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Agrément Certificate

14/5118

Product Sheet 3

DANOSA SINGLE-PLY ROOF WATERPROOFING MEMBRANES

DANOPOL HSF AND DANOPOL+ HSF PVC MEMBRANES

This Agrément Certificate Product Sheet⁽¹⁾ relates to DANOPOL HSF and DANOPOL+ HSF PVC Membranes, for use loose-laid and ballasted systems in fully adhered and pitched roofs with limited access, roof gardens on flat roofs, or green and brown systems on flat and pitched 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 products will resist the passage of moisture into the interior of a building (see section 6).

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

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

Resistance to mechanical damage — the products will accept the limited foot traffic and loads associated with installation and maintenance and minor structural movements occurring in service (see section 9).

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

Durability — under normal service conditions, the products will provide a durable roof waterproofing with a service life in excess of 35 years (see section 12).



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

Date of Third issue: 4 August 2021

Originally certificated on 3 March 2018

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, DANOPOL HSF and DANOPOL+ HSF PVC Membranes, 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: Comment:	B4(1)	External fire spread The products are restricted by this Requirement in some circumstances. See section 7.4 of this Certificate.
Requirement: Comment:	B4(2)	External fire spread On suitable substructures, the use of the products may enable a roof to be unrestricted under the requirements of this Regulation. See sections 7.1 to 7.3 of this Certificate.
Requirement: Comment:	C2(b)	Resistance to moisture The products, including joints, will enable a roof to satisfy this Requirement. See section 6 of this Certificate.
Regulation: Comment:	7(1)	Materials and workmanship The products are acceptable. See section 12 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: Comment:	8(1)(2)	Durability, workmanship and fitness of materials The use of the products satisfies the requirements of this Regulation. See sections 11.1 and 12 and the <i>Installation</i> part of this Certificate.
Regulation: Standard: Comment:	9 2.6	Building standards applicable to construction Spread to neighbouring buildings The products are restricted under clause 2.6.4 ⁽¹⁾⁽²⁾ of this Standard in some circumstances. See section 7.5 of this Certificate.
Standard: Comment:	2.8	Spread from neighbouring buildings When applied to a suitable substructure, the products may enable a roof to be unrestricted under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. See sections 7.1 to 7.3 of this Certificate.
Standard: Comment:	3.10	Precipitation The products, including joints, 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: Comment:	7.1(a)	Statement of sustainability The products 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: Comment:	12	Building standards applicable to conversions Comments in relation to the products 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 products are acceptable. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The products, including joints, can enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		On suitable substructures, the use of the products may enable a roof to be unrestricted under this Requirement. See section 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 2021

In the opinion of the BBA, DANOPOL HSF and DANOPOL+ HSF PVC Membranes, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying to relevant requirements in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs, terraces and balconies*.

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

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard EN 13956 : 2012.

Technical Specification

1 Description

1.1 DANOPOL HSF and DANOPOL+ HSF PVC Membranes⁽¹⁾ are a range of polyester net reinforced PVC membranes, backed with a 300 g·m⁻² polyester fleece.

(1) DANOPOL HSF is light grey and the DANOPOL+ HSF is dark grey.

1.2 The products are manufactured to the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	DANOPOL HSF 1.5	DANOPOL HSF 1.8
	DANOPOL+ HSF 1.5	DANOPOL+ HSF 1.8
Thickness (mm)	1.5	1.8
Width (m)	1.80	1.80
Length (m)	15	13
Mass per unit area (kg·m ⁻²)	2.2	2.6
Watertightness	pass	pass
Tensile strength (N per 50 mm)		
longitudinal	> 1500	> 1600
transverse	> 1300	> 1400
Elongation at maximum force (%)		
longitudinal	> 20	> 20
transverse	> 20	> 20
Tear resistance (N)		
longitudinal	> 400	> 500
transverse	> 400	> 500
Peel strength of joints (N per 50 mm)	> 300	> 400
Shear strength of joints (N per 50 mm)	> 1200	> 1300
Low temperature foldability (°C)	< -30	< -30
Static load (kg) (method B)	> 60	> 60
Impact resistance (mm)	> 800	> 800
Reaction to fire	E	E
Colour		
DANOPOL HSF	light grey	light grey
DANOPOL+ HSF	dark grey	dark grey

1.3 Fleecebond Adhesive is a high-grab moisture-curing polyurethane adhesive for bonding the membranes to the substrate. Canister Fleecebond Adhesive is a canister dispensed version of the adhesive.

1.4 Ancillary items for use with the products, but outside the scope of this Certificate, include:

- DANOPOL Colaminated Metal — metal coated with Danopol/Danopol+ compound for use in forming details
- DANOPOL H — non-reinforced PVC membrane for use in detailing
- Embossed Surfacing Membrane — a low profile embossed PVC membrane for use in demarcation of maintenance walkways, plant zones and working areas
- DANOPOL/DANOPOL+ HS 1.5 Coverstrip — a polyester reinforced PVC membrane strip for use in sealing over end butt joints
- 150G Fleece — a needle-punched and calendered polypropylene fleece for use as a separation layer
- DANOFORCE PRIMER — a polyurethane primer for preparing the surface of existing PVC membranes prior to the application of a polyurethane adhesive
- PVC Contact Adhesive — adhesive for bonding the PVC membrane to substrates
- DANOBOND Adhesive — a solvent free adhesive
- Pre-formed accessories — a range of corners and pipe collars
- Alpha Profile — a PVC extruded profile for use as a decorative standing seam
- PVC Lightning Clip — a lightning conductor clip to hold a lightning conductor strip, incorporating a PVC membrane flange to allow welding to the waterproofing membrane
- DANODREN JARDIN — a composite board comprising a high-density polyethylene, dimple-profiled sheet and non-woven geotextile for use as a drainage layer in roof gardens and green roofs
- DANODREN R-20 — a high density polyethylene, dimple-profiled sheet for use as a water retaining layer in roof gardens and green roofs
- DANOLOSA — a paving slab incorporating an extruded polystyrene insulation.

1.5 General ancillary items for use with the products, but outside the scope of this Certificate, include:

- Air and Vapour control layers
- Stone wool insulation
- Polyisocyanurate (PIR) insulation.

2 Manufacture

2.1 The products are manufactured by extruding the PVC compound into sheets and laminating two sheets together with polyester reinforcement and heat laminating a polyester fleece to the underside of the membrane.

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 Derivados Asfálticos Normalizados S.A (DANOSA) has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 and EN ISO 14001 : 2015 by Bureau Veritas Certification (Certificates ES083321-1 and ES091096-1 respectively).

3 Delivery and site handling

3.1 The products are delivered to site in rolls wrapped in polythene on pallets. Roll labels bear the Certificate holder's name and address, product identification, batch number, CE marking and the BBA logo incorporating the number of this Certificate.

3.2 Rolls should be stored on end on a clean, level surface, and kept under cover.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the products 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 DANOPOL HSF and DANOPOL+ HSF PVC Membranes.

Design Considerations

4 General

4.1 DANOPOL HSF and DANOPOL+ HSF PVC Membranes are satisfactory for use as roof waterproofing, either:

- fully adhered on exposed flat and pitched roofs with limited access
- loose-laid and ballasted on flat roofs with limited access
- on roof gardens on flat roofs, or
- green roofs and brown roofs on flat or pitched roofs.

4.2 Decks to which the products are to be applied must comply with the relevant requirements of BS 6229 : 2018, BS 8217 : 2005 and, where appropriate, *NHBC Standards 2021*, Chapter 7.1.

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

- roof garden (intensive) — a roof with a substantial layer of growing medium with planting that can include shrubs and trees, generally accessible to pedestrians
- green roof (extensive) — a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wild flower species
- brown roof — a roof with a growing medium selected to allow indigenous plant species to inhabit the roof over time; no deliberate planting is undertaken.

4.4 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 products must be provided (see section 9 of this Certificate and the relevant clauses of the Certificate holder's installation instructions).

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

(1) *NHBC Standards 2021* require a minimum fall of 1:60 for green roofs and roof gardens.

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

4.7 Structural decks to which the products are 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.

4.8 Imposed loads, dead loading and wind loads specifications should 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.

4.9 Recommendations for the design of green roofs, brown 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 drainage systems for green roofs, brown roofs or roof gardens must be correctly designed, and the following points should be addressed:

- provision made for access for maintenance purposes
- dead loads can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer.

4.11 Insulation materials to be used in conjunction with the products 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 be used in accordance with that Certificate.

4.12 Contact with bituminous and oil-based products must be avoided as the products are not compatible with lower grades of bitumen. If contact with such products is likely, a separating layer must be interposed before installing the waterproofing membrane. Where doubt arises, the advice of the Certificate holder must be sought.

4.13 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

Installation of the products must only be carried out by installers trained and registered with the Certificate holder.

6 Weathertightness



The products, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture into the interior of a building and enable a roof to comply with the requirements of the national Building Regulations.

7 Properties in relation to fire



7.1 When tested in accordance with DD CEN/TS 1187 : 2012, Test 4, and classified to BS EN 13501-5 : 2016, the following systems achieved a B_{ROOF}(t4) classification and so is unrestricted by the national Building Regulations with respect to proximity to a boundary:

- a 18 mm thick plywood substrate, a 2.5 mm thick bitumen vapour control layer (vcl), 100 mm thick polyisocyanurate (PIR) insulation and 1.5 mm thick, adhesively bonded DANOPOL HSF⁽¹⁾⁽²⁾
- a 18 mm thick plywood substrate, a 2.5 mm thick bitumen vcl, 105 mm thick stone wool insulation and 1.5 mm thick, adhesively bonded DANOPOL HSF⁽³⁾⁽⁴⁾
- a 18 mm thick plywood substrate, a 2.5 mm thick bitumen vcl, 100 mm thick PIR insulation and 1.8 mm thick, adhesively bonded DANOPOL HSF⁽⁵⁾⁽⁶⁾
- a 18 mm thick plywood substrate, a 2.5 mm thick bitumen vcl, 105 mm thick stone wool insulation and 1.8 mm thick, adhesively bonded DANOPOL HSF⁽⁷⁾⁽⁸⁾.

(1) Fire test report, reference P108670-1000, conducted by BRE Global. Report available from the Certificate holder.

(2) Fire classification report, reference P108670-1001, conducted by BRE Global. Report available from the Certificate holder.

(3) Fire test report, reference P108670-1004, conducted by BRE Global. Report available from the Certificate holder.

(4) Fire classification report, reference P108670-1005, conducted by BRE Global. Report available from the Certificate holder.

(5) Fire test report, reference P108670-1002, conducted by BRE Global. Report available from the Certificate holder.

(6) Fire classification report, reference P108670-1003, conducted by BRE Global. Report available from the Certificate holder.

(7) Fire test report, reference P108670-1006, conducted by BRE Global. Report available from the Certificate holder.

(8) Fire classification report, reference P108670-1007, conducted by BRE Global. Report available from the Certificate holder.

7.2 In the opinion of the BBA, a roof incorporating the products will also be unrestricted under the with respect to proximity to a boundary national Building Regulations in the following circumstances:

- protected with 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, brown roofs or green roofs.

7.3 The designation of other specifications should be confirmed by reference to the documents supporting the national Building Regulations.



7.4 The products, when used in pitches of greater than 70°, excluding upstands, should not be used on buildings in England and Wales that have a storey at least 18 m above ground level and contain: one or more dwellings, an institution, a room for residential purposes (excluding any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.



7.5 The products, 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, the plants used may allow flame spread across the roof. This should be taken into consideration when selecting suitable plants for the roof. Appropriate planting irrigation and/or protection should 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 adhesively fixed membranes will be limited by the cohesive strength of the substrate. On substrates of high cohesive strength, the adhesion of the membranes is sufficient to resist the effect of wind suction, thermal cycling and minor structural movements occurring in practice.

8.2 The ballast requirements for loose-laid roof systems must be calculated by a suitably experienced and competent individual in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex. When using gravel ballast, the system must always be loaded with a minimum depth of 50 mm of aggregate. In areas of high wind exposure, the Certificate holder's advice should be sought. Alternatively, concrete slabs on suitable supports can be used.

8.3 The soil used in roof gardens and the ballast on inverted/protected roofs must not be of a type that will be removed or become delocalised owing to wind scour experienced on the roof.

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

9 Resistance to mechanical damage

9.1 The products can accept the limited foot traffic and light concentrated loads associated with installation and maintenance. However, reasonable care should be taken to avoid puncture by sharp objects or concentrated loads.

9.2 Where regular traffic is envisaged, such as for maintenance of lift equipment, a walkway such as DANOLOSA or concrete slabs on bearing pads should be used.

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

10 Resistance to penetration by roots

Tests on a 1.2 mm membrane, using the same PVC compound, indicate that the membranes are resistant to root penetration and can be used in a roof waterproofing system for roof gardens and green roofs.

11 Maintenance



11.1 The products must be the subject of six monthly inspections and maintenance in accordance with BS 6229 : 2018, Chapter 7, to ensure continued satisfactory performance.

11.2 Guidance is available within the latest edition of *The GRO Green Roof Code – Green Roof Code of Best Practice for the UK* for roof garden, green roof or brown roof maintenance.

11.3 Where damage has occurred it should be repaired in accordance with section 16 and the Certificate holder's instructions.

12 Durability



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

12.2 In environments where the products are in contact with organic solvents, the life expectancy of the products may be reduced. In cases of doubt, the advice of the Certificate holder should be sought.

13 Reuse and recyclability

The products contain PVC and polyester, which can be recycled.

14 General

14.1 Installation of DANOPOL HSF and DANOPOL+ HSF PVC Membranes must be carried out by installers trained and approved by the Certificate holder in accordance with the relevant clauses of BS 6229 : 2018, BS 8000-0 : 2014, BS 8000-4 : 1989, BS 8217 : 2005, the Certificate holder's instructions and this Certificate.

14.2 Substrates to which the products are to be applied must be sound, dry, clean and free from sharp projections such as nail heads and concrete nibs. Rough substrates must first be overlaid with a suitable protection layer.

14.3 Installation should not be carried out during inclement weather (e.g. rain, fog or snow). When the temperature is below 5°C, suitable precautions against surface condensation must be taken.

14.4 The need for a vcl should be judged on a case by case basis, taking into account the internal hygrothermal values and the external vapour resistance of the different elements of the system. A vcl must be used when the water absorption by diffusion of the insulation is greater than 3% by volume.

14.5 All flashings must be formed in accordance with the Certificate holder's instructions.

14.6 Soil or other bulk material must not be stored on one area of the roof prior to installation, to ensure localised overloading does not occur.

15 Procedure

Loose-laid applications

15.1 The membranes are laid flat onto the substrate without folds or ripples, with 50 mm minimum side laps and end laps are butted.

15.2 The membranes are fully adhered at the perimeter of the roof in accordance with the Certificate holder's instructions.

15.3 The joints are formed in accordance with sections 15.8 to 15.9 and the Certificate holder's instructions.

15.4 The membranes must be covered by at least a 50 mm depth of well-rounded gravel or other suitable ballast depending on the specification being installed. In areas of high wind exposure, paving slabs set on a suitable support may be considered.

15.5 Side laps are produced either by hot-air welding or by solvent welding using tetrahydrofuran (THF) in accordance with the Certificate holder's instructions. The weld width is a minimum of 40 mm.

15.6 End laps are covered by a 210 mm wide strip of DANOPOL/DANOPOL+ HS 1.5 Coverstrip and welded in accordance with the Certificate holder's instructions.

Fully adhered

15.7 The membranes are laid flat onto the substrate without folds or ripples, with 50 mm minimum side laps and butted at the end of the roll.

15.8 The membranes are folded or rolled back to its centre and either Fleecebond Adhesive or Canister Fleecebond Adhesive applied to the substrate in accordance with the Certificate holder's recommendations, ensuring that no adhesive is applied to the weld area of the membrane. The membranes are rolled out into the wet adhesive. The process is repeated for the other end of the membranes.

15.9 The joints are formed in accordance with sections 15.5 to 15.6 and the Certificate holder's instructions.

16 Repair

Any damage must be repaired by cleaning around the affected area and welding a patch of the membrane over it, as described in section 15.8.

Technical Investigations

17 Tests

17.1 Tests were carried out on DANOPOL HS (the subject of Product Sheet 1 of this Certificate) and DANOPOL HSF and DANOPOL+ HSF PVC Roof Waterproofing Membranes and the results assessed to determine:

- thickness
- mass per unit area
- plasticiser content
- water vapour transmission
- watertightness
- tensile strength and elongation
- tear resistance (nail)
- tear resistance (trapezoidal)
- static loading
- dynamic indentation
- dimensional stability
- low temperature foldability
- wind uplift
- shear strength of joint
- peel of joints
- peel from concrete substrate, control and heat aged (DANOPOL HSF)
- root resistance
- heat ageing
- UV ageing.

17.2 Long term artificial heat and UV ageing was carried out on samples taken from an existing site, followed by comparative low temperature foldability and dynamic indentation testing.

18 Investigations

18.1 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.

18.2 Existing data on fire performance of the membrane were evaluated.

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 : 18 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 elements Classification using data from external fire exposure to roofs tests*
- DD CEN/TS 1187 : 2012 *Test methods for external fire exposure to roofs*
- EN 13956 : 2012 *Flexible sheet for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*
- EN ISO 9001 : 2015 *Quality management systems — Requirements*
- EN ISO 14001 : 2015 *Environmental management systems. Requirements with guidance for use*

19 Conditions

19.1 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.

19.2 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.

19.3 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.

19.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

19.5 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.

19.6 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.