



Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 (as amended in 2022)

UK Technical Assessment	UKTA-0836-23/6986 of 21/09/2023
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	Protec Evolve
Product family to which the construction product belongs:	Product Area Code 03 MEMBRANES, INCLUDING LIQUID APPLIED AND KITS (FOR WATER AND/OR WATER VAPOUR CONTROL)
Manufacturer:	Polyroof Products Ltd Furness House Castle Park Industrial Estate Flint Flintshire CH6 5XA
Manufacturing plant(s):	Polyroof Products Ltd Furness House Castle Park Industrial Estate Flint Flintshire CH6 5XA
This UK Technical Assessment contains:	8 pages and 1 Annex which forms an integral part of the document
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 (as amended in 2022) on the basis of:	UKAD 030350-00-0402 <i>Liquid applied roof waterproofing kits</i>

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1 Technical description of the product

The kit consists of the following components:

- Protec Evolve — a flexible, low odour, modified polyester resin
- Polyroof Evolve Catalyst — 40% dibenzoyl peroxide suspension in a solvent mixture
- Polymat — a 450 g·m⁻² glass fibre mat for reinforcing the system
- Polygrit — an optional surface finish to provide an anti-slip surface if required
- Uni-Primer S — a standard primer for preparing bituminous, timber, concrete, and other substrates
- Uni-Primer DP — an alternative primer for preparing bituminous, timber and concrete substrates
- Twin Pack Epoxy Metal Primer — a two-part primer for preparing metal substrates
- Mordant T Wash — a pre-treatment for galvanized steel and zinc substrates
- Proprietary anti-fungicidal solution — a fungicide for the removal of algae and moss prior to application
- Protec Taping Mat — a reinforcing tape for use at points of weakness such as detailing, protrusions and over cracks
- Protec MMA resin — a liquid-applied methyl methacrylate resin that may be used over excessive movement joints and other special case applications
- Protec Evolve Accelerator — an additive to allow application at lower temperatures
- Uni-Primer DP Accelerator — an additive to allow application at lower temperatures
- Preformed trims — a range of factory-manufactured GRP trims, including upstand fixing trim, drip trim, fillet trim and flat trim.

The application rates for primers/treatments are given in the following table.

Primer/treatment coverage rates

Primer/treatment	Substrate	Coverage rate (m ² ·litre ⁻¹)
Mordant T Wash	New galvanized steel and zinc	15
Twin pack Epoxy metal Primer ⁽¹⁾	Metal substrates	10-15
Uni-Primer S ⁽¹⁾	Substrates other than metal	4-6
Uni-Primer DP ⁽¹⁾	Substrates other than metal	4-6

(1) Coverage rate is dependent on the condition of the substrate surface.

The kit is used to produce a two-coat application. The application rate, finished thickness, and reinforcement are given in the following table.

Kit build-up and thickness (smooth concrete substrate)⁽¹⁾

Component	Kit build-up
Primer (m ² ·litre ⁻¹)	4-6
System	
First coat (litre·m ⁻²)	1.25-1.50
Reinforcement	Polymat
Second coat (litre·m ⁻²)	0.5
Dry film thickness (mm)	2.00-2.25

(1) When applying to very rough, uneven or heavily mineralised surfaces the coverage rate may be significantly reduced and this should be taken into account when estimating material usage.

The amount of catalyst added is dependent on the ambient substrate surface/air temperature.

The percentage catalyst addition is given in the following table.

Catalyst proportion against temperature

Temperature (°C)	Catalyst addition for Polyroof Uni-Primer DP (%)
3-10	3-4
10-20	2-3
20-35	2

Air Temperature range (°C)	Cold (2 to 7)	Warm (8 to 17)	Hot (18 to 30)
Protec Evolve Accelerator	Must be used	Optional	Do not use
Protec Evolve resin volume in litres	Number of catalyst pumps ⁽¹⁾		
10	16	12	8
7.5	12	9	6
5	8	6	4
2.5	4	3	2

(1) One pump is equivalent to 30 ml of catalyst

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

Protec Evolve is for use as a liquid-applied roof waterproofing system on new or existing roofs with limited or pedestrian access (not for the exposed roof use) in the following specifications:

- exposed warm and cold flat and pitched roofs
- protected warm and cold flat and zero fall roofs (i.e., covered by pavers or other suitable protection)
- green (extensive) flat, zero fall and pitched roofs
- inverted flat and zero fall roofs.

The provisions made in this UK Technical Assessment are based on an assumed working life for the roof of 25 years. The indications given in the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to Fire	No Performance assessed
External fire performance	See Annex A

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content, emission and/or release of dangerous substances	No performance assessed
Resistance to water vapour	See Annex A
Watertightness	Watertight
Resistance to mechanical damage (perforation)	
Resistance to dynamic indentation	Steel 23°C = I ₄ Steel -20°C = I ₄ PIR insulation 23°C = I ₃ Steel 23°C = L ₄
Resistance to static indentation	Steel 90°C = L ₄ Carrier membrane on PIR insulation 23°C = L ₄
Resistance to fatigue movements	See Annex A
Resistance to the effects of low and high surface temperature	
Effect of low surface temperatures	I ₄ - See Annex A
Extreme low temperatures	No performance declared
Effects of high surface temperature	L ₃ - See Annex A
Resistance to ageing media	
Resistance to heat ageing	I ₄ Change in tensile strength +31,7% Change in elongation 0%
UV radiation in the presence of water	I ₄ at 1200 MJ.m ⁻²
Resistance to water ageing	I ₄
Resistance of plant roots	No performance assessed
Effects of variations in kit components and site practices	See Annex A
Effects of day joints	See Annex A

3.4 Safety in use (BWR 4)

Essential characteristic	Performance
Resistance to wind loads	See Annex A
Slipperiness	No performance assessed

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Not relevant.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1 System of assessment and verification of constancy of performance

According to UKAD 030350-00-0402 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as bought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 3 applies.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/ registered address of the manufacturer of the product/ system
- Marking including date of Marking and the intended use as stated in the Designated technical specification
- Unique identification code of the product type
- The reference number of the Declaration of Performance
- The level or class of the performance declared
- The reference to the Designated technical specification applied
- UKTA number.

On behalf of the British Board of Agrément



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ANNEX A

CATEGORISATION OF LEVELS OF PERFORMANCE OF PROTEC EVOLVE

This Annex applies to the Protec Evolve roof waterproofing kit described in the main body of the UK Technical Assessment.

The substrate applicable to this kit is defined in the main body of the UK Technical Assessment.

The kit has the following characteristics:

- Water vapour diffusion (equivalent air layer thickness) — S_d — 57 m
- Resistance to wind loads — >50 kPa
- Assembled kit thickness — 2.0 mm to 2.25 mm

The categorisation of levels of performance in accordance with UKAD 030350-00-0402 are:

- External fire performance — $B_{ROOF}(t_4)^{(1)}$
- Reaction to fire — No performance assessed
- Categorisation by working life — W3
- Categorisation by climatic zones — M
- Categorisation by imposed loads — P4
- Categorisation by roof slope — S1 to S4
- Categorisation by surface temperature
 - lowest — TL3
 - highest — TH4
- Statement on dangerous substances — No performance assessed
- Root resistance — No performance assessed
- Slipperiness — No performance assessed

⁽¹⁾ Field of application

- Range of pitches: $\leq 10^\circ$
- Range of supporting decks: Non-combustible (A1) substrates with thickness 9 mm or more and density 1000 kg.m^{-3} or more, and on combustible substrates made from OSB boards with thickness of 18 mm or more and density 644 kg.m^{-3} or more.



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