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Authorised and notified
according to Article 29 of the
Regulation (EU)
No 305/2011 of the European
Parliament and of the Council
of 9 March 2011

MEMBER OF EOTA



European Technical Assessment ETA-22/0898 of 2023/02/14

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

Protec Evolve

Product family to which the above construction product belongs:

Roof waterproofing

Manufacturer:

Polyroof Products
Limited Furness House
Castle Park Industrial
Estate Flint
Flintshire CH6 5XA United Kingdom

Manufacturing plant:

Polyroof Products
Limited Furness House
Castle Park Industrial
Estate Flint
Flintshire CH6 5XA United Kingdom

This European Technical Assessment contains:

7 pages including 1 annex which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

European Assessment document (EAD) no. European Assessment Document EAD 030350-00-0402 for Liquid applied roof waterproofing kits

This version replaces:

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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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
- Protec Evolve Catalyst - 40% dibenzoyl peroxide suspension in a solvent mixture
- Polymat — a 450 g/m² glassfibre mat for reinforcing the system
- Polygrit — an optional surface finish to provide an anti-slip surface if required.

Ancillaries within the scope of this ETA :

- 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.
- Twin Pack Epoxy Metal Primer — a two-part primer for preparing metal substrates
- Mordant T-Wash — a pre-treatment for new galvanized steel or 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)
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)	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 in accordance with the applicable EAD

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 (ie 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 European 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)

Characteristic	Classification
External fire performance	See Annex A
Reaction to fire	No performance assessed

3.3 Health, hygiene and the environment (BWR 3)

Characteristic	Category
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
Resistance to static indentation	Steel 23 °C = L ₄ Steel 90 °C = L ₃ 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 temperatures	
Effect of low surface temperatures	I ₄ - See Annex A
Extreme low temperatures	No performance assessed
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 to 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 (BWR4)

Characteristic	Category
Resistance to wind loads	See Annex A
Slipperiness	No performance assessed

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

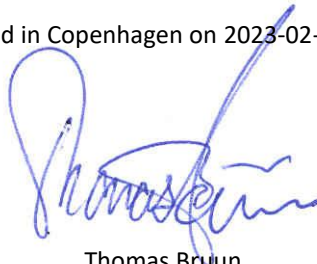
According to the Decision 98/599/EC and amended by Decision 2001/596/EC of the European Commission, the system of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table applies.

Product	Intended use	Level or class	System
Liquid applied roof waterproofing kits	For all roof waterproofing uses	–	3

5 Technical details necessary for the implementation of the AVCP system, as outlined in the applicable EAD

Technical details necessary for the implementation of the Assessment and Verification of Constancy of Performance (AVCP) are laid down in the control document deposited at ETA-Danmark A/S prior to CE marking.

Issued in Copenhagen on 2023-02-14 by



Thomas Bruun

Managing Director, ETA-Danmark A/S

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 European Technical Assessment.

The substrate applicable to this kit is defined in the main body of the European 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 EAD 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/m³ or more, and on combustible substrates made from OSB boards with thickness of 18 mm or more and density 644 kg/m³ or more.