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Agrément Certificate
21/5879
Product Sheet 3

GEORG BÖRNER ROOF WATERPROOFING SYSTEMS

GEORG BÖRNER SINGLE LAYER UNIVERSAL SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Georg Börner Single Layer Universal System, for use as a single layer roof waterproofing system on flat roofs with limited access, for roof renovations, or for warm and cold roofs. Membranes can be either torch applied, polyurethane adhesive bonded or mechanically fastened.

(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, including joints, will resist the passage of moisture into the interior of a building (see section 6).

Performance in relation to fire — the system may enable a roof to be unrestricted under the national Building Regulations (see section 7).

Resistance to wind uplift — the system will resist the effects of any likely wind suction acting on the roof (see section 8).

Resistance to mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with the installation and maintenance and the effects of thermal or other minor movement likely to occur in practice (see section 9).

Durability — under normal service conditions, the system will provide a durable waterproof covering with a service life in excess of 35 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: 13 October 2022

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 Georg Börner Single Layer Universal System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(2)	External fire spread
Comment:		On a suitable substructure, the system may enable a roof to be unrestricted under this Requirement. See sections 7.1, 7.2, 7.3 (Wales only) and 7.4 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The membranes, including joints, will enable a roof to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	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)	Fitness and durability of materials and workmanship
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:		The system, when applied to a suitable substructure, may enable a roof to be unrestricted under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. See sections 7.1, 7.2 and 7.4 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The membranes, including joints, will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾ and 3.10.7 ⁽¹⁾ . See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system can contribute to satisfying 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 11 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The membranes, including joints, can satisfy the requirements of this Regulation. See section 6 of this Certificate.

Regulation: 36(b)

Comment:

External fire spread

On a suitable substructure, the use of the system can enable a roof to be unrestricted under the requirements of this Regulation. See sections 7.1 to 7.4 of this Certificate.

Construction (Design and Management) Regulations 2015 Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.3) of this Certificate

Additional Information

NHBC Standards 2022

In the opinion of the BBA, the Georg Börner Single Layer Universal 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, 7.1 Flat roofs, terraces and balconies*.

CE marking

The Certificate holder has taken the responsibility of CE marking the membranes in accordance with harmonised European Standard EN 13707 : 2013.

Technical Specification

1 Description

1.1 The Georg Börner Single Layer Universal System comprises the following waterproofing membranes:

- POLY ELAST RAPID O Single Layer Universal Membrane – a torch-on, elastomeric modified bitumen membrane, reinforced with polyester used as a partially bonded capsheet. The membrane has a slate finish on the upper surface and rapid torch-on points, covered by fleece on the lower surface
- ELMO-FLEX 4K – an elastomeric modified bitumen membrane used as a torched on, polyurethane adhesive bonded or mechanically fastened capsheet. The membrane has a slate finish on the upper surface and a fleece on the lower surface
- ELMO-Star – a torch-on, plastomeric modified bitumen upper surface and an elastomeric modified bitumen lower surface membrane, reinforced with polyester. The membrane has a slate finish on the upper surface and a thermofusible polyethylene film on the lower surface.

1.2 The nominal characteristics of the waterproofing membranes are given in Table 1.

Table 1 Nominal characteristics – waterproofing membranes

Characteristic (unit)	POLY ELAST RAPID O	ELMO-FLEX 4K	ELMO-Star
Thickness (mm)	5.0	4.5	5.2
Roll width (m)	1.0	1.0	1.0
Roll length (m)	5.0	5.0	5.0
Roll weight (kg)	34	29	35
Watertightness – one-metre head	pass	pass	pass
Tensile strength (N per 50 mm)			
longitudinal	800	≥ 1000	1400
transverse	700	≥ 1000	1000
Elongation (%)			
longitudinal	30	≥ 30	25
transverse	30	≥ 30	25
Low temperature flexibility (°C)	≤-25	≤-35	top surface ≤ -28 bottom surface ≤ -36
Flow resistance (°C)	≥110	≥ 120	top surface ≥ 155 bottom surface ≥ 130

1.3 PUK 3D polyurethane adhesive is a moisture activated foaming adhesive for bonding ELMO-FLEX 4K.

1.4 The following ancillaries, covered by Product Sheets 1 and 2 of this Certificate, can be used in conjunction with the system:

Air and vapour control layers (AVCL)

- DACO-KSD-B – a self-adhesive AVCL
- Multiplex Super AL - a torch applied AVCL

Underlays

- INTER-Stick SK 3 Extra Underlay – a self-adhesive underlay
- DACO-KSU+ Underlay – a self-adhesive underlay
- Monoplex PV180 S4 — a torch applied underlay

Capsheets for detailing work

- DACO-KSO+ - a cold-applied, self-adhesive bituminous capsheet
- Polyelast PV180 S4 - a torch-applied, bituminous capsheet.

1.5 Mechanical fastening of the ELMO-FLEX 4K membrane is carried out using suitable fixings in accordance with the Certificate holder’s recommendations (see section 8.4).

2 Manufacture

2.1 The membranes are manufactured by saturating and coating the reinforcement with modified bitumen, then calendaring to the correct thickness. The lower and upper surfaces are applied as appropriate and the sheets are cooled, trimmed and rolled for packaging.

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 Georg Börner Chemisches Werk für Dach Bautenschutz GmbH & Co KG has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 (Certificate 106760 issued by KIWA International Cert GmbH).

3 Delivery and site handling

3.1 The membranes are delivered to site in rolls with either paper wrappers or tape bands bearing the product name and product dimensions. The rolls are packed on pallets and shrink wrapped in polythene; the pallets bear a label with the product number, product name, dimensions and batch number.

3.2 Rolls should be stored upright on a clean, level surface, away from excessive heat and kept under cover. The self-adhesive products should be stored out of direct sunlight.

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 the Georg Börner Single Layer Universal System.

Design Considerations

4 General

4.1 The Georg Börner Single Layer Universal System is satisfactory for use as a roof waterproofing and on flat roofs with limited access in the following specifications:

- POLY ELAST RAPID O as a partially bonded layer over existing waterproofing systems for the renovation of roofs
- ELMO-FLEX 4K as either as a torched on, polyurethane adhesive bonded or mechanically fastened single layer system for the renovation of existing roofs or new warm roofs
- ELMO-Star as a torch-bonded layer for the renovation of existing roofs or new warm roofs.

4.2 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018 and BS 8217 : 2005 and, where appropriate, *NHBC Standards 2022*, Chapter 7.1.

4.3 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, such as pedestrian access roofs, additional protection must be provided (see section 10 of this Certificate and the relevant clauses of the Certificate holder's installation instructions).

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

4.5 Pitched roofs are defined for the purpose of this Certificate as those having a fall in excess of 1:6.

4.6 Structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance needs to be made for loading deflections to ensure that the free drainage of water is maintained.

4.7 Imposed loads, dead loading and wind load specifications must be 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.

4.8 Insulation materials to be used in conjunction with the system 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 limitations of, that Certificate.

4.9 The NHBC requires that the roof membranes, once installed, are inspected in accordance with *NHBC Standards 2022*, Chapter 7.1, Clause 7.1.12, and undergo 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

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

6 Weathertightness



The waterproofing membranes, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture to the interior of a building and so satisfy the requirements of the national Building Regulations.

7 Performance in relation to fire



7.1 When classified to BS EN 13501-5 : 2016 the systems given in Table 2 achieved B_{ROOF}(t4) for slopes below 10° and will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a boundary.

Table 2 Systems given $B_{ROOF}(t4)$ classification

Substrate	AVCL	Insulation	Capsheet	Classification report number
18 mm plywood	Daco-KSD-B	glass faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 or greater	ELMO-Star fully torch bonded	19901D ⁽¹⁾ 21049B ⁽²⁾
		layer aluminium faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 mm or greater		19901D ⁽¹⁾ 21049B ⁽²⁾
		bitumen faced mineral wool boards greater than 60 mm		19901H ⁽³⁾
18 mm plywood	Daco-KSD-B	glass faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 mm or greater	POLY ELAST RAPID O partially torch bonded	19901D ⁽¹⁾ 21049B ⁽²⁾
		layer aluminium faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 mm or greater		19901D ⁽¹⁾ 21049B ⁽²⁾
		bitumen faced mineral wool boards greater than 60 mm		19901H ⁽³⁾
18 mm plywood	Daco-KSD-B	glass faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 mm or greater	ELMO-FLEX 4K either torch bonded, bonded with polyurethane adhesive or mechanically fastened	19901D ⁽¹⁾ 21049B ⁽²⁾
		layer aluminium faced polyisocyanurate (PIR) boards bonded with polyurethane adhesive one layer 50 to 120 mm two layers 120 mm or greater		19901D ⁽¹⁾ 21049B ⁽²⁾
		bitumen faced mineral wool boards greater than 60 mm		19901H ⁽³⁾

7.2 A roof incorporating the system will be unrestricted under the national Building Regulations with respect to proximity to a boundary when protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC.



7.3 In Wales and Northern Ireland, when used on flat roofs with the surface finishes listed below, the roof is also deemed to be unrestricted with respect to proximity to a boundary:

- bitumen-bedded stone chippings covering the whole surface to a depth of not less than 12.5 mm
- bitumen-bedded tiles of a non-combustible material
- sand and cement screed
- macadam.



7.4 The designation and permissible areas of use of other specifications should be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

8 Resistance to wind uplift

Bonded installation

8.1 The adhesion of the bonded membranes is sufficient to resist the effects of wind-suction, elevated temperature and thermal shock conditions likely to occur in practice.

8.2 The resistance to wind uplift will be dependent on the cohesive strength of the insulation and the method by which it is secured to the roof deck. This must be taken into account when selecting suitable insulation material.

Mechanical fastened

8.3 The resistance to wind uplift of a mechanically fastened waterproofing layer is provided by the fixing bar and fasteners passing through the membrane into the substrate. The number and position of fixings will depend on a number of factors including:

- wind uplift forces to be restrained
- pull-out strength of the fasteners
- tensile properties of the membrane
- appropriate calculation of safety factors.

8.4 The wind uplift forces must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. On this basis, the number of fixings required should be established using a maximum permissible load of 0.4 kN per fixing.

9 Resistance to mechanical damage

9.1 The system can accept, without damage, the 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). Reasonable care should be taken to avoid puncture by sharp objects or concentrated loads.

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

10 Maintenance



10.1 The system must be the subject of six-monthly inspections and maintenance in accordance with the recommendations made in BS 6229 : 2018, Chapter 7 to ensure continued satisfactory performance.

10.2 Where damage has occurred, it should be repaired in accordance with section 15 of this Certificate and the Certificate holder's instructions.

11 Durability



Under normal service conditions, the system will have a service life in excess of 35 years.

12 Reuse and recyclability

The membranes are made from bitumen and polyester, which can be recycled.

13 General

13.1 Installation of the Georg Börner Single Layer Universal System is carried out in accordance with the Certificate holder's instructions, the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989 and BS 8217 : 2005 and this Certificate.

13.2 Deck surfaces must be dry, clean and free from sharp projections such as nail heads and concrete nibs. If required, the substrate should be prepared using a suitable bitumen primer at the recommended rate.

13.3 A suitable bitumen primer should be used for the preparation of substrates prior to the application of the products. The advice of the Certificate holder should be sought on suitable primers.

13.3 The system may be laid in conditions normal to roofing work and must not be laid in rain, snow or heavy fog. If the temperature is below 5°C, suitable precautions must be taken against the formation of condensation on the substrate.

13.4 The waterproofing layers must always be installed with staggered overlaps and in such a manner that no counter-seams in the direction of the outlets are made.

13.5 At falls in excess of 5° (1:11) precautions against slippage, and requirements for mechanical fixing as required by BS 8217 : 2005, should be observed. For slopes above 10° (1:5.7), the Certificate holder's Technical Service Department should be contacted for advice.

13.6 Installation of the insulation boards must be carried out in accordance with the insulation manufacturer's instructions.

14 Procedure

Partial and full torch bonding

14.1 Bonding of the ELMO-Star, Elmo-Flex 4K and POLY ELAST RAPID O capsheets is achieved by melting their lower surfaces by torching and pressing the membranes down. Care must be taken not to overheat the membranes.

14.2 End laps and side laps for the capsheets are 80 mm wide and fully bonded, ensuring that a continuous bead of bitumen exudes from the lap.

14.3 Detailing should be carried out in accordance with the Certificate holder's instructions and following the guidelines specified in the *NFRC Safe2Torch Guidance - For the safe installation of torch-on reinforced bitumen membranes and use of gas torches in the workplace* document.

Cold adhesive bonding

14.4 The bonding of the ELMO-FLEX 4K capsheet is achieved using PUK 3D polyurethane adhesive. The adhesive is applied in beads across the width of the roll, in accordance with the Certificate holder's instructions.

14.5 The membrane is unrolled over the adhesive and pressed firmly into the adhesive with a weighted roller.

14.6 End laps and side laps for the capsheets are 80 mm wide and fully torch bonded, ensuring that a continuous bead of bitumen exudes from the lap.

14.7 Detailing should be carried out in accordance with the Certificate holder's instructions.

Mechanically fastened

14.8 For mechanically fastened systems, the type of mechanical fixings used for the system will vary according to the type of deck and insulation used. The Certificate holder must be consulted for advice.

14.9 The ELMO-Flex 4K is unrolled over the substrate, with 120 mm side laps and end laps of 80 mm wide.

14.10 The membrane is fixed to the deck (through insulation boards, where appropriate) in the joint overlaps with the fixing plates positioned at least 10 mm from the edge, prior to welding the joint. The fixings must be installed at centres calculated from the average wind force in that location up to a maximum spacing of 500 mm.

14.11 The laps are fully torch bonded, ensuring that a continuous bead of bitumen exudes from the lap.

14.12 Detailing should be carried out in accordance with the Certificate holder's instructions.

15 Repair

In the event of damage the capsheet can be effectively repaired, after cleaning the surrounding areas, with a patch of the capsheet bonded over the damaged area in accordance with the Certificate holder's instructions.

Technical Investigations

16 Tests

16.1 Tests were carried out on ELMO-FLEX 4K and the results assessed to determine:

- thickness
- mass per unit area
- tensile strength and elongation
- nail tear
- low temperature flexibility, control and heat aged for 240 days at 70°C
- heat resistance, control and heat aged for 240 days at 70°C
- peel strength of joints
- wind uplift.

16.2 Tests were carried out on ELMO-Star and the results assessed to determine:

- thickness
- mass per unit area
- peel strength from concrete, control and heat aged 28 days at 80°C
- heat resistance, control and heat aged for 240 days at 70°C.

16.3 Tests were carried out on POLY ELAST RAPID O and the results assessed to determine:

- thickness
- mass per unit area
- static indentation
- dynamic indentation
- heat resistance
- peel strength of joints.

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 Existing test data was assessed to determine:

- head of water
- tensile strength and elongation
- nail tear
- resistance to impact
- resistance to static loading
- dimensional stability
- shear strength of joints
- peel strength of joints
- adhesion of granules
- low temperature flexibility after heat ageing
- tensile strength and elongation after heat ageing.

Bibliography

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 + A1 : 2015 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 : 2016 *Fire classification of construction products and building element — Classification using data from external fire exposure to roofs tests*

EN 13707 : 2013 *Flexible sheets for waterproofing — reinforced bitumen sheets for roof waterproofing — Definitions and characteristics*

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

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.