

Phoenix Dichtungstechnik GmbH

Eisenacher Landstrasse 70
D-99880 Walterhausen
Germany

Tel: 00 49 40 7667 2807 Fax: 00 49 40 7667 2949
website: www.phoenix-dt.de

Agrément Certificate
06/4329
Product Sheet 1

RESITRIX ROOF WATERPROOFING SYSTEMS

RESITRIX CLASSIC, MB, SK FULL BOND AND SK PARTIAL BOND WATERPROOFING SYSTEMS

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Resitrix Classic, MB, SK Full Bond and SK Partial Bond Waterproofing Systems, a range of multi-laminate membranes which consist of thermoplastics elastomer TPE, a ethylene propylene diene class M plastic EPDM, glass reinforcement and styrene-butyl-styrene SBS modified bitumen.

AGRÉMENT 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 product and joints in the product, when completely sealed and consolidated, will resist the passage of moisture to the interior of the building (see section 5).

Properties in relation to fire — tests indicate that the systems will enable a roof to be unrestricted under the Building Regulations (see section 6).

Resistance to wind uplift — when correctly specified, the systems will resist the effects of any wind suction likely to occur in practice (see section 7).

Resistance to foot traffic — the systems will accept the limited foot traffic and loads associated with the installation and maintenance of the systems without damage (see section 8).

Durability — under normal service conditions, the systems will provide a durable waterproof covering with a service life of at least 30 years (see section 10).

The BBA has awarded this Agrément Certificate to the company named above for the systems described herein. The systems has been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément



Simon Wroe
Head of Approvals — Materials



Greg Cooper
Chief Executive

Date of First issue: 5 August 2010

Originally certificated on 27 July 2006

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

British Board of Agrément
Bucknalls Lane
Garston, Watford
Herts WD25 9BA

©2010

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

Regulations

In the opinion of the BBA, Resitrix Classic, MB, SK Full Bond and SK Partial Bond Waterproofing Systems, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2000 (as amended) (England and Wales)

Requirement:	B4(2)	External fire spread
Comment:		Test data to BS 476-3 : 2004 indicate that on suitable substructures the use of the systems will enable a roof to be unrestricted under this Requirement. See sections 6.1 to 6.3 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		Tests for water resistance on the systems, including joints, indicate that the systems meet this Requirement. See section 5.1 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The systems are acceptable. See section 10 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 systems can contribute to a construction meeting this Regulation. See sections 9, 10 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards – construction
Standard:	2.8	Spread from neighbouring buildings
Comment:		Test data to BS 476-3 : 2004 indicate that the systems 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 sections 6.1 to 6.3 of this Certificate.
Standard:	3.10	Precipitation
Comment:		Tests for water resistance of the systems indicate that the use of the systems 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 5.1 of this Certificate.
Regulation:	12	Building standards – conversions
Comment:		All comments given for the systems under Regulation 9 also apply to this Regulation, with reference to clause 0.12 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The systems are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	B3(2)	Suitability of certain materials
Comment:		The systems are acceptable. See section 9 of this Certificate.
Regulation:	C4(b)	Resistance to ground moisture and weather.
Comment:		Tests for water resistance of the systems, including joints, indicate that the use of the systems will enable a roof to satisfy the requirements of this Regulation. See section 5.1 of this Certificate.
Regulation:	E5(b)	External fire spread
Comment:		Test data to BS 476-3 : 2004 indicate that on suitable substructures, the use of the systems will enable a roof to be unrestricted under the requirements of this Regulation. See sections 6.1 to 6.3 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 sections: 1 *Description* (1.2) and 2 *Delivery and site handling* (2.2 and 2.3).

Non-regulatory Information

NHBC Standards 2010

NHBC accepts the use of Resitrix Classic, MB, SK Full Bond and SK Partial Bond Waterproofing Systems, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs and balconies*.

General

This membranes are manufactured in Germany by Pheonix Dichtungstechnik GmbH and marketed in the UK by PDT Sealing Systems Ltd, 11 Arches House, Leicester Road, Rugby, Warwickshire CV21 1FD, Tel: 01788 551294.

Technical Specification

1 Description

1.1 Resitrix Classic is a multi-laminate membrane consisting of a top layer of thermoplastic elastomer (TPE), a second layer of EPDM with a glass reinforcement, a third layer of TPE and a fourth layer of SBS-modified bitumen with a fine sand finish. For use in mechanical fastened, loose-laid and ballasted, partially adhered and fully adhered applications.

1.2 Resitrix MB is a multi-laminate membrane (as Resitrix Classic) with polyethylene separating film (instead of fine sand finish). For use in mechanically fastened, loose-laid and ballasted, partially adhered and fully adhered applications.

1.3 Resitrix SK Full Bond and SK Partial Bond membranes comprise of the top three layers as for Resitrix Classic, the modified-bitumen layer is replaced with a self-adhesive, polymer-modified bitumen with a release film and 60 mm selvedge with a thermofusible polyethylene film for heat welding of the joint. For use in fully or partially bonded applications⁽¹⁾.

(1) Resitrix SK can also be used in green roofs, however, this application is outside the scope of this Certificate.

1.4 The nominal characteristics for the membranes are given in Table 1.

Characteristics (units)	Resitrix Classic/MB	Resitrix SK/SK Partial Bond
Thickness (mm)	3.1	2.5
Length (m)	10	10
Width (m) ⁽¹⁾	1	1
Weight per unit	3.5	2.75
Roll weight (kg)	35.0	27.5

(1) Also available in widths of 250 mm, 333 mm, 500 mm and 666 mm.

1.5 Ancillary items for use within this system:

- FG 35 Surface Primer — a synthetic rubber and resin, low viscosity, solvent-based primer, for use in priming all surfaces prior to application of Resitrix SK
- G 2000 Contact Adhesive — a medium-viscosity adhesive for use with Resitrix Classic for perimeter flashings
- G 500 Thinner — a blend of organic solvents for use in thinning G 2000, degreasing metal surfaces and cleaning tools/equipment
- PU-UMF-98 Polyurethane — a single component, solvent-free adhesive for use with Resitrix Classic on flat roof areas
- Resitrix patches — for use in producing corner details.

1.6 Quality control tests are carried out during production and on the final product. Checks on the final product include:

- thickness
- weight per unit area
- tensile properties
- dimensional stability
- foldability at low temperature
- joint strength
- watertightness
- heat ageing.

2 Delivery and site handling

2.1 The membranes are delivered to site in individually wrapped rolls on a pallet, 20 rolls per pallet. The wrapper bears the product name, dimensions, weight, production code and the BBA identification mark incorporating the number of this Certificate.

2.2 Rolls should be stored vertically on a clean, dry, level surface and kept under cover.

2.3 Ancillary items classified under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009* (CHIP4) are given in Table 2 along with flashpoints. These products bear the appropriate hazard warning.

Materials	Flashpoint (°C)	Classification
FG 35 Surface primer ⁽¹⁾⁽²⁾	-20	highly flammable
G 2000 Contact Adhesive ⁽¹⁾	-4	highly flammable, irritant
G 500 Thinner ⁽¹⁾⁽²⁾	-15	highly flammable, harmful
PU-UMF-98	212	harmful

(1) These components should be stored in accordance with the *Highly Flammable Liquids and Petroleum Gases Regulations 1997*.

(2) These components are harmful to aquatic organisms.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Resitrix Classic, MB, SK Full Bond and SK Partial Bond Roof Waterproofing Systems.

Design Considerations

3 General

3.1 Resitrix Classic and MB membranes are satisfactory for use as partially adhered or fully adhered mechanically-fixed waterproofing on flat and pitched roofs with limited access and loose-laid ballasted on flat roofs with limited access.

3.2 Resitrix SK Full Bond and SK Partial Bond membranes are satisfactory for use as partially or fully-adhered waterproofing on flat and pitched roofs with limited access.

3.3 Limited access roofs are defined for the purpose of this Certificate as those roofs subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc. Where traffic in excess of this is envisaged, special precautions, such as additional protection to the membrane, must be taken.

3.4 Flat roofs are defined for the purpose of this Certificate as those roofs 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, for example, overall and local deflection and direction of falls. Pitched roofs are defined for the purpose of this Certificate as those having a fall in excess of 1:6.

3.5 Decks to which the membrane is to be applied must comply with the relevant requirements of BS 6229 : 2003, BS 8217 : 2005 and, where appropriate, *NHBC Standards 2010*, Chapter 7.1.

3.6 Insulation systems or materials used in conjunction with the product must be approved by the Certificate holder and either:

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

3.7 If rigid glass fibre or mineral wool roof insulation products are used they must be overlaid with 13 mm thick fibreboard unless otherwise authorised by the Certificate holder.

3.8 Contact with low-grade bitumen, coal tar and oil-based products should be avoided. If contact with such products is likely, a separating layer should be interposed before installing the waterproof sheet. If the compatibility with other products is in doubt, the advice of the Certificate holder should be sought.

4 Practicability of installation

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

5 Weathertightness



5.1 Test data confirm that the membranes, and joints in the membranes, when completely sealed and consolidated, will adequately resist the passage of moisture to the inside of the building and so meet 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 and 3.10.7

Northern Ireland — Regulation C4(b).

5.2 The systems are impervious to water and, when used in one of the systems described in this Certificate, will give a weathertight roof capable of accepting minor structural movement without damage.

6 Properties in relation to fire



6.1 When tested in accordance with BS 476-3 : 2004 a system comprising:

- an 18 mm thick primed marine plywood substrate, a self-adhesive bitumen/aluminium vapour control layer, an 80 mm thick polyisocyanurate insulation board and a layer of Resitrix MB mechanically fastened, achieved a rating of EXT.F.AB
- an 18 mm thick primed marine plywood substrate, a self-adhesive bitumen/aluminium vapour control layer, an 80 mm thick, mechanically fastened, primed polyisocyanurate insulation board and a layer of Resitrix SK fully bonded achieved a rating of EXT.F.AB.

6.2 The membrane used in the loose-laid and ballasted specification, including a minimum depth of 50 mm of aggregate, shall be deemed to satisfy BS 476-3 : 2004 rating EXT.F.AA.

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

England and Wales — Test or assessment in accordance with Approved Document B, Appendix A, Clause 1

Scotland — Test to conform with Mandatory Standard 2.8, clause 2.8.1

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

7 Resistance to wind uplift

7.1 The resistance to wind uplift of a mechanically-fixed waterproofing layer is provided by the washer secured to the deck by approved fasteners passing through the membrane. The number and position of fixings will depend on many factors, including:

- pull-out strength of fasteners
- elastic limit of the membrane
- appropriate safety factors.

7.2 The number of fixings used should be established by reference to the wind uplift forces calculated in accordance with BS EN 1991-1-4 : 2005 and the National Annex on the basis of maximum permissible loads of 0.5 kN per fixing.

7.3 The precise ballast requirements for loose-laid systems should be calculated in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and the National Annex, but should be a minimum thickness of 50 mm. In areas of high-wind exposure the gravel may be bonded at the edges for a distance of one metre. Alternatively, concrete slabs on suitable supports can be used.

7.4 The adhesion of the partially and fully adhered systems to the substrate will be limited by the cohesive strength of the substrate. Tests indicate that on substrates of high cohesive strength the adhesion of systems is sufficient to resist the effects of wind suction, thermal cycling or minor structural movements occurring in practice.

8 Resistance to foot traffic

Results of test data indicate that the systems can accept, without damage, the limited foot traffic and light concentrated loads associated with the installation and maintenance operations. Reasonable care should be taken, however, to avoid sharp objects or concentrated loads. Anywhere regular traffic is envisaged, ie maintenance of lift equipment, a walkway should be provided using concrete slabs supported on bearing pads.

9 Maintenance



Roofs covered with the systems should be the subject of annual inspections, as is good practice with single-layer waterproofing systems, to ensure continued security and performance, especially those roofs without ballast.

10 Durability



The products have been used in Europe since 1981 and have performed satisfactorily. Accelerated weathering tests and evidence from long-term existing sites confirm that satisfactory retention of physical properties is achieved. Available evidence indicates that the system should have a life in excess of 30 years.

Installation

11 General

11.1 Installation of Resitrix Classic, MB, SK Full Bond and SK Partial Bond Waterproofing Systems must be carried out by trained and approved installers working in accordance with the relevant Clauses of the Certificate holder's instructions and BS 8000-4 : 2001.

11.2 Conditions on site should be those for normal roof waterproofing work. Deck surfaces must be dry, clean and free from sharp projections such as nail heads, concrete nibs. When used over a rough substrate, a suitable protection layer should be placed over the substrate.

11.3 Installation should not be carried out during wet weather (eg rain, fog, snow) nor when the temperature is below 5°C unless suitable precautions against surface condensation are taken.

11.4 All flashings should be formed in accordance with the Certificate holder's instructions.

12 Procedure

Mechanically fastened (MB and Classic)

12.1 The membrane should be laid out flat onto the substrate without folds or ripples, with 100 mm overlaps (130 mm wide over polystyrene insulation).

12.2 The membrane is mechanically fixed to the deck (through the insulation boards, where appropriate) in the joint overlaps, prior to welding of the joint. The joint must be welded prior to the installation of the next line of fasteners on the other side of the sheet to avoid creasing of the membrane.

12.3 The fastener washers should be positioned a minimum of 10 mm from the edge of the membrane. The fixings should be installed at centres calculated from the average wind force for that area, with a maximum of 330 mm centres and a minimum of 200 mm centres, (see sections 7.1 and 7.2).

Loose-laid and ballasted (MB and Classic)

12.4 The membrane should be laid out flat onto the substrate without folds or ripples, with 50 mm overlaps (80 mm wide over polystyrene insulation).

12.5 At roof perimeters the membrane should be installed with minimum upstands of 50 mm. Details and perimeters should be either mechanically fastened or fully adhered.

12.6 The membrane should be covered with a protective sheet prior to the application of a 50 mm minimum thick layer of washed, well-rounded gravel (between 16 mm and 32 mm in diameter). In areas of high-wind exposure, a heavier gravel may be used and/or the gravel may be bonded at the edges for a distance of one metre. Alternatively, concrete slabs on suitable supports (preferably 10 mm thick rubber supports) can be used.

Fully adhered (MB and Classic)

12.7 Fully adhering the systems can be achieved by either softening or pour and roll bonding in bitumen.

Softening

12.8 The substrate should be a new or existing bituminous layer and must contain 1 kg·m⁻² of bitumen above the reinforcement, if less, additional bitumen should be applied to achieve this figure.

12.9 The membrane should be laid out flat onto the substrate without folds or ripples, with 50 mm overlaps.

12.10 Each end of the membrane is rolled back to the centre of the roll.

12.11 Before the membrane is rolled out, the bituminous underlayer is heated until it melts using a gas torch, the membrane is then rolled out over the molten bitumen. Care must be taken to ensure flames do not contact with the roll and in particular with the EPDM top layer.

Pour and roll

12.12 The bonding is carried out as for traditional bitumen roofing using 95/25 or 115/15 grade oxidised bitumen. The laps are 50 mm wide and must be kept free of bitumen.

Self-adhesive application (SK)

Partially bonded (SK Partial Bond)

12.13 The substrate is primed using FG 35 Surface Primer at a rate of 100% coverage for a one-metre wide band around roof perimeter and 50% coverage rate in the central zone of the roof.

12.14 When the primer is dry (a minimum of 60 minutes), the membrane should be laid out flat onto the substrate without folds or ripples, with 50 mm overlaps.

12.15 The membrane is either rolled or folded back to the centre of the membrane and the release film is carefully scored with a knife along the centreline and removed.

12.16 The membrane is applied to the substrate, pressed down ensuring a good bond between membrane and substrate. The operation is repeated for the other half of the sheet.

Fully bonded (SK Full Bond)

12.17 The substrate is primed using FG 35 Surface Primer at a 100% coverage rate.

12.18 The membrane is installed as described in sections 12.14 to 12.16.

Joints

12.19 The joints are formed by heat welding in accordance with the Certificate holder's installation instructions.

Detailing

12.20 Details are formed in accordance with the Certificate holder's installation instructions. Corner details should be reinforced using Resitrix patches.

13 Repair

In the event of accidental damage, repairs can be carried out by cleaning the area around the damage and applying a patch as described in the Certificate holder's instructions.

Technical Investigations

14 Tests

The following is a summary of technical investigations carried out on Resitrix Classic, MB, SK Full Bond and SK Partial Bond Waterproofing Systems.

14.1 Data from tests conducted by the BBA, CSTC/WTCB/BBRI and BDA are summarised in Tables 3 and 4.

14.2 Testing was also carried out on the membranes to determine:

- thickness
- width
- length
- mass per unit area
- straightness
- flatness.

Table 3 Physical properties of Resitrix MB/Resitrix Classic — directional

Test (units)	Mean results		Method
	Longitudinal	Transverse	
Tensile strength (N per 50 mm)			EN 12311-2 (100 mm min ⁻¹)
control	411	348	
heat aged ⁽¹⁾	383	334	
Elongation at break (%)			EN 12311-2 (100 mm min ⁻¹)
control	680	638	
heat aged ⁽¹⁾	547	564	
Nail tear (N)	360	468	EN 12310-1 (100 mm min ⁻¹)
Dimensional stability (%)	-0.05	0.00	EN 1107-2

(1) Heat aged 28 days at 80°C.

Table 4 Physical properties of Resitrix SK — directional

Test (units)	Mean results		Method
	Longitudinal	Transverse	
Tensile strength (N per 50 mm)			EN 12311-2 (100 mm min ⁻¹)
control	683	630	
heat aged ⁽¹⁾	580	672	
Elongation at break %			EN 12311-2 (100 mm min ⁻¹)
control	609	623	
heat aged ⁽¹⁾	269	522	
Cold folding temperature (°C)	≤-35	≤-35	EN 495-5
Nail tear (N)	312	287	EN 12310-1 (100 mm min ⁻¹)

(1) Heat aged 168 days at 70°C.

Table 5 Physical properties — general

Test (units)	Mean results		Method
	MB/Classic	SK	
Water vapour permeability (gm ⁻² ·day ⁻¹)	0.243	0.310	BS 3177 (25°C/75% RH)
Vapour resistance (MN·s·g ⁻¹)	844	662	BS 3177 (25°C/75% RH)
Static indentation			MOAT 66 : 4.3.8
EPS	—	L ₁₀	
concrete	—	L ₂₀	
Dynamic impact			MOAT 66 : 4.3.9
EPS	—	I ₁₀	
perlite	—	I ₁₀	
Fatigue cycling	—	pass	MOAT 66 : 4.3.7
Peel strength control			MOAT 66 : 4.3.3
concrete	100	214	
plywood	150	—	
heat aged ⁽¹⁾			
concrete	74	115	
plywood	141	—	
Wind uplift (N per fastener)			ETAG 006
failure load			
Isofast	1000	—	
Ejot	900	—	
correct load			
Isofast	633	—	
Ejot	570	—	
Wind uplift on partially adhered (kPa)	—	≥8 ⁽²⁾	MOAT 66 : 4.3.2

(1) Heat at aged 28 days 80°C.

(2) No failure of sample, test stopped after 8 kPa cycle.

— not tested.

15 Investigations

15.1 Existing data on fire performance to BS 476-3 : 2004 were examined.

15.2 The manufacturing processes were examined, including methods of quality control. Details were also obtained of the quality and composition of the materials used.

Bibliography

- BS 476-3 : 2004 *Fire tests on building materials and structures — Classification and method of test for external fire exposure to roofs*
- BS 3177 : 1959 Method for determining the permeability to water vapour of flexible sheet materials used for packaging
- BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*
- 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 1991-1-4 : 2005 *Eurocode 1 : Actions on structures — General actions — Wind actions*
- NA to BS EN 1991-1-4 : 2005 *UK National Annex to Eurocode 1 : Actions on structures — General actions — Wind actions*
- EN 495-5 : 2000 *Flexible sheets for waterproofing — Determination of foldability at low temperature — Plastic and rubber sheet for roof waterproofing*
- EN 1107-2 : 2001 *Flexible sheets for waterproofing — Determination of dimensional stability — Plastic and rubber sheet for roof waterproofing*
- EN 12310-2 : 2000 *Flexible sheets for waterproofing — Determination of resistance to tearing — Plastic and rubber sheets for roof waterproofing*
- EN 12311-2 : 2000 *Flexible sheets for waterproofing — Determination of tensile properties — Plastic and rubber sheets for roof waterproofing*
- MOAT No 66 : 2001 *UEAtc Technical Guide for the assessment of non-reinforced, reinforced and/or Backed Roof Waterproofing Systems made of EPDM*
- ETAG 006 : 2000 *Systems of Mechanically Fastened Flexible Roof Waterproofing Membranes*

Conditions of Certification

16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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.

16.2 Publications and documents referred to in this Certificate are those that the BBA deems to be relevant at the date of issue or re-issue of this Certificate and include any: Act of Parliament; Statutory Instrument; Directive; Regulation; British, European or International Standard; Code of Practice; manufacturers' instructions; or any other publication or document similar or related to the aforementioned.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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.

16.4 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date 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. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.

British Board of Agrément
Bucknalls Lane
Garston, Watford
Herts WD25 9BA

©2010

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