

Icopal Limited

Barton Dock Road
Stretford
Manchester M32 0YL

Tel: 0161 865 4444

Fax: 0161 866 9859 (Marketing), 0161 865 8433 (Technical)

e-mail: info.uk@icopal.com

website: www.icopal.co.uk



Agrément Certificate

15/5189

Product Sheet 1

PARABIT SOLO

PARABIT SOLO HOT-APPLIED ROOFING SYSTEMS

This Agrément Certificate Product Sheet⁽¹⁾ relates to Parabit Solo Hot-Applied Roofing Systems, for use in waterproofing specifications for flat roofs, including zero-pitched, in inverted roof, green roof, roof garden and protected roof 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 systems will resist the passage of moisture into the building (see section 6).

Properties in relation to fire — the systems, when used in a suitable specification, will enable a roof to be unrestricted under Building Regulations (see section 7).

Resistance to wind uplift — resistance to wind uplift is dependent on the ballast layers of the roofing specification (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 of roots — the systems, when used in combination with the Rootbar Capsheet, will adequately resist plant root penetration (see section 10).

Durability — under normal service conditions, the systems will provide a durable waterproof covering with a service life of at least 10 years (see section 12).

The BBA has awarded this Certificate to the company named above for the systems described herein. These systems have 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

A handwritten signature in black ink, appearing to read 'John Albon'.

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

Date of First issue: 12 February 2015

John Albon — Head of Approvals
Construction Products

Claire Curtis-Thomas
Chief Executive

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
Watford
Herts WD25 9BA

tel: 01923 665300
fax: 01923 665301
clientservices@bba.star.co.uk
www.bbacerts.co.uk

©2015

Regulations

In the opinion of the BBA, Parabit Solo Hot-Applied Roofing Systems, 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:		When used in suitably-protected specifications, the systems will be unrestricted under this Requirement. See sections 7.1 to 7.5 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The systems will enable a roof to meet this Requirement. See section 6.1 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The systems are 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 systems can contribute to a construction meeting this Regulation. See sections 11 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:		When used in suitably-protected specifications, the systems can be regarded as having low vulnerability under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. See sections 7.1, 7.2, 7.3 and 7.5 of this Certificate
Standard:	3.10	Precipitation
Comment:		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 6.1 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The systems can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for these systems under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012

Regulation:	23(a)(i)(iii)(b)(i)	Fitness of materials and workmanship
Comment:		The systems are acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The systems will enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		When used in suitably protected specifications, the systems will be unrestricted under the requirements of this Regulation. See sections 7.1 to 7.5 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* (1.3, 1.4 and 1.5) and 3 *Delivery and site handling* (3.1 and 3.6) of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of Parabit Solo Hot-Applied Roofing Systems, provided they are installed, used and maintained in accordance with this Certificate, 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 membranes used in the systems, in accordance with harmonised European Standard EN 13707 : 2013. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

1 Description

1.1 Parabit Solo Hot-Applied Roofing Systems consist of a hot-applied modified bitumen, reinforced with interwoven glassfibre and used in conjunction with a range of modified bitumen roofing membranes.

1.2 The systems comprise the following components:

- Icopal Parabit Hot Melt — a polymer-modified bitumen hot-applied liquid membrane
- Parabit Solo Reinforcing Fabric — a resin-coated interwoven glassfibre reinforcement
- Icopal QD Bitumen Primer — a black, quick-drying bitumen priming solution, consisting of bitumens and hydrocarbon solvents, for use on concrete surfaces
- Power Elastomeric 250 Sand (covered by Product Sheet 2 of Certificate 91/2618) — a polyester-reinforced, SBS-modified bitumen membrane. Used in conjunction with Rootbar Capsheet on green roofs for upstands
- Thermaweld (covered by Product Sheet 4 of Certificate 07/4409) — a polyester-reinforced, SBS-modified bitumen membrane for torch-applied details at joints and upstands. Not for use with green roofs
- Rootbar Capsheet — a polyester-reinforced, SBS-modified bitumen membrane for use as an anti-root layer in green roof applications (covered by Product Sheet 1 of Certificate 05/4269). Used in conjunction with Power Elastomeric 250 sand for upstands on green roofs
- Néodyl strip and Néodyl cord — an SBS-modified bitumen strip and a synthetic rubber cord, for use at changes of direction, structural joints and expansion joints, and covered with mineral layer
- Xtra-Load Protection Board — a bitumen-impregnated, water-resistant cellulose board for use on sites where covering of the waterproofing is delayed and excessive foot traffic is anticipated.

1.3 The membranes are manufactured to the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Power Elastomeric 250 Sand	Thermaweld	Rootbar Capsheet
Thickness (mm)	2.1	4.3 ⁽¹⁾	3.2 ⁽¹⁾
Roll width (m)	1	1	1
Roll length (m)	16	8	8
Mass per unit area* (kg·m ⁻²)	2.5	5.25	5.0
Watertightness	pass	pass	pass
Tensile strength* (N per 50 mm)			
longitudinal	600	900	740
transverse	550	900	540
Elongation at break* (%)			
longitudinal	22	35	40
transverse	25	35	49
Low temperature flexibility* (°C)	-15	-20	-15
Flow resistance* (°C)	90	75	100
Dimensional stability* (%)	1	0.5	0.5
Impact* (mm) (soft substrate B)	–	–	1500
Static loading* (kg) (soft substrate A)	–	–	20
Surface finish			
lower	sand	thermofusible film	thermofusible film
upper	sand	slate flakes	slate flakes

(1) Including mineral finish.

1.4 The Néodyl strip and Néodyl cord are manufactured to the following nominal characteristics:

Strip

Roll length (m)	10
Roll width (m)	0.33, 0.5, 0.66 and 1.0
Roll weight (kg)	20 (0.33 m), 31 (0.5 m), 40 (0.66 m) and 62 (1.0 m)

Cord

Diameter (mm)	30
Length (m)	10
Weight (kg)	11

1.5 Xtra-Seal Protection Board is manufactured to the following nominal characteristics:

Board length (m)	2
Board width (m)	1
Board thickness (mm)	2.5
Mass per unit area (kg·m ⁻²)	3.3.

1.6 Ancillary items for use with the systems but outside the scope of this Certificate include:

- Icopal termination bar — an extruded aluminium termination bar providing a compression seal to concrete or brickwork
- Drainage Board — a prefabricated drainage board for use in green roofs, plazas and podiums.

2 Manufacture

2.1 Icopal Parabit Solo is manufactured by heating and blending bitumen and polymer in a temperature-controlled cycle.

2.2 The membranes are manufactured by saturating and coating the reinforcement with SBS (styrene-butadiene-styrene) modified bitumen and calendaring to the correct thickness.

2.3 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.

2.4 The management system of Icopal BV, who manufacture Icopal Parabit, has been assessed and registered as meeting the requirements of EN ISO 9001 : 2008 by Bureau Veritas (Certificate NL007511-1).

2.5 The management system of Icopal SAS, who manufacture Rootbar Capsheet, has been assessed and registered as meeting the requirements of EN ISO 9001 : 2008 by Bureau Veritas (Certificate 1.927.221/C).

2.6 The management system of Icopal Limited, who manufacture Power Elastomeric 250 Sand and Thermaweld, has been assessed and registered as meeting the requirements of EN ISO 9001 : 2008 by BSI (Certificate Q05556).

3 Delivery and site handling

3.1 Icopal Parabit is delivered to site in blocks packaged in silicon-lined cardboard cartons with labels bearing product name, article number, weight, date of production, batch number, address of the Certificate holder and the BBA logo incorporating the number of this Certificate. The material must be stored under cover and away from heat sources.

3.2 Icopal Parabit is unaffected by the temperatures likely to occur during storage and should have an indefinite shelf-life when stored under normal conditions.

3.3 The membranes are delivered to site in rolls in printed wrappers bearing the product name, Certificate holder's name and the BBA logo incorporating the number of their corresponding Certificate.

3.4 Rolls should be stored upright on a clean, level surface and kept dry, away from excessive heat and under cover.

3.5 Parabit Solo Reinforcing Fabric, Néodyl strip, Néodyl cord and Xtra-Seal Protection Board are packaged with labels bearing the product trade name and should be stored under cover and kept dry.

3.6 Icopall QD Bitumen Primer has a flashpoint of 25°C and must be stored away from ignition sources, and extremes of temperature must also be avoided. The primer is classified under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (CHIP4)/Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009* as 'flammable' and 'harmful' and bears the appropriate hazard warning label.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Parabit Solo Hot-Applied Roofing Systems.

Design Considerations

4 General

4.1 Parabit Solo Hot-Applied Roofing Systems are satisfactory for use as a waterproofing layer on flat, including zero-pitched, roofs with limited access in:

- inverted roof specifications
- protected roof specifications, eg covered by pavers or other suitable protection
- roof gardens or green roof systems.

4.2 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 system must be provided (see section 9).

4.3 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 such features as overall and local deflection and direction of falls. Pitched roofs are defined as those having a fall greater than 1:6. Zero-pitched roofs are defined for the purpose of this Certificate as those having a finished fall which can vary between 0° and 0.7°.

4.4 Concrete substrates to which the product is to be applied must comply with the relevant requirements of BS 6229 : 2003 and, where appropriate, *NHBC Standards 2014*, Chapter 7.1. The following substrates are suitable for use with the systems:

- in-situ structural concrete with a density of between 2160 kg·m⁻³ and 2500 kg·m⁻³ and with 3 to 5 percent moisture by volume when cured
- precast concrete
- concrete block in vertical applications
- lightweight structural concrete with a density of between 1400 kg·m⁻³ and 1800 kg·m⁻³ and with 5 to 20 percent moisture by volume when cured
- new 25 mm exterior grade plywood, to BS EN 636 : 2003, Clause 8, fixed in accordance with the relevant requirements of BS 6229 : 2003 and BS 8217 : 2005.

4.5 In-situ structural concrete with a density of less than 1850 kg·m⁻³ (owing to substrate friability) and lightweight insulating concretes are not acceptable substrates for application of the systems.

4.6 Insulation systems or materials used in conjunction with the systems must be:

- as described in the relevant clauses for inverted roofs in BS 8217 : 2005 and approved by the Certificate holder, or
- the subject of a current BBA Certificate for inverted roofs and used in accordance with, and within the limitations of, that Certificate, and approved by the Certificate holder.

4.7 When the systems are used in gravel-ballasted protected roof or inverted roof specifications, a suitable filter layer/water reducing layer must be used between the ballast and the rest of the specification.

4.8 When the systems are used in roof garden or green roof specifications, the Rootbar Capsheet must be used as part of the system.

4.9 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*.

4.10 The structural decks to which the systems are to be applied must be suitable to transmit the dead and imposed loads experienced in service.

4.11 Imposed loads, dead loading and wind loads specifications 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 respective UK National Annexes.

4.12 The drainage system for both green roofs and roof gardens must be correctly designed, and provision made for access for maintenance purposes. Dead loads for green roofs and roof gardens can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer.

4.13 On zero-pitched roofs it is particularly important to identify the correct drainage points to ensure that the drainage provided is effective.

5 Practicability of installation

The system should only be installed by trained contractors using specialist equipment.

6 Weathertightness



6.1 Results of test data confirm that the membranes will resist minor structural movements and resist the passage of water and moisture to the inside of the building and so enable a roof to comply with the relevant requirements of the national Building Regulations.

6.2 The membranes are impervious to water and, when used in one of the systems described, will achieve a weathertight roof capable of accepting minor structural movement without damage.

7 Properties in relation to fire



7.1 The system, when protected by an inorganic covering (eg gravel or paving slabs) listed in the Annex of Commission Decision 2000/553/EC, can be considered to be unrestricted under the various national Building Regulations.

7.2 A roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer of 300 mm thick will also be unrestricted.

7.3 In the opinion of the BBA, when used in irrigated roof gardens or green roofs the membranes will also be unrestricted.



7.4 Exposed areas of the capsheet, when used with one of the surface finishes detailed in Approved Document B, Appendix A, Table A5, part iii (England and Wales) and Technical Booklet E, Table 4.6, part iv (Northern Ireland) (listed below), would be deemed to be unrestricted:

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



7.5 The designation of exposed areas of the capsheet installed to other specifications should be confirmed by:

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

Scotland — test to conform to Mandatory Standard 2.8, clause 2.8.1

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

7.6 If allowed to dry, the plants used may allow flame spread across the roof. This should be taken into consideration when selecting the plants for the roof. Appropriate planting irrigation and/or protection must be applied to ensure that the overall fire-rating of the roof is not compromised.

8 Resistance to wind uplift

8.1 The systems, when used within a suitable specification, will adequately resist the effects of wind uplift likely to occur in practice.

8.2 In inverted roof systems the precise ballast requirements should be calculated in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex.

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

8.4 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

9.1 The systems can accept the limited foot traffic and light concentrated loads associated with installation and maintenance. Reasonable care should be taken to avoid puncture of the systems by sharp objects or concentrated loads. Where traffic in excess of this is envisaged, such as for maintenance of lift equipment or pedestrian areas suitable protection for example, using concrete slabs supported on bearing pads must be used.

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

9.3 When used over construction or expansion joints, the system can accommodate without damage the minor structural movement likely to occur under normal service conditions.

10 Resistance to penetration of roots

Results of root penetration resistance tests on the Rootbar Capsheet, including joints, indicate that it is resistant to root penetration and can be used in roof waterproofing specifications for roof gardens and green roofs.

11 Maintenance



11.1 Roofs should be inspected twice yearly, in autumn after leaf fall and in the spring, to ensure that vegetation and other debris are cleared from the roof and drainage outlets cleared.

11.2 Guidance for the maintenance of roof gardens and green roofs is available within the latest edition of *The GRO Green Roof Code — Green Roof Code of Best Practice for the UK*.

12 Durability



12.1 Parabit Solo Hot-Applied Roofing Systems, when fully protected and subject to normal conditions of use, will provide a durable waterproof covering with a service life of at least 10 years.

12.2 The liquid-applied component has currently been assessed to the W2 criteria of ETAG 005 Part 1. The membrane components of the system have been assessed as having a life expectancy of 20 years for Power Elastomeric 250 Sand and 30 years for the Rootbar Capsheet.

13 General

13.1 Parabit Solo Hot-Applied Roofing Systems must be installed in accordance with the Certificate holder's instructions, on a dry and frost-free substrate. After rain or snow the substrate must be allowed to dry before installation can commence. The installing contractor can aid drying by suitable means approved by the Certificate holder. Once applied, the system is not affected by rain, snow or frost.

13.2 The surface of the concrete substrate must be sound and free of contaminants with a surface finish in accordance with the Certificate holder's criteria.

13.3 To assess the suitability of a substrate to receive the membrane, bond tests must be carried out in accordance with the Certificate holder's instructions. If bonding problems occur, advice should be sought from the Certificate holder.

13.4 The substrate is primed using Icopal QD Bitumen Primer at a nominal coverage rate of $5 \text{ m}^2 \cdot \ell^{-1}$, dependent on substrate porosity, and allowed to dry.

13.5 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 Icopal Parabit Hot Melt blocks are heated in a thermostatically-controlled bitumen boiler to a temperature of approximately 180°C , with a maximum allowable temperature of 205°C . Overheating of the hot-melt compound must be avoided.

14.2 Parabit Solo Reinforcing Fabric is unrolled over the primed substrate, with overlap of 75 mm minimum at the sides and end of a roll.

14.3 Power Elastomeric 250 Sand is unrolled over the reinforcement with overlaps of 100 mm at the side and 150 mm at the end. The membranes must always be installed with end laps staggered a minimum of 300 mm and in such a manner that no counter-seams in the direction of outlets are made. The membrane is rolled back on itself prior to the application of the hot-melt compound.

14.4 The hot-melt compound is poured through the reinforcement at an application rate of $3 \text{ kg} \cdot \text{m}^{-2}$ ensuring that the reinforcement is fully encapsulated by the hot melt.

14.5 The Power Elastomeric membrane is immediately unrolled into the hot-melt compound; excess compound may extrude from the edges of the membrane. The hot melt is poured ahead of the unrolled membrane. The membrane must be fully bonded to the hot melt.

14.6 Roof garden and green roof specifications include an additional layer of Rootbar Capsheet torch-applied to the Power Elastomeric 250 Sand.

14.7 Upstands and other detailing are carried out in accordance with the Certificate holder's installation instructions.

15 Repair

In the event of minor damage, the cap sheets can be fully repaired with additional patch of the applicable capsheet bonded to the damaged area using the appropriate installation method.

Technical Investigations

16 Tests

16.1 Tests were conducted on the Icopal Parabit Hot Melt and the results assessed to determine:

- fines content
- cone penetration at 50°C
- flow at 60°C for 5 hours at 75° angle
- low temperature flexibility
- effects of re-melting
- effects of prolonged heating.

16.2 Tests were conducted on the Rootbar Capsheet and the results assessed to determine:

- roll weight
- thickness
- length
- low temperature flexibility
- heat resistance
- dimensional stability

- tensile strength and elongation
- nail tear resistance
- root resistance
- resistance to leakage at joints
- tensile shear of joints
- adhesion
- peel resistance of joints
- water exposure (180 days at 60°C)
- chemical resistance.

16.3 Tests were conducted on the Power Elastomeric 250 Sand and the results assessed to determine:

- thickness
- width
- mass per unit area
- water resistance
- water vapour transmission
- tensile strength and elongation
- low temperature flexibility
- nail tear resistance
- dimensional stability
- static indentation
- dynamic indentation
- heat resistance
- unrolling at low temperatures
- heat ageing
- water soak.

16.4 Tests were conducted on an assembled system and the results assessed to determine:

- water vapour permeability
- watertightness
- dynamic indentation, control and after heat ageing
- static indentation, control and after water exposure
- fatigue cycling, control and heat aged
- resistance to wind uplift.

17 Investigations

17.1 The manufacturing processes were 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 CE marking for the roofing membranes to EN 13707 : 2013 was examined.

Bibliography

- BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*
- BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*
- BS EN 636 : 2003 *Plywood — Specifications*
- 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 *Eurocode 1 : Actions on structures — General actions — Snow loads*
- NA to BS EN 1991-1-3 : 2003 *UK National Annex to Eurocode 1 : Actions on structures — General actions — Snow loads*
- 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 13707 : 2013 *Flexible sheets for waterproofing — Reinforced bitumen sheets for roof waterproofing — Definitions and characteristics*
- EN ISO 9001 : 2008 *Quality management systems — Requirements*

Conditions of Certification

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.