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Agrément Certificate

15/5215

Product Sheet 1 Issue 5

GREEN SUSTAINABLE PRODUCTS ROOFING TILES

ENVIRO TILE

This Agrément Certificate Product Sheet⁽¹⁾ relates to Envirotile, an interlocking compression-moulded polypropylene roof tile, for use as a weatherproof finish to timber pitched roofs with a rafter pitch of 12.5° to 70°.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the product described herein. This product 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 Fifth issue: 18 March 2025

Originally certified on 20 May 2015

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Envirotile, 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 Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(2)	External fire spread
Comment:		A roof incorporating the product may be restricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		A roof incorporating the product will satisfy this Requirement. See section 3 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 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 product can contribute to a roof satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards – construction
Standard:	2.8	Spread from neighbouring buildings
Comment:		A roof incorporating the product may be restricted under this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product will contribute to a roof satisfying this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product 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 – conversion
Comment:		Comments given for the product 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(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The product is acceptable. See sections 8 and 9 of this Certificate.

Regulation:	28(b)	Resistance to moisture and weather
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		A roof incorporating the product may be restricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, Envirotile, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 7.2 *Pitched roofs*.

Fulfilment of Requirements

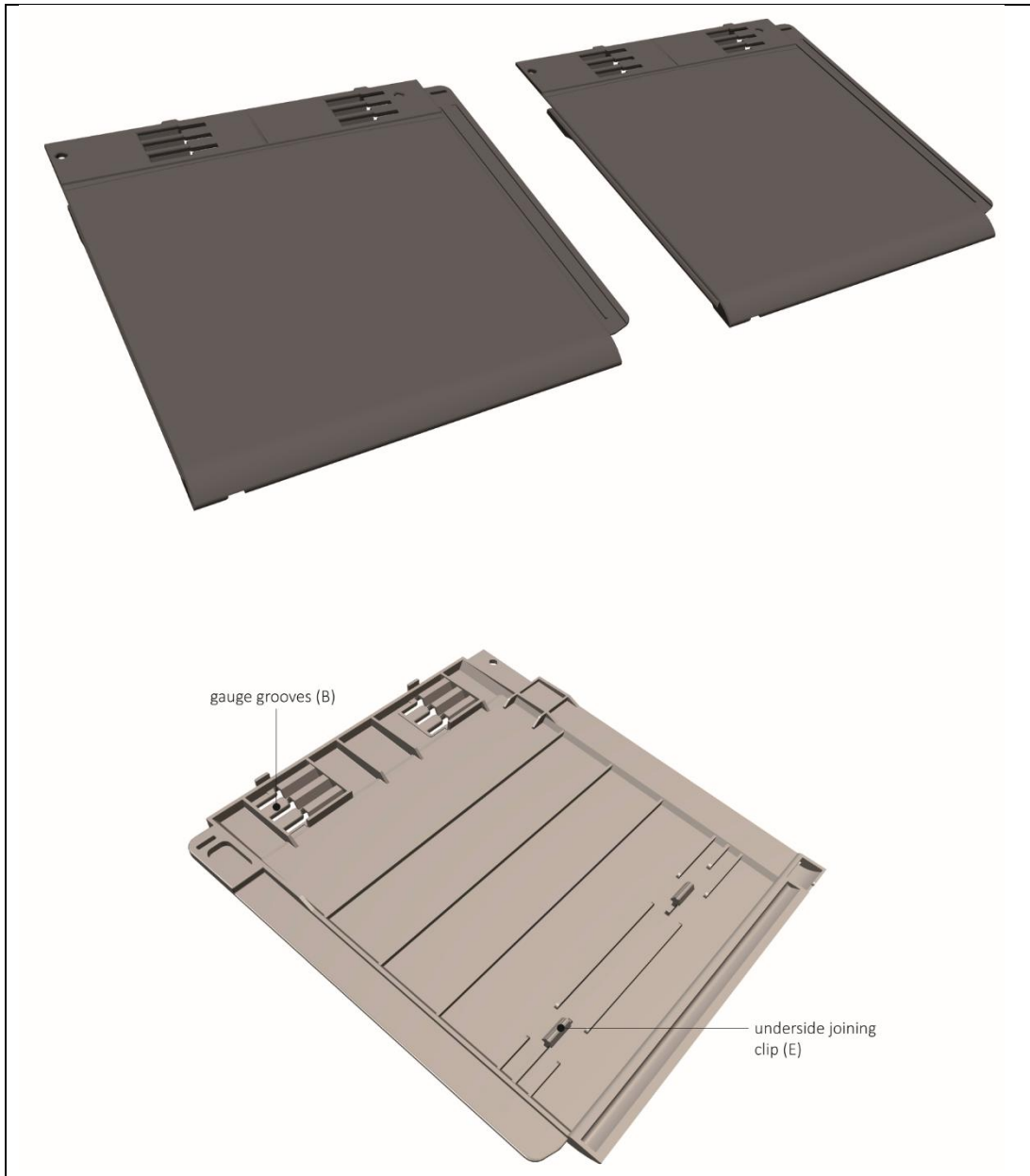
The BBA has judged Envirotile to be satisfactory for use as described in this Certificate. The product has been assessed for use as a weatherproof finish to pitched timber roofs with a rafter pitch of 12.5° to 70°.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Envirotile consists of a compression-moulded polymer composite roof tile. The roof tiles incorporate interlocking features on the underside face (see Figure 1).

Figure 1 Envirotile



The product is supplied with nail holes for fixing.

The product has the nominal characteristics given in Table 1.

<i>Table 1 Nominal characteristics</i>	
Characteristic (unit)	Value
Length (mm)	365
Width (mm)	325
Thickness (mm)	11
Weight per tile (kg)	0.645
Weight per bundle (kg)	6.45
Headlap (mm)	85, 100, 115
Gauge (mm)	280, 265, 250
Cover width (mm)	300
Coverage capacity (tiles per m ²)	11.9, 12.6, 13.3
Weight of tiling (kg·m ⁻²)	8.45, 8.93, 9.47
Colour	Black

Ancillary Items

The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- fascia eaves tray and fixing bar
- ventilated Envirotile
- Envirolay — an insulated underlay
- stainless-steel angular ring shank nails (30 by 3.35 mm) — for pitches of 30° to 70°
- countersunk stainless-steel screws (30 by 4 mm) — for pitches of 12.5° to 30°.

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristic.

1.1 Mechanical properties

1.1.1 The result of a bending moment test is given in Table 2.

Table 2 Bending moment

Product assessed	Assessment method	Requirement	Result
Envirotile	BS EN 492 : 2004 Control	Value achieved	139 Nm·m ⁻¹

1.1.2 On the basis of data assessed, the product has adequate resistance to damage during site handling and installation using conventional roofing methods.

1.1.3 The product has satisfactory resistance to the wind and snow loads likely to be encountered in service. In situations where high local loads may occur, the designer must seek the advice of the Certificate holder, but such advice is outside the scope of this Certificate. Consideration must also be given to the guidance contained in BRE Digest 439.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 The product has been tested for external fire exposure and achieved the classifications given in Table 3 for a pitch of 45°.

Table 3 Tested constructions

System	Assessment method	Requirement	Result
Envirotile System comprising the following components: <ul style="list-style-type: none"> • 150 mm thick pine batten⁽³⁾ • 0.6 mm Envirolay underlay⁽³⁾ • Black Envirotile 	DD CEN/TS 1187 : 2012, Test 4	Classification achieved	B _{ROOF} (t4) ⁽¹⁾
Envirotile System comprising the following components: <ul style="list-style-type: none"> • 18 mm plywood⁽³⁾ • 38 x 25 mm battens⁽³⁾ • 1.5 mm Klober underlay⁽³⁾ • Black Envirotile 	BS 476-3 : 2004	Classification achieved	EXT.S.AA ⁽²⁾

(1) Test report 331674, issued by Exova Warringtonfire, is available from the Certificate holder on request.

(2) Test report 306891, issued by Exova Warringtonfire, is available from the Certificate holder on request.

(3) These components are outside the scope of this Certificate.

2.1.2 These classifications may not be achieved by other colours, constructions or pitches, and can also be affected by other components of the roof, eg insulation materials, substrates/decking and membranes. These constructions must therefore be evaluated by reference to the requirements of the documents supporting the national Building Regulations and any consequent restrictions imposed by those documents, on a case-by-case basis.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 4.

Table 4 Weathertightness

Product assessed	Assessment method	Requirement	Result
Envirotile	Water absorption after 21 days to MOAT 48 : 1991	Value achieved	0.07%
Envirotile	Resistance to driving rain to prEN 15601 : 2006 (tested at 12.5°)		
	Sub test B	> 30 Pa	Pass
	Sub test D	No leakage	Pass
Envirotile	Max design value of the fastener uplift resistance (R _d) to DD CEN/TS 15087 : 2005	Value achieved	598 N

3.1.2 On the basis of data assessed, the product, when used in conjunction with a suitable roof tile underlay, has adequate resistance to the ingress of wind-driven rain or snow when installed on a roof with a rafter pitch of between 12.5° and 70°.

3.1.3 When fixed in accordance with the Certificate holder's instructions, the product is resistant to the effects of wind uplift likely to be encountered in the UK. Where conditions of exposure may be severe, consideration must be given to the recommendations outlined in BS 5534 : 2014.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the product were assessed.

8.2 Specific test data were assessed as given in Table 5.

Product assessed	Assessment method	Requirement	Result
Envirotile	Dimensional stability to a BBA Method Length change Width change	Value achieved	-0.07% -0.03%
Envirotile	Bending moment to BS EN 492 : 2004 - heat ageing at 80°C for 56 days - UV ageing to BS EN ISO 4892-3 : 2000 for 2000 hours - exposure to water at 40°C for 56 days - 100 freeze/thaw cycles to BS EN 492 : 2004 Clause 7.4.1	$R_L \geq 0.75$	Pass Pass Pass Pass
Envirotile	Colour stability to ISO 7724-3 : 1984 - UV ageing to BS EN ISO 4892-3 : 2000 for 2000 hours	No significant colour change	Pass
Envirotile	Heat/rain cycling to BS EN 492 : 2004	No visible cracks, delamination or other defects in the tiles that would affect performance	Pass

8.2.1 On the basis of data assessed there may be some fading of colour over long exposure periods, but such fading will be consistent across any one elevation.

8.3 Service life

Under normal service conditions, the product will have a life in excess of 20 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance specified in this Certificate.

9.1.2 Roofs incorporating the product and subject to the national Building Regulations must be designed and constructed in accordance with the relevant recommendations of BS 5250 : 2021, BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023. The designer must select a construction appropriate to its location, paying due attention to design detailing, workmanship and materials to be used.

9.1.3 The roof construction must be adequate to resist the loadings detailed in BS EN 1991-1-1 : 2002 and BS EN 1991-1-4 : 2005 and their UK National Annexes. The roof construction must be in accordance with the relevant requirements of BS 5534 : 2014.

9.1.4 It is essential that roofs are designed and constructed to incorporate precautions to prevent moisture penetration and the formation of condensation (eg by adequate ventilation).

9.1.5 The roof space and batten space must be adequately ventilated in accordance with BS 5250 : 2021.

9.1.6 Slight colour variations may exist between batches and, therefore, the product should be randomised on site to achieve a consistent appearance when installed.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate, the Certificate holder's instructions and the relevant recommendations of BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023, using conventional tiling techniques.

9.2.3 Where the tiles are to be used on an existing roof structure, the recommendations contained in BS 5534 : 2014, Section 6.14, and BS 8000-6 : 2023, Section 11, clause 11.1.3, must be followed. Consideration must also be given to the advice contained in BRE Defect Action Sheets DAS 124 : 1988 and DAS 125 : 1988.

9.2.4 The tiles may be cut (for use at eaves and valleys) with a medium-toothed handsaw. The use of a chalk line to determine straight edge cutting is recommended for use with valley and hip detail.

9.2.5 After cutting and/or drilling, slates must be cleaned to avoid possible staining.

9.2.6 Any roof clad in tiles must be treated as fragile, and the recommendations in section 9.4.3 of this Certificate must be followed. Precautions must be taken to prevent danger to the public from falling, broken or displaced tiles.

9.2.7 Every tile must be fixed using stainless-steel angular ring shank nails (30 by 3.35 mm) for pitches of 30° to 70° and countersunk stainless-steel screws (30 by 4 mm) for pitches of 12.5 to 30°.

9.2.8 It is essential that fixing clips are correctly installed and the interlocking lugs are fully engaged in the correct position.

9.2.9 Care is required to ensure that nails are not overdriven. They must be tapped rather than driven home.

9.2.10 At verges, either side of hips or valleys, and where the roof meets an abutment, the last tile in each course must be twice nailed at the head and, in addition, once at the tail (except left-hand verge tiles). At verges, and where the tails of tiles are unsecured at valleys, verge clips must also be used. At eaves and top edges, the last course of tiles must be twice nailed at the head and, in addition, once at the tail. Tiles in the remaining area must be nailed at the head (through the right-hand fixing holes) and, in addition, once at the tail.

9.2.11 Ridge and hip details may be completed using standard concrete or clay products, and verge details may be completed using traditional mortar bedding techniques. Dry-fix products may also be used, but their performance is outside the scope of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA and on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the product must be carried out by competent roofers/tilers experienced with this type of product.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the product in use requires that it is suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

The following requirements apply in order to satisfy the performance assessed in this Certificate:

9.4.2 Roofs covered with the product must be visually inspected twice a year to ensure continued satisfactory performance. Any damaged product must be replaced.

9.4.3 Care is required when carrying out maintenance work on tile roofs, and the recommendations contained in BS 5534 : 2014, Clause 6.14, BS 8000-0 : 2014 and BS 8000-6 : 2023 must be followed.

9.4.4 Damaged tiles must be replaced by following the Certificate holder's instructions and the relevant sections of BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is delivered to site in packs of 10, shrink-wrapped on wooden pallets, each pallet containing 72 packs. The wrapping bears the Certificate holder's label and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The product must be stored on a level base in dry conditions at temperatures above 0°C, under cover and away from the possibility of damage.

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the 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.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by SGS (Certificate GB19/962864).

Bibliography

BS 476-3 : 2004 *Fire tests on building materials and structures — Classification and method of test for external fire exposure to roofs*

BS 5250 : 2021 *Management of moisture in buildings — Code of practice*

BS 5534 : 2014 + A2 : 2018 *Slating and tiling for pitched roofs and vertical cladding — Code of practice*

BS 8000-0 : 2014 + A1 : 2024 *Workmanship on construction sites — Introduction and general principles*

BS 8000-6 : 2023 *Workmanship on construction sites — Slating and tiling of roofs and walls — Code of practice*

BS EN 492 : 2004 *Fibre-cement slates and fittings — Product specification and test methods*

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 1991-1-4 : 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 ISO 4892-3 : 2000 *Plastics — Methods of exposure to laboratory light sources — Fluorescent UV lamps*

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

BRE Defect Action Sheets 124 : 1988 *Pitched roofs: Renovation of older type timber roofs — Re-tiling or re-slating*

BRE Defect Action Sheets 125 : 1988 *Pitched roofs: Re-tiling or re-slating of older type timber roofs*

BRE Digest 439 *Roof loads due to local drifting of snow*

DD CEN/TS 1187 : 2012 *Test methods for external fire exposure to roofs*

DD CEN/TS 15087 : 2005 *Determination of the uplift resistance of installed clay and concrete interlocking tiles for roofing — Test method for mechanical fasteners*

ISO 7724-3 : 1984 *Paints and varnishes — Colorimetry — Calculation of colour differences — Calculation of colour differences*

MOAT 48 : 1991 *Technical guide for the assessment of the durability of fibre reinforced cement products (without asbestos) for external use*

prEN 15601 : 2006 *Hygrothermal performance of buildings — Resistance to wind-driven rain of roof coverings with discontinuously laid small elements — Test method*

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product 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
- 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
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

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.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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.

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

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 or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product 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.

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