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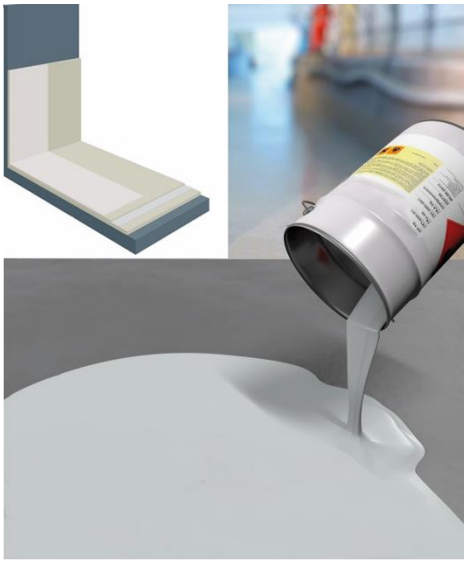
Agrément Certificate
16/5326
Product Sheet 1 Issue 4

FLEET LIQUID APPLIED WATERPROOFING SYSTEMS

FLEET COAT 30

This Agrément Certificate Product Sheet(1) relates to Fleet Coat 30, a polymethyl methacrylate liquid-applied roof waterproofing system for use on inverted roofs, exposed flat and pitched roofs with limited access, green roofs on flat, zero fall and pitched roofs, and roof garden specifications on flat and zero fall roofs.

(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 Fourth issue: 20 September 2023
Originally certified on 15 June 2016

Hardy Giesler
Chief Executive Officer

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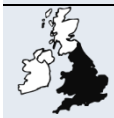
SUMMARY OF ASSESSMENT AND COMPLIANCE

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 Fleet Coat 30, 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(1)**	**External fire spread**
Comment:		The product is restricted by this Requirement in some circumstances. See section 2 of this Certificate.
Requirement:	**B4(2)**	**External fire spread**
Comment:		On a suitable substructure, the product may contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The product will enable a roof to 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 satisfies the requirements of this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	2.6	Spread to neighbouring buildings
Standard:	2.7	Spread to external walls
Comment:		The product is restricted under clauses 2.6.4(1)(2) and 2.7.2(1)(2) of these Standards in some circumstances. See section 2 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		When applied to a suitable substructure, the product may contribute to satisfying 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 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 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 – conversions**
Comment:		All 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) (iii)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The product will enable a roof to satisfy the requirements of this Regulation. See section 3 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The product is restricted by this Regulation in some circumstances. See section 2 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		On a suitable substructure, the use of the product may contribute to satisfying this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, Fleet Coat 30, 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 7.1 *Flat roofs, terraces and balconies.*

In addition, in the opinion of the BBA, the product, when installed and used in accordance with this Certificate can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standard for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the product.

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

Fulfilment of Requirements

The BBA has judged Fleet Coat 30 to be satisfactory for use as described in this Certificate. The product has been assessed as a waterproofing system on exposed flat and pitched roofs with limited access, in green roof applications on flat, zero fall and pitched roofs, and roof garden specifications on flat and zero fall roofs.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Fleet Coat 30 consists of:

- Fleet Coat 30 — a two-component polymethyl methacrylate-based waterproofing resin available in Slate Grey (RAL 7016). Other RAL colours are available on request
- Fleet Junction — a thixotropic version of the standard resin. For use in detailing at upstands, corners, connections and other details, available in Slate Grey (RAL 7016). Other RAL colours are available on request
- Fleet Coat LT — a low-temperature installation version of the standard resin, with a modified cure system, to allow application between +25 and -15°C. Available in Slate Grey (RAL 7016). Other RAL colours are available on request

- Fleet Catalyst — a polymethyl methacrylate-based catalyst, used with all three resin versions as a two-component system
- Fleet 105 Fleece — a 110 $g \cdot m^{-2}$ polyester fleece for use as a reinforcement
- Fleet Primer A1 — a non-pigmented primer based on a two-component fast-reactive polymethyl methacrylate resin, for the preparation of asphaltic and bituminous substrates
- Fleet Primer P — a non-pigmented primer based on a two-component fast-reactive and fast-curing polymethyl methacrylate resin, for the preparation of absorbent substrates such as concrete, screeds and timber.

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:

- Fleet Primer M — a one component, solvent-free, acrylate-based fast-reactive primer for metal substrates, available in grey
- Fleet Cover S2A and S2B — a flexible, self-levelling mortar for use in levelling rough substrates of less than 10 mm depth, levelling of gradients, and as additional protection in trafficked areas such as roof terraces, balconies and multi-storey car parks
- Fleet Mortar Resin/Aggregate — for use in levelling rough substrates of greater than 10 mm depth and levelling of gradients
- Fleet Sealer Coat — a flexible, UV-stabilised, pigmented surface sealant, based on polymethyl methacrylate, available in Slate Grey (RAL 7016). Other RAL colours are available on request
- Fleet Deco Chips — an acrylate-based topping available in black, grey and white, for use on a surface sealant coat and decorative medium
- Fleet HD Coating — a flexible, filled, slip-resistant surface finish based on polymethyl methacrylate, available in Slate Grey (RAL 7016)
- Fleet Debonding Tape – for use in providing a bond breaker at expansion / construction joints
- Fleet Surfacer / Filler — for use in filling small cracks and joints in the substrate
- Fleet Cleaner — for use in cleaning the substrate prior to the installation of the product
- Fleet Primer G — a fast-reactive combination primer for interface details and upstands with changing substrate materials
- Fleet Resin MF – a fast-curing, dust-suppressing, ultra-low viscosity resin with very good penetration on mineral substrates
- Fleet Primer MF – a fast-curing, low-viscosity primer with good penetration properties on mineral substrates
- Fleet Primer Damp – a fast-curing, low-viscosity primer with good penetration properties on mineral substrates.
- Fleet Primer FPO — a one-component primer used as a bonding agent between FPO and TPO
- Fleet Coat 236 — a high-grade PMMA-based waterproofing resin for waterproofing main areas, developed specifically for spray applications
- Fleet Proof A — a high-grade, highly flexible, low-odour PMMA-based waterproofing resin
- Fleet Proof B — a high-grade, flexible, low-odour PMMA-based waterproofing resin
- Fleet Coat GM — a high-grade, highly flexible, low-odour PMMA-based waterproofing resin
- Fleet LD Coating – for use as a wearing layer for Fleet systems
- Fleet Translucent Finish — a colourless, clear and mechanically durable sealer for surfaces with topping
- Fleet Reinforced Putty — a highly flexible, fibre-filled waterproofing product for sealing minor penetrations, eg screws
- Fleet Plus VRM – a prefabricated, compression-resistant mesh for use on cementitious substrates.

Applications

The product is intended for use on inverted roofs, exposed flat and pitched roofs with limited access, on the following substrates:

- concrete
- bituminous
- timber
- metal
- plastic.

The product is also satisfactory for use in green roof applications on flat, zero fall and pitched roofs, and roof gardens on flat and zero fall roofs on concrete substrates.

Definitions for products and applications inspected

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

- limited access roof — a roof subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc
- zero fall roof — a roof having a finished fall which can vary between 0 and 1:80(1)
- flat roof — a roof having a minimum finished fall of 1:80(1)
- pitched roof — a roof having a fall in excess of 1:6
- 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.

(1) *NHBC Standards* 2023 require a minimum fall of 1:60 for green roofs and roof gardens.

Product assessment – key factors

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

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 When tested to CEN/TS 1187 : 2012 Test 4 and classified to BS EN 13501-5 : 2016, the constructions given in Table 1 of this Certificate achieved B_{ROOF}(t4) for slopes below 10°.

Table 1 External fire spread tests

	System 1	System 2	System 3
Substrate	12.5 mm cement board	12.5 mm cement board	≥ 18 mm OSB/3
Primer	1 mm Fleet Primer P	—	SBS adhesive primer(1)
VCL	—	0.6 mm self-adhesive bituminous membrane foil faced(1)	0.6 mm self-adhesive bituminous membrane foil faced(1)
Adhesive	—	—	PU insulation adhesive(1)
Insulation	—	130 mm PIR tissue faced insulation(1)	25 mm up to any thickness PIR tissue-faced insulation (single or double layered)(1)
Primer	—	—	SBS adhesive primer(1)
Carrier membrane	—	0.6 mm self-adhesive bituminous membrane foil faced(1)	0.6 mm self-adhesive bituminous membrane foil faced(1)
Waterproofing	3 mm Fleet Coat 30	3 mm Fleet Coat 30	3 mm Fleet Coat 30

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

2.1.2 On the basis of data assessed, the constructions listed in Table 1 will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a boundary.

2.1.3 A roof incorporating the product will also be unrestricted under the national Building Regulations with respect to a boundary in the following circumstances:

- when protected by an inorganic covering (eg gravel or paving slabs) 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 and green roofs.

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

2.1.5 If allowed to dry, plants used in a roof garden 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 must be applied to ensure the overall fire-rating of the roof is not compromised.

2.2 Reaction to fire

2.2.1 The Certificate holder has declared a reaction to fire classification of Class E to BS EN 13501-1 : 2018(1) for the product.

2.2.2 On the basis of data assessed, the product will be restricted in use under the documents supporting the national Building Regulations in some cases.

2.2.3 In England, the product, when used in pitches greater than 70°, excluding upstands, should not be used less than 1 m from a boundary, or on residential buildings more than 11 m in height or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions should also be included in calculations of unprotected area.

2.2.4 In Wales and Northern Ireland, the product, when used in pitches greater than 70°, excluding upstands, should not be used less than 1 m from a boundary, or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions should also be included in calculations of unprotected area.

2.2.5 In Scotland, when used in pitches greater than 70°, excluding upstands, the product should not be used on buildings less than 1 m from a boundary or with a storey 11 m or more above the ground level or on some entertainment, assembly, hospital and residential care buildings. These constructions should also be included in calculations of unprotected area.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

Data were assessed for the following characteristics.

3.1.1 Results of weathertightness tests are given in Table 2.

Table 2 Weathertightness tests

Product assessed	Assessment method	Requirement	Result
Fleet Coat 30 reinforced with Fleet 105 Fleece	Watertightness to EOTA TR 003 : 1999	No evidence of water leakage	Pass
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Effects of day joints to EOTA TR 004 : 2004 concrete substrate	≥ 50 kPa	Pass
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Resistance to wind loads to EOTA TR 004 : 2004 concrete substrate steel substrate pine wood substrate plastic substrate	≥ 50 kPa	Pass
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer A1	Resistance to wind loads to EOTA TR 004 : 2004 bitumen substrate	≥ 50 kPa	Pass
Fleet Coat 30 reinforced with Fleet 105 Fleece	Water vapour transmission to BS EN 1931 : 2000	Declared value $\mu \geq 4330$	Pass

3.1.2 On the basis of data assessed, Fleet Coat 30, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture into the interior of a building and so satisfy the requirements of the national Building Regulations.

3.1.3 On the basis of data assessed, the adhesion of the bonded product is sufficient to resist the effects of wind suction, elevated temperatures and thermal shock conditions likely to occur in practice and remain weathertight.

3.2 Resistance to mechanical damage

3.2.1 Results of resistance to mechanical damage tests are given in Table 3.

Table 3 Resistance to mechanical damage tests

Product assessed	Assessment method	Requirement	Result
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to static indentation to EOTA TR 007 : 2004 23°C, concrete substrate	Value achieved	L3
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Resistance to static indentation to EOTA TR 007 : 1999 23°C, steel substrate	Value achieved	L4
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer M	Resistance to static indentation to EOTA TR 007 : 2004 23°C, steel substrate	Value achieved	L4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to static indentation to EOTA TR 007 : 2004 23°C, mineral wool substrate	Value achieved	L3
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 23°C, concrete substrate	Value achieved	I3
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 –20°C, concrete substrate	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer M	Resistance to dynamic indentation to EOTA TR 006 : 1999 –20°C, steel substrate	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 23°C, mineral wool substrate	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Tensile strength to BS EN ISO 527-1 : 2019 longitudinal direction	Value achieved	6.0 MPa
	Tensile strength to BS EN ISO 527-1 : 2019 transversal direction	Value achieved	6.7 MPa
Fleet Coat 30 reinforced with Fleet 105 Fleece	Elongation at break to BS EN ISO 527-1 : 2019 longitudinal direction	Value achieved	40.1%
	Elongation at break to BS EN ISO 527-1 : 2019 transversal direction	Value achieved	32.6%

3.2.2 On the basis of data assessed, Fleet Coat 30 can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance and the effects of minor structural movement while remaining weathertight.

3.2.3 Where traffic in excess of the examples given in section 3.2.2 is envisaged, such as for maintenance of lift equipment, a walkway must be provided (for example, using concrete slabs supported on bearing pads or the Certificate holder's walkway sheets). Reasonable care must be taken to avoid puncture of the membranes by sharp objects or concentrated loads.

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

3.3 Resistance to root penetration

3.3.1 Results of resistance to root penetration tests are given in Table 4.

Table 4 Resistance to root penetration tests

Product assessed	Assessment method	Requirement	Result
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to root penetration to BS EN 13948 : 2007	No root penetration after 2 years	Pass

3.3.2 On the basis of data assessed, the product will resist penetration by plant roots and remain weathertight.

3.3.3 Fleet Coat 30 can be used as a layer in the waterproofing system in green roof and roof garden specifications, acting as the root protection layer.

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 this product were assessed.

Specific test data were assessed as shown in Table 5.

Table 5 Durability tests

Product assessed	Assessment method	Requirement	Result
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to static indentation to EOTA TR 007 : 2004 80°C, concrete substrate Surface water ageing 60 days at 60°C	Value achieved	L3
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Resistance to static indentation to EOTA TR 007 : 2004 23°C, steel substrate Surface water ageing 180 days at 60°C	Value achieved	L4
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer M	Resistance to static indentation to EOTA TR 007 : 2004 80°C, steel substrate Surface water ageing 216 days at 60°C	Value achieved	L4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 –20°C, concrete substrate Heat ageing 200 days at 80°C	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 –10°C, concrete substrate UV ageing 1000 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece	Resistance to dynamic indentation to EOTA TR 006 : 1999 –10°C, concrete substrate UV ageing 1000 MJ·m^{-2} Xenon Arc at 60°C	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer M	Resistance to dynamic indentation to EOTA TR 006 : 1999 –10°C, steel substrate UV ageing 1200 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	I4
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Resistance to fatigue movement to EOTA TR 008 : 2004 –10°C, 1000 cycles, concrete substrate	No leakage after 24-hour exposure to 100 mm head of water. No debonding or, if	Pass
	Resistance to fatigue movement to EOTA TR 008 : 2004 –10°C, 50 cycles, concrete substrate Heat ageing 200 days at 80°C	any, not exceeding 75 mm in total or 50 mm on one side of the gap	Pass
Fleet Coat 30 reinforced with Fleet 105 Fleece	Tensile strength to BS EN ISO 527-1 : 2019 Heat ageing 200 days at 80°C	Value achieved	5.9 MPa
	Tensile strength to BS EN ISO 527-1 : 2019 longitudinal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	5.2 MPa
	Tensile strength to BS EN ISO 527-1 : 2019 transversal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	6.4 MPa
	Tensile strength to BS EN ISO 527-1 : 2019	Value achieved	5.6 MPa

	longitudinal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 60°C		
	Tensile strength to BS EN ISO 527-1 : 2019 transversal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 60°C	Value achieved	6.7 MPa
	Tensile strength to BS EN ISO 527-4 : 2021 UV ageing 1200 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	5.6 MPa
Fleet Coat 30 reinforced with Fleet 105 Fleece	Elongation at break to BS EN ISO 527-1 : 2019 Heat ageing 200 days at 80°C	Value achieved	28.7%
	Elongation at break to BS EN ISO 527-1 : 2019 longitudinal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	40.1%
	Elongation at break to BS EN ISO 527-1 : 2019 transversal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	32.8%
	Elongation at break to BS EN ISO 527-1 : 2019 longitudinal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 60°C	Value achieved	43.6%
	Elongation at break to BS EN ISO 527-1 : 2019 transversal direction UV ageing 1000 MJ·m^{-2} Xenon Arc at 60°C	Value achieved	34.4%
	Elongation at break to BS EN ISO 527-4 : 2021 UV ageing 1200 MJ·m^{-2} Xenon Arc at 50°C	Value achieved	55.8%
Fleet Coat 30 reinforced with Fleet 105 Fleece primed with Fleet Primer P	Resistance to delamination to EOTA TR 004 : 2004 concrete substrate Surface water ageing 60 days at 60°C	≥ 50 kPa	Pass
	Resistance to delamination to EOTA TR 004 : 2004 concrete substrate Surface water ageing 180 days at 60°C	≥ 50 kPa	Pass

8.3 Service life

Under normal service conditions, the product will have a life of at least 30 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 meet the performance assessed in this Certificate:

9.1.1.1 Decks to which the product is to be applied must comply with the relevant requirements of BS 6229 : 2018, BS 8217 : 2005 and, where appropriate, *NHBC Standards* 2023, Chapter 7.1.

9.1.1.2 For design purposes of flat roofs, twice the minimum finished fall must be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, and direction of falls.

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

9.1.1.4 Imposed loads, dead loading and wind loads must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

9.1.1.5 The drainage systems for zero fall roofs, green roofs or roof gardens must be correctly designed, and the following points must be addressed:

- provision made for access for maintenance purposes
- for zero fall roofs, it is particularly important to identify the correct drainage points, to ensure that drainage is sufficient and effective in accordance with the relevant clauses of BS 6229 : 2018
- dead loads for green roofs and roof gardens can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer.

9.1.1.6 Insulation materials to be used in conjunction with the product must be in accordance with the Certificate holder's instructions and be either:

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and used in accordance with, and within the limitations of, that Certificate.

9.1.1.7 The soil used in intensive planting must not be of a type that will be removed, or become localised, owing to wind scour on the site.

9.1.1.8 It must be recognised that the type of plants used could significantly affect the wind loads experienced in service.

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 clauses of BS 6229 : 2018, BS 8000-0 : 2014 and BS 8000-4 : 1989 and the Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*. A summary of instructions and guidance is provided in Annex A.

9.2.3 Substrates to which the product is to be applied must be sound, clean, dry, free from laitance and adhesion-reducing particles, and free from ice and frost.

9.2.4 The substrate must also be free from sharp projections such as nail heads and concrete nibs. Power-floated concrete, cement slurry, dirt and grease must be shot blasted or mechanically abraded to help ensure the primer can penetrate into the surface. The Certificate holder's advice must be sought as to the suitability of the substrate to

receive the product and for suitable cleaning procedures, including the use of a proprietary surface cleaner/HSE-approved fungicidal wash where required.

9.2.5 Rough substrates must be made good using the appropriate levelling compound in accordance with the Certificate holder's instructions.

9.2.6 Defects such as large cracks must be repaired prior to application of the product in accordance with the Certificate holder's instructions.

9.2.7 Installation must not be carried out during inclement weather (eg rain, fog or snow) or when the substrate or air or material temperature is outside of the range specified in Table 6. The substrate temperature must be at least 3°C above the dew-point during application and curing. The relativity humidity must be ≤ 90%.

Table 6 Usage temperature ranges

Product	Temperature range (°C)		
	Air ambient	Substrate	Material
Fleet Primer A1	+3 to +35	+3 to +50	+3 to +30
Fleet Primer P	+3 to +35	+3 to +50	+3 to +30
Fleet Primer M	+3 to +35	+3 to +50	+3 to +30
Fleet Coat 30	-5 to +35	+3 to +50	+3 to +30
Fleet Junction	-5 to +35	+3 to +50	+3 to +30
Fleet Coat LT	-15 to +25	-10 to +30	+3 to +20
Fleet Cover S2A and S2B	-5 to +25	-5 to +30	+3 to +20
Fleet Sealer Coat	-5 to +35	+3 to +40	+3 to +30

9.2.8 Previously coated areas must be checked for integrity and adequate adhesion to the substrate. Adhesion checks must be carried out to ensure that the product is compatible with the existing surface. The Certificate holder must be consulted for details of suitable test methods and requirements before use. If the substrate requires preparing after bond testing, the appropriate methods (such as high pressure washing, captive shot blasting or other mechanical abrasive methods) can be used. Advice must be sought from the Certificate holder.

9.2.9 Fleet Catalyst must be mixed with the resin for 2 minutes in accordance with the Certificate holder's instructions using a mixing tool with twin-paddle stirrer at a slow-speed setting, in the weight ratio specified in Table 7.

Table 7 Substrate temperature to percentage catalyst

Resin	Substrate temperature to percentage catalyst				
	–10 to +2°C	+3 to +14°C	+15 to +34°C	+35 to +39°C	+40 to +50°C
Fleet Coat 30 / Fleet Junction	—	4%	2%	2%	1%
Fleet Coat LT	6%	4%	2%	—	—

9.2.10 The primer coat must be allowed to dry prior to overcoating with Fleet Coat 30 / Fleet Junction / Fleet Coat LT waterproofing membrane, ensuring that any minimum/maximum drying times are observed in accordance with the Certificate holder's instructions.

9.2.11 Fleet Coat 30 / Fleet Junction / Fleet Coat LT resin must be applied at a minimum application rate of 1.5 kg·m^{-2} for the waterproofing of details, such as penetrations and expansion joints.

9.2.12 Fleet 105 Fleece must be immediately applied into the wet resin, ensuring that any trapped air pockets are removed.

9.2.13 A second layer of Fleet Coat 30 / Fleet Junction / Fleet Coat LT resin must be applied (wet in wet) at a minimum application rate of 1 kg·m^{-2}, ensuring that the fleece is saturated. Typical application rates for various situations are:

- smooth substrates 2.5 kg·m^{-2}
- fine-grained substrates 3 kg·m^{-2}
- rough substrates 3.5 kg·m^{-2}
- below Fleet Sealer Coat / Fleet Cover S2A and S2B 2.5 kg·m^{-2}.

9.2.14 Fleece overlaps must be at least 5 cm wide.

9.2.15 Expansion or construction joints must be additionally reinforced prior to the application of the main waterproofing layer, in accordance with the Certificate holder's instructions.

9.2.16 If work is interrupted or when it is completed, the tools must be cleaned thoroughly with Fleet Cleaner within the pot life of the material (approximately 10 minutes), using a brush.

9.2.17 Following installation, the treated surface must be tested using a non-destructive test, eg holiday test, where required. Damaged areas must be repaired in accordance with section 9.4.

9.2.18 The NHBC requires that Fleet Coat 30, once installed, is inspected in accordance with *NHBC Standards* 2023, Chapter 7.1, Clause 7.1.11, including undergoing an appropriate integrity test, where required. Any damage to the product assessed in this Certificate must be repaired in accordance with section 9.4 of this Certificate and reinspected, in order to maintain product performance.

9.3 Workmanship

9.3.1 Practicability of installation was assessed on the basis of the Certificate holder's information and the relevant clauses of BS 6229 : 2018, BS 8000-0 : 2014 and BS 8000-4 : 1989. To achieve the performance described in this Certificate, the product must only be installed by installers who have been trained and approved by the Certificate holder.

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 The product must be the subject of six-monthly inspections and maintenance in accordance with the recommendations in BS 6229 : 2018, Chapter 7, and the manufacturer's own maintenance requirements, where relevant, to ensure continued satisfactory performance.

9.4.3 Green roofs and roof gardens must be the subject of regular inspections, particularly in autumn after leaf fall and in spring, to ensure unwanted vegetation and other debris are cleared from the roof and drainage outlets (see section 9.1).

9.4.4 Minor damage can be repaired by cleaning back to the unweathered material and recoating the damaged area with the membrane at the appropriate application rate as described in the Certificate holder's instructions.

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 primer and waterproofing resin components are delivered to site in 5, 10 or 25 kg containers bearing the product's name, batch number, health and safety information and the BBA logo incorporating the number of this Certificate. The Fleet Catalyst for the resin components is supplied in a 100 g plastic bag.

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

11.2.1 Resins must be stored in a ventilated, dry location, away from heat and oxidising agents and out of direct sunlight, and at a temperature between 0 and 25°C.

ANNEX A – SUPPLEMENTARY INFORMATION †

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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

Additional information on installation

General

A.1 Where necessary, substrate priming should be carried out using a sheepskin roller in accordance with the Certificate holder's instructions.

A.2 To assess the suitability of a substrate to receive the product, bond tests should be carried out, generally in accordance with BS EN 1542 : 1999, in consultation with the Certificate holder. If bonding problems occur, advice should be sought from the Certificate holder.

A.3 Detailing should be carried out in accordance with the Certificate holder's instructions.

A.4 All equipment should be cleaned after use with Fleet Cleaner.

A.5 Recommendations for the design of green roofs and roof garden specifications are available in the latest edition of *The GRO Green Roof Code – Green Roof Code of Best Practice for the UK*.

A.6 Additional guidance for inverted roof specifications is given in BBA Information Bulletin No 4 *Inverted roofs – Drainage and U value corrections.*

Procedure

A.7 The primer is applied to the prepared substrate using a sheepskin roller, smoothing trowel or finish roller.

A.8 Once the coating has cured, a second coat of primer should be applied to cover any defects, ensuring that a continuous pore free primer film is achieved.

A.9 Fleet Coat 30 / Fleet Junction / Fleet Coat LT resin is applied using a sheepskin roller or brush.

A.10 Fleet 105 Fleece is immediately applied into the wet resin and embedded using a sheepskin roller.

A.11 A second layer of Fleet Coat 30 / Fleet Junction / Fleet Coat LT resin is applied (wet in wet), ensuring that the fleece is saturated.

A.12 If existing expansion joints have to be waterproofed, a joint tape and two layers of waterproofing with fleece reinforcement are applied along the centre of the joint.

A.13 The main area is waterproofed in the same way as the details, and these are integrated with a minimum fleece overlap of 5 cm.

Maintenance

A.14 Additional guidance on maintenance for green roofs and roof gardens is available in the latest edition of *The GRO Green Roof Code – Green Roof Code of Best Practice for the UK*.

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 1542 : 1999 *Products and systems for the protection and repair of concrete structures — Test methods — Measurement of bond strength by pull-off*

BS EN 1931 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of water vapour transmission properties*

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 + A2 : 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 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*
BS EN 13501-5 : 2016 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roof tests*

BS EN 13948 : 2007 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to root penetration*

BS EN ISO 527-1 : 2019 *Plastics — Determination of tensile properties — General principles*
BS EN ISO 527-4 : 2021 *Plastics — Determination of tensile properties — Test conditions for isotropic and orthotropic fibre-reinforced plastic composites*

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

EOTA TR 003 : 1999 *Determination of the watertightness*

EOTA TR 004 : 2004 *Determination of the resistance to delamination*

EOTA TR 006 : 1999 *Determination of the resistance to dynamic indentation*

EOTA TR 007 : 2004 *Determination of the resistance to static indentation*

EOTA TR 008 : 2004 *Determination of the resistance to fatigue movement*

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
- 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.

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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