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Agrément Certificate

20/5833

Product Sheet 1

RESTEC ROOF WATERPROOFING SYSTEMS

FLEXITEC PLATINUM

This Agrément Certificate Product Sheet⁽¹⁾ relates to Flexitec Platinum, a liquid-applied roof waterproofing system for use on limited access and, where appropriate, pedestrian access roofs, on warm and cold exposed roofs (flat and pitched), green roofs (flat, zero fall and pitched), protected warm and cold roofs (flat and zero fall), inverted roofs (flat and zero fall), terraces and walkways across roof areas.

(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

Weather-tightness — the system will resist the passage of moisture into the interior of a building (see section 6).

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

Adhesion — the adhesion of the system is sufficient to resist the effects of any likely wind suction and the effects of thermal or other minor movement likely to occur in practice (see section 8).

Resistance to mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with installation, maintenance, pedestrian traffic (anti-slip specification) and minor structural movements occurring in service (see section 9).

Resistance to root penetration — the system is suitable for use in green roof (extensive) specifications (see section 10).

Slip resistance — the anti-slip specification of the system, when wet or dry, has a satisfactory co-efficient of friction to enable its use in pedestrian areas (see section 11).

Durability — under normal service conditions, the system will provide a durable waterproof covering with a service life of at least 25 years (see section 13).

The BBA has awarded this Certificate to the company named above for the system described herein. This system have 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 Second issue: 23 May 2022

Originally certificated on 1 December 2020

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, Flexitec Platinum, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(1)	External fire spread
Comment:		The system is restricted by this Requirement in some circumstances. See section 7.4 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		On suitable substructures, the system may enable a roof to be unrestricted under this Requirement. See sections 7.1 to 7.3 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The system will enable a roof to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The system is acceptable. See section 13.1 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The system can satisfy the requirements of this Regulation. See sections 12.1 and 13.1 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings
Comment:		The system is restricted under clause 2.6.4 ⁽¹⁾⁽²⁾ of this Standard in some circumstances. See section 7.5 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		When applied to a suitable substructure the system 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:	3.10	Precipitation
Comment:		The use of the system 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 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments in relation to the system 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 system is acceptable. See section 13.1 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The system will enable a roof to satisfy the requirements of this Regulation. See section 6 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		On suitable substructures, the use of the system may enable a roof to be unrestricted by this Regulation. See sections 7.1 to 7.3 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 section: 3 *Delivery and site handling* (3.2 and 3.3) of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, Flexitec Platinum, 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*.

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

Technical Specification

1 Description

1.1 Flexitec Platinum is a liquid-applied, glass-reinforced, flexible modified polyester system, available in unpigmented or pre-pigmented versions.

1.2 Flexitec Platinum consists of:

- Flexitec Platinum Resin — a pigmented, flexible modified polyester resin
- Restec Powder Hardener — a 50% dibenzoyl powder
- chopped strand glass fibre mat — a 225 g·m⁻² glass reinforcement
- Flexitec Primer — a primer for preparing bituminous, wood, concrete, and other substrates, as approved by the Certificate holder
- Restec Twin Pack Epoxy Metal Primer — a two-part primer for preparing metal substrates and other selected substrates as approved by the Certificate holder
- Restec Sealer Coat — sealer coat for pedestrian access specification, available in clear, pigmented and unpigmented
- Restec Sealer Coat pigment — for use with Restec Sealer Coat unpigmented
- anti-slip additive — an optional surface finish to provide an anti-slip surface if required
- quartz sand (0.7 to 1.2 mm) — an alternative grit for walkways and balconies.

1.3 Ancillary items for use with the system are:

- Flexitec Accelerator — an additive for the resin to allow application at lower temperatures
- Flexitec Summer Inhibitor — an additive to enable longer pot-life and working time in high temperatures
- Flexitec Primer Accelerator — an additive to allow application at lower temperatures
- taping mat — a reinforcing tape for use at points of weakness such as detailing, protrusions and over cracks
- mordant solution — a pre-treatment for new galvanized steel or zinc substrates
- Restrims — a range of factory-manufactured GRP trims, including upstand fixing trim, drip trim, fillet trim and flat trim
- acetone — for use in cleaning tools.

1.4 Ancillary items that can be used in conjunction with the system, but which are outside the scope of this Certificate, are:

- mineral slate — an alternative grit for walkways and balconies
- Flexitec Detailer — a flexible, fibre-reinforced resin for detailing, inaccessible areas, levelling and minor repairs
- SP Primer — A primer for preparing selected single ply substrates
- Metal Detailing Primer — a single pack primer for minor detail work.

2 Manufacture

2.1 The Flexitec Platinum Resin and Primer are manufactured via a batch-blending process using conventional methods.

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.

3 Delivery and site handling

3.1 Flexitec Platinum Resin is delivered to site in tins bearing the Certificate holder's name, logo, product name, batch number, health and safety data and the BBA logo incorporating the number of this Certificate.

3.2 The system components and ancillary items packaging type and size are given in Table 1.

Table 1 Packaging

Component/item	Package type	Size
Flexitec Platinum Resin	Tins	10 kg
		20 kg
Restec Powder Hardener	Packs	0.5 kg
		1 kg
Chopped strand glass fibre mat	Rolls	15 m ²
		30 m ²
		120 m ²
Restec Sealer Coat		
Clear	Tins	10 kg (10.3 litre)
Pigmented	Tins	10 kg (9.6 litre)
Unpigmented	Tins	8.5 kg (8.7 litre)
Restec Sealer Coat Pigment	Tins	1.5 kg (0.9 litre)
Flexitec Primer	Tins	5 litre
Restec Twin Pack Epoxy Metal Primer	Tins	4 litre
Acetone	Cans	1 litre
		5 litre

3.3 The Certificate holder has taken the responsibility of classifying and labelling the system components 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 Flexitec Platinum.

Design Considerations

4 General

4.1 Flexitec Platinum is satisfactory for use as a liquid-applied roof waterproofing system on new or existing roofs with limited⁽¹⁾ or pedestrian access⁽²⁾ in the following specifications:

- exposed warm and cold flat and pitched roofs⁽¹⁾
- protected warm and cold flat and zero fall roofs (ie covered by pavers or other suitable protection)⁽¹⁾⁽²⁾
- green (extensive) flat⁽¹⁾⁽²⁾, zero fall⁽¹⁾⁽²⁾ and pitched roofs⁽¹⁾
- inverted flat and zero fall roofs⁽¹⁾⁽²⁾
- terraces with anti-slip layer⁽²⁾
- walkways across roof areas with anti-slip layer⁽²⁾.

4.2 The system is suitable for use on the following substrates:

- concrete
- asphalt
- plywood⁽¹⁾
- OSB 3⁽²⁾
- reinforced bitumen membranes (including sanded and mineral surfaced felts)
- insulation⁽¹⁾
- GRP
- single-ply membranes⁽²⁾
- previously coated surfaces⁽²⁾
- small areas of metal incidental to the roof, eg pipe upstands
- small areas of plastic-coated metal incidental to the roof⁽¹⁾.

(1) Grades approved by the Certificate holder.

(2) The advice of the Certificate holder should be sought on compatibility of the substrate with the system.

4.3 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018 and, where appropriate, *NHBC Standards 2022*, Chapter 7.1.

4.4 For the purpose of this Certificate, green roofs (extensive) are defined as those with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wildflower species.

4.5 For the purpose of this Certificate, limited access roofs are defined as those subject only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged, special precautions such as additional protection to the membrane must be taken; for example, quartz sand (0.7 – 1.2 mm), Polygrit or similar incorporated into the final coat.

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

4.7 Pitched roofs are defined for the purpose of this Certificate as those having falls in excess of 1:6.

4.8 Zero fall roofs are defined for the purpose of this Certificate as those having a finished fall of between 0 to 1:80⁽¹⁾. Reference should also be made to the appropriate clauses in the Liquid Roofing and Waterproofing Association (LRWA) Note 7 — *Specifier Guidance for Flat Roof Falls*.

(1) *NHBC Standards 2022* require a minimum fall of 1:60 for green roofs and roof gardens.

4.9 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.

4.10 Terraces, to which the system is to be applied, must be designed in accordance with BS 8579 : 2020.

4.11 For green and inverted roofs, structural decks to which the system is to be applied must be capable of transmitting the dead and imposed loads experienced in service.

4.12 Dead loads, wind loading and imposed loads must 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.

4.13 Recommendations for the design of green roofs specifications are available within the latest edition of *The GRO Green Roof Code — Green Roof Code of Best Practice for the UK*.

4.14 The drainage systems for inverted roofs, zero fall roofs or green roofs must be correctly designed, and the following points should 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

- dead loads for green roofs can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer
- additional guidance for inverted roof specifications is given in BBA Information Bulletin No 4 *Inverted roofs – Drainage and U value corrections*.

4.15 Insulation materials to be used in conjunction with the system must be in accordance with the Certificate holder's instructions and must 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 scope of, that Certificate.

4.16 The NHBC requires that the roof membranes, once installed, be inspected in accordance with of *NHBC Standards 2022*, 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 17 of this Certificate and reinspected.

5 Practicability of installation

The system is installed only by specialist roofing contractors who have been trained and approved by the Certificate holder.

6 Weathertightness



The system will adequately resist the passage of moisture to the interior of a building and enable a structure to satisfy the relevant requirements of the national Building Regulations.

7 Properties in relation to fire



7.1 When tested to DD CEN/TS 1187 : 2012, Test 4, the following flat roof systems achieved a classification under BS EN 13501-5 : 2016 of B_{ROOF}(t4) for roof pitches between 0 and 10° and so are unrestricted with respect to proximity from a boundary by the documents supporting the national Building Regulations:

- a flat roof system consisting of a 9 mm thick calcium silicate board, primed with Flexitec Primer applied at 0.22 kg·m⁻², one coat of Flexitec Platinum Resin at 1.22 kg·m⁻², a layer of 225 g·m⁻² chopped strand glass fibre mat reinforcement and one coat of Flexitec Platinum Resin at 0.71 kg·m⁻²(1)
- a flat roof system consisting of an 18 mm thick OSB3 board, primed with a polymeric adhesive primer applied at 0.15 ℓ·m⁻², a 0.6 mm self-adhesive air and vapour control layer (AVCL), a 150 mm thick tissue faced polyisocyanurate (PIR) insulation board adhesively bonded, primed with a polymeric adhesive primer applied at 0.15 ℓ·m⁻², a 0.6 mm self-adhesive carrier membrane, one coat of Flexitec Platinum Resin at 1 ℓ·m⁻², a layer of 225 g·m⁻² chopped strand glass fibre mat reinforcement and one coat of Flexitec Platinum resin at 0.5 ℓ·m⁻²(2)
- a flat roof system consisting of a primed 18 mm thick OSB3 board, a 300 μm polyethylene AVCL, a 150 mm thick aluminium foil faced PIR insulation board mechanically fastened, an 18 mm thick OSB3 board, one coat of Flexitec Platinum Resin at 1 ℓ·m⁻², a layer of 225 g·m⁻² chopped strand glass fibre mat reinforcement and one coat of Flexitec Platinum Resin at 0.5 ℓ·m⁻²(3)
- a primed 18 mm orientated strand board, a 0.6 mm thick self-adhesive vapour control layer, a 120 mm thick, glass tissue-faced, polyisocyanurate insulation board, bonded with a polyurethane adhesive, a 53 mm thick, bitumen-faced, polyisocyanurate insulation board, bonded with a polyurethane adhesive, one coat of Flexitec Platinum Resin at 1.0 ℓ·m⁻², a layer of 225 g·m⁻² chopped strand glass fibre mat reinforcement, one coat of Flexitec Platinum Resin at 0.50 ℓ·m⁻², one coat of Flexitec Platinum Resin at 0.50 ℓ·m⁻² with 0.7 – 1.2 mm quartz sand broadcast at 2.5 kg·m⁻² and one layer of light grey Restec Sealer Coat at 0.60 ℓ·m⁻²(4).

(1) Fire Test and Classification reports, reference P1082719-1001 and P1082719-1002 respectively, conducted by BRE Global. Report available from the Certificate holder.

(2) Fire Classification report, reference Q100928-1008, issued by BRE Global. Report available from the Certificate holder.

(3) Fire Classification report, reference Q100928-1012, issued by BRE Global. Report available from the Certificate holder.

(4) Fire test and classification reports, references P119609-1001 and P119609-1002 respectively, conducted by BRE Global, Report available from the Certificate holder.

7.2 A roof incorporating the system will also be unrestricted with respect to proximity from a boundary under the national Building Regulations in the following circumstances:

- when used in protected or inverted roof specifications including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC,
- irrigated green roofs.

7.3 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.



7.4 In England and Wales, the system, when used in pitches of greater than 70°, excluding upstands, should not be used on buildings 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 In Scotland, the system, when used in pitches greater than 70°, excluding upstands, should not be used on buildings that have a storey more than 11 m above ground level.

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

8 Adhesion

The adhesion of the system to the substrates and finishes listed in section 4.2 is sufficient to resist the effects of any wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.

9 Resistance to mechanical damage

9.1 The system can accept, without damage, the limited foot traffic and light concentrated loads associated with installation, maintenance and pedestrian traffic on defined walkways. However, care must be taken to avoid puncture by sharp objects or concentrated loads.

9.2 The level of resistance for dynamic is I_4 and static indent is L_4 for both hard and soft substrates when tested in accordance with EOTA TR006 and EOTA TR007, respectively.

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

10 Resistance to root penetration

The system will resist penetration by plant roots and can be used as a waterproofing layer in green roof (extensive) specifications.

11 Slip resistance

The system, when installed with the anti-slip layer, has a satisfactory slip resistance in dry and wet conditions to allow it to be used in areas of pedestrian access.

12 Maintenance



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

12.2 Green roofs must be the subject of regular inspections, particularly in autumn after leaf fall and in spring, to ensure that unwanted vegetation and other debris are cleared from the roof and drainage outlets (see section 4.13). Guidance is available within the latest edition of *The GRO Green Roof Code — Green Roof Code of Best Practice for the UK*.

12.3 Any damage should be repaired in accordance with section 17 of this Certificate and the Certificate holder's instructions.

13 Durability



13.1 The system will achieve an initial life expectancy, for an exposed roof, of at least 25 years. When fully protected and subjected to normal service conditions in an inverted roof specification with a suitable covering (eg aggregate pavers), the system can provide an effective barrier to the transmission of liquid water and water vapour for the design life of the roof in which it is incorporated.

13.2 In situations where maintenance or repair of any of the components in the roof structure are necessary (eg protection layer or insulation), the durability of the system may be reduced. In these circumstances the Certificate holder should be consulted.

13.3 An estimation cannot be given for the life of green roof specifications owing to the nature of use; however, under normal circumstances, it should be significantly greater than for exposed waterproof coverings.

Installation

14 General

14.1 Installation of the system must be carried out in accordance with the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989, Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls* and the Certificate holder's instructions and this Certificate only by specialist roofing contractors trained by the Certificate holder in accordance with their installation manual.

14.2 Application of the system is carried out at a minimum substrate temperature and air temperature of 5°C stable (1°C with the use of Flexitec Accelerator), rising to a maximum air temperature of 30°C and substrate temperature of 40°C. The system must not be installed in rain, snow, fog or misty conditions, or when the relative humidity is above 95%.

14.3 Detailing (eg upstands) must be carried out in accordance with the Certificate holder's instructions.

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

15 Site and surface preparation

15.1 Substrates on which the system is applied must be properly prepared in accordance with the Certificate holder's instructions.

15.2 Adhesion to substrates depends on the condition and cleanliness of the substrate. Substrates must be visibly dry and when measured have a maximum moisture content of 20% wood moisture equivalent (WME), be sound and free from loose materials or contamination (eg moss or algae). In cases of doubt the advice of the Certificate holder's Technical Department should be sought.

15.3 Any areas of fungal growth or moss must be treated with an HSE approved, proprietary anti-fungal solution to ensure that all spores are destroyed.

15.4 High pressure sand-blasting or water-jetting may be used to remove loose or flaking materials and residues following treatment with the anti-fungal wash, but the substrate must be visibly dry before application of the system.

15.5 Damaged areas of the substrate, for example, blistered reinforced bitumen membranes must be removed, replaced or repaired.

15.6 Deck surfaces must be free from sharp projections, such as protruding fixing bolts or concrete nibs.

15.7 Gutters and outlets must be checked to ensure that they are, and remain, clear of all debris.

15.8 Restrim prefabricated details are installed where required in accordance with the Certificate holder's instructions.

15.9 Small areas of new galvanized steel and zinc substrates are treated with a mordant solution at the recommended coverage rate. The wash is allowed to react, the surface conversion is indicated by a black deposit. The surface residue is washed off with water and dried prior to the application of the primer

15.10 Metal substrates are primed using Restec Twin Pack Epoxy Metal Primer at a coverage rate of 5 m² per litre; rough or porous surfaces will significantly reduce coverage rate. The primer should be left to dry for a minimum of 8 hours to maximize adhesion. The maximum overcoating period is 28 days; after this period, it will be necessary to rub down and/or re-prime the surface.

15.11 Other substrates may be primed, using Flexitec Primer at a coverage rate of 4 to 6 m² per litre, depending on surface roughness, in dry conditions between 5°C (1°C when accelerator used) and 30°C ambient air temperature. Porous surfaces should be visually checked to ensure an adequate seal and any suspect areas re-primed as necessary.

15.12 The primer is allowed to dry for at least one hour before overcoating. If the primed surface is left for longer than seven days before application of the system, it is necessary to solvent wipe the surface with acetone and may require re-priming prior to the installation of the waterproofing. Advice on the necessity of re-priming should be sought from the Certificate holder.

15.13 The Restec Powder Hardener proportion for Flexitec Primer is given in Table 2 in respect of the surface/air temperature.

Table 2 Restec Powder Hardener for Flexitec Primer

Temperature (°C)	Catalyst addition (%)(level scoops per litre of primer) ⁽¹⁾
5 – 10	4
11 – 17	3
18 – 30	2

15.14 All upstands, internal outlets, protrusions, cracks/splits and other points of weakness are locally reinforced using Flexitec Platinum Resin reinforced with taping mat prior to the application of the main system.

16 Application

16.1 The system is mixed on site by adding the pigment (if required) and then the catalyst to the resin in the correct proportions. The catalyst is added in the proportions given in Table 3, depending on the surface/air temperature, and stirred in accordance with the mixing instructions.

Table 3 Catalyst addition

Air temperature range	1 to 4°C	5 to 10°C	11 to 17°C	18 to 30°C
Flexitec Accelerator	must be used	not required		
Resin volume in litres	Number of catalyst level scoops ⁽¹⁾			
1	4	4	3	2
2	8	8	6	4
3	12	12	9	6
4	16	16	12	8
5	20	20	15	10
6	24	24	18	12
7	28	28	21	14

(1) Scoop provided with the catalyst.

16.2 The application is normally in two coats. Depending on the substrate, the first coat of resin is applied at the rates given in Table 4 and chopped strand glass fibre mat rolled out and laid with 50 mm side and end laps and ensuring the mat is correctly oriented, so the cut edge is overlapped by the feathered edge of the next strip of reinforcement. Extra resin is immediately applied to achieve a closed, pinhole-free surface.

Table 4 First coat coverage rate⁽¹⁾

Substrate	Coverage rate ($\ell \cdot m^{-2}$)
Concrete screed	1.0
OSB 3 TG4	0.85
Asphalt	
– smooth	0.85
– medium	1.0
– rough	1.4
Sanded felt	0.85
Mineral felt	1.15
Single ply	0.85
GRP	0.85

(1) The rates given in this Table are minimum values and it is the contractor's responsibility to ascertain the rate used on the specific site.

16.3 The second coat of resin can be applied as soon as it is practical to do so at a coverage rate of $0.5 \ell \cdot m^{-2}$. However, the maximum period between coats is seven days, after which it is necessary to clean the surface with acetone that will allow a further seven days' application time. If left longer than 14 days, the Certificate holder's advice should be sought.

16.4 Where required an anti-slip finish can be achieved by broadcasting the anti-slip additive onto a further coat of Flexitec Platinum Resin applied, in accordance with the Certificate holder's instructions, at a coverage rate of $0.5 \ell \cdot m^{-2}$. Alternatively, quartz sand or mineral slate can be used instead of the anti-slip additive.

Anti-slip layer

16.5 An additional third coat of resin is applied at a coverage rate of 0.5 litres per m^2 to the waterproofing system. Quartz sand ($0.7 - 1.2$ mm) is broadcast in excess, approximately $4 \text{ kg} \cdot m^{-2}$, into the wet resin. The loose excess quartz sand is removed to leave a coverage of approximately $2.5 \text{ kg} \cdot m^{-2}$.

16.6 The quartz sand is sealed with a coat of Restec Sealer Coat at a coverage rate of $0.6 \ell \cdot m^{-2}$. Restec Sealer Coat is catalysed with Restec Powder Hardener in accordance with the Certificate holder's instructions.

17 Repair

17.1 Should minor damage occur, it can be rectified by cleaning back to unweathered material, reactivating the surface in accordance with the Certificate holder's advice and applying the system to the damaged area at the total application rate stated in sections 15 and 16.

17.2 The anti-slip layer may require maintenance and repair for either cosmetic or anti-slip performance. In most situations a visual inspection will reveal if the sealer coat has worn away. A further application of the sealer coat, at the coverage rate given in section 16.7. Preparation before coating includes a thorough clean and, if any of the original sealer coat remains a solvent wipe. A small quantity of extra quartz sand may be required to be broadcast onto the wet sealer coat and rolled in to maintain anti-slip properties.

17.3 If more severe wear of the anti-slip layer has occurred, with a significant loss of the quartz sand, the full anti-slip layer specification should be applied (see sections 16.5 and 16.6) following appropriate surface preparation in accordance with the Certificate holder's instructions.

18 Tests

18.1 Tests were carried out and the results assessed to determine:

- dynamic indentation on hard and soft substrates
- static indentation on hard and soft substrates
- dynamic indentation after heat ageing for 100 days at 80°C
- static indentation after 180 days surface water exposure at 60°C.

18.2 Tests on related products were used to assess the following:

- tensile strength and elongation on control, heat aged⁽¹⁾ and UV aged⁽²⁾ samples
- delamination on control and after water exposure⁽³⁾
- resistance to fatigue on control and after heat ageing⁽¹⁾
- slip resistance.

(1) Heat aged for 200 days at 70°C.

(2) UV aged at 1000 MJ·m⁻² UV-A.

(3) 180 days surface water exposure at 60°C.

19 Investigations

19.1 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.

19.2 Data on fire performance were evaluated.

19.3 An assessment was made of the installation instructions and contractor training scheme.

Bibliography

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EOTA Technical Report TR-006 : May 2004 *Determination of the resistance to dynamic indentation*

EOTA Technical Report TR-007 : June 2003 *Determination of the resistance to static indentation*

20 Conditions

20.1 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
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20.3 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.

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

20.5 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:

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- any claims by the manufacturer relating to CE marking.

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