic Rapid Levelling Mortar — for use in levelling rough substrates of less than 10 mm depth, levelling of gradients, and as additional protection in trafficked areas such as roof terraces, communal walkways and balconies
- Sikalastic Rapid Pigmented Sealer — a flexible, UV-stabilised, pigmented surface sealant, based on polymethyl methacrylate, available in pebble grey (RAL 7032) and dark grey (RAL 7043). Other RAL colours are available on request
- Paint Flakes — an acrylate-based topping available in black, grey and white, for use as a surface sealant coat and decorative medium
- Sikalastic Rapid Filler Compound — for use in filling small cracks and joints in the substrate
- Sikalastic Rapid Cleaner — for use in cleaning the substrate prior to the installation of the system
- Sikalastic Rapid Structured Coating RA — for use as a wearing layer for Sikalastic Rapid systems
- Sikalastic Rapid Clear Sealer — a colourless, clear and mechanically durable sealer for surfaces with topping.

2 Manufacture

2.1 The liquid components of the system are manufactured by batch-blending processes.

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

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

3 Delivery and site handling

3.1 The primer and waterproofing resin components of the system are delivered to site in 10 kg containers bearing the product's name, safety data, batch number and the BBA logo incorporating the number of this Certificate. The catalyst for the resin components is supplied in a 100 g plastic bag.

3.2 Resins must be stored in ventilated, dry locations, away from heat and oxidising agents and out of direct sunlight, and at a temperature between 0 and 25°C. The resins will have a shelf-life of greater than six months if stored correctly and unopened, in accordance with the Certificate holder's instructions.

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 Sheet(s).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Sikalastic Rapid-721.

Design Considerations

4 General

4.1 Sikalastic Rapid-721 is satisfactory for use as a waterproofing system on flat and pitched roofs with limited access, on substrates of:

- concrete
- bituminous
- timber
- metal

- plastic.

4.2 The system is also satisfactory for use in green roofs on flat, zero fall and pitched roofs and roof gardens on flat, zero fall on concrete substrates. The adhesion to, and compatibility with, other substrates must be confirmed by test (see also section 12.3).

4.3 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, Chapter 7.1.

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

- roof garden (intensive) — a roof with a substantial layer of growing medium with planting that can include shrubs and trees, generally accessible to pedestrians
- green roof (extensive) — a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wildflower species.

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 and cleaning of gutters, etc. Where traffic in excess of this is envisaged, additional protection to the membrane must be provided (see section 9).

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

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

4.7 Pitched roofs are defined for the purpose of this Certificate as those having falls in excess of 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 appropriate clauses in Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*.

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

4.9 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.

4.10 Structural decks, to which for green roofs and roof gardens systems are to be applied, must be suitable to transmit the dead and imposed loads experienced in service.

4.11 Dead loads, wind loading and imposed loads are calculated by a suitably experienced and competent individual 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.

4.12 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*.

4.13 The drainage systems for green roofs, roof gardens and zero fall roofs 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.

4.14 Insulation materials to be used in conjunction with the membranes must be in accordance with the Certificate holder's instructions and be either:

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and used in accordance with, and within the scope of, that Certificate.

4.15 The NHBC requires that the roof membranes, once installed, be inspected in accordance with of *NHBC Standards 2021*, Chapter 7.1, Clause 7.1.12, including the use of an appropriate integrity test, where required. Any damage to the membrane is repaired in accordance with section 15 of this Certificate and reinspected.

5 Practicability of installation

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

6 Weathertightness



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

7 Properties in relation to fire



7.1 When tested to BS 476-3 : 2004 a system comprising a 12 mm thick gypsum glassrock roof board, primed with Sikalastic Rapid Cementitious Primer and coated with Sikalastic Rapid-721 reinforced with Sikalastic Rapid Fleece 110, achieved a EXT.F.AC rating and will be unrestricted by the national Building Regulations.

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

- Protected or inverted roof specifications, including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC,
- a roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer 300 mm thick,
- irrigated roof gardens 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 which 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 The system, when used in pitches of greater than 70°, excluding upstands, should not be used on buildings in Scotland that have a storey at least 11 m above ground level.

7.6 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 concrete, bitumen felts, timber, plastic and metal is sufficient to resist the effects of any wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.

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

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

9 Resistance to mechanical damage

9.1 The system will accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance. Where traffic in excess of this is envisaged, such as for maintenance of lift equipment, a walkway must be provided (for example, using concrete slabs supported on bearing pads or the manufacturer's walkway sheets). Reasonable care must be taken to avoid puncture of the membranes by sharp objects or concentrated loads.

9.2 Results of testing for dynamic and static indentation are given in Table 1.

Test	Result	Method
Dynamic indentation		EOTA TR 006
concrete		
unaged	I ₃	
UV aged ⁽¹⁾	I ₄	
heat aged ⁽²⁾	I ₄	
low temperature	I ₃	
cure ⁽³⁾		
high temperature	I ₃	
cure ⁽⁴⁾		
insulation	I ₄	
unaged		
Static indentation		EOTA TR 007
concrete		
unaged	L ₃	
water exposure ⁽⁵⁾	L ₃	
insulation		
unaged	L ₃	

(1) UV aged using UVA lamps at an exposure of 1000 MJ·m⁻² at 50°C to EOTA TR 010.

(2) Heat aged for 200 days at 80°C to EOTA TR 011.

(3) Cured at -5°C.

(4) Cured at 35°C.

(5) Water exposure for 60 days at 60°C to EOTA TR 012.

9.3 In areas of heavy pedestrian traffic an additional coat of Sikalastic Rapid Levelling Mortar is applied with a finish coat of Sikalastic Rapid Pigmented Sealer, in accordance with the Certificate holder's instructions.

9.4 Once a green roof or a roof garden is installed, it can be regarded as a suitable protection for the membrane in use.

9.5 The system is capable of accepting minor structural movement while remaining weathertight.

10 Resistance to penetration of 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, to ensure continued satisfactory performance.

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 17 of this Certificate and the Certificate holder's instructions.

12 Durability



Sikalastic Rapid-721 will achieve a service life in excess of 25 years.

Installation

13 General

13.1 Installation of the system must be carried out in accordance with the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989, Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*, the Certificate holder's instructions and this Certificate.

13.2 Substrates to which the system is to be applied must be sound, dry, clean and free from sharp projections such as nail heads and concrete nibs. Rough substrates must be made good using the appropriate levelling compound in accordance with the Certificate holder's instructions.

13.3 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.

13.4 Where necessary, substrate priming must be carried out using a sheepskin roller in accordance with the Certificate holder's instructions.

13.5 Adhesion checks may 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 Installation should not be carried out during inclement weather (eg rain, fog or snow). When the temperature is below 5°C suitable precautions against surface condensation on the substrate must be taken. The substrate and ambient air temperature for the application of Sikalastic Rapid-721 standard formulation and Sikalastic Rapid-721 Thixo is between –5 and +35°C.

13.7 Detailing (eg at upstands) should be carried out in accordance with the Certificate holder's instructions.

13.8 Expansion or construction joints must be additionally reinforced prior the application of the main waterproofing layer, in accordance with the Certificate holder's instructions.

13.9 It is recommended that membranes installed for green roof installations are visually inspected and tested electronically for waterproofing integrity prior to the green roof system being installed, *NHBC Standards 2018*, Chapter 7.1, Clause 7.1.9.

13.10 All equipment should be cleaned after use with Sikalastic Rapid Cleaner.

14 Application

14.1 Once the substrate has been primed and joint treatments have cured, Sikalastic Rapid-721 resin is applied at a minimum application rate of 1.5 kg·m⁻².

14.2 Sikalastic Rapid Fleece 110 is applied into the wet resin and embedded using sheepskin rollers, ensuring that any trapped air pockets are removed.

14.3 A further layer of Sikalastic Rapid-721 resin is applied to the substrate at a minimum application rate of $1 \text{ kg}\cdot\text{m}^{-2}$, ensuring that the fleece is saturated. Recommended application rates for various situations are:

smooth substrates	$2.5 \text{ kg}\cdot\text{m}^{-2}$
fine-grained substrates	$3.0 \text{ kg}\cdot\text{m}^{-2}$
rough substrates	$3.5 \text{ kg}\cdot\text{m}^{-2}$
below Sikalastic Rapid Pigmented Sealer/Levelling Mortar	$2.5 \text{ kg}\cdot\text{m}^{-2}$.

14.4 The specification above the waterproofing system should be of suitable design, including a filter layer and drainage where required. In cases of doubt, the Certificate holder's advice should be sought.

15 Repair

Minor damage can be repaired by cleaning back to the unweathered material and recoating the damaged area with the membrane at the appropriate application rate stated in section 14.

Technical Investigations

16 Tests

Tests were conducted on samples of Sikalastic Rapid-721 and the results assessed to determine:

- tensile strength and elongation
- water vapour diffusion resistance coefficient (μ)
- watertightness
- tensile bond strength on concrete, steel, bitumen sheet, timber and plastic
- dynamic indentation
- static indentation
- resistance to fatigue cycling
- resistance to low temperatures
- resistance to high temperatures
- heat ageing at 80°C for 200 days
- resistance to UV ageing at $1000 \text{ MJ}\cdot\text{m}^{-2}$
- resistance to water exposure at 60°C for 60 days
- the effect of application temperatures
- the effect of day joints
- external fire performance to ENV 1187 : 2002, test 1
- reaction to fire
- water exposure (for 180 days at 60°C).

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 Data on root penetration were assessed.

Bibliography

- BS 476-3 : 2004 Fire tests on building materials and structures — Part 3 : Classification and method of test for external fire exposure to roofs
- BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — Code of practice*
- BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
- BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*
- 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 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*
- DD ENV 1187:2002 *Test methods for external fire exposure to roofs*
- EOTA TR 006 *Determination of the resistance to dynamic indentation*
- EOTA TR 007 *Determination of the resistance to static indentation*
- EOTA TR 010 *Exposure procedure for artificial weathering*
- EOTA TR 011 *Exposure procedure for accelerated ageing by heat*
- EOTA TR 012 *Exposure procedure for accelerated ageing by hot water*

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.