

# PROTEC EVOLVE SYSTEM

## TECHNICAL DATA SHEET

Version: 3.0

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**POLYROOF**  
ADVANCED LIQUID ROOFING

Part of  
**Roberts  
Group**

## Introduction

Protec Evolve is a flexible, cold liquid applied, seamless polyester methacrylate waterproofing system which is ideally suited for long term waterproofing of flat roofs. The system has low odour making it the ideal waterproofing system for sensitive areas such as the refurbishment of schools and hospitals. Protec Evolve is a BBA Approved liquid applied roof waterproofing system available as a 20 year system.

## Key Features

- Low odour
- Cold applied - no hot works
- Easy to detail
- Can be applied to most existing roof surfaces
- Rapidly resistant to rainfall
- Flexible
- Totally seamless – no joints
- Excellent resistance to ponded water
- 20 year guarantee
- 30 year BBA durability

## Typical System Build Up

Protec Evolve is a low odour liquid applied reinforced polyester methacrylate liquid roofing system.



*\*Graphic is indicative only.*

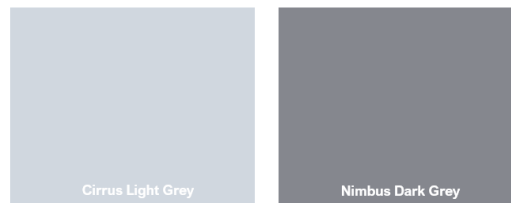
1. Existing construction
2. Existing substrate  
(prepared and primed as required)
3. Protec Evolve Resin

(with PolyMat 450 reinforcement)

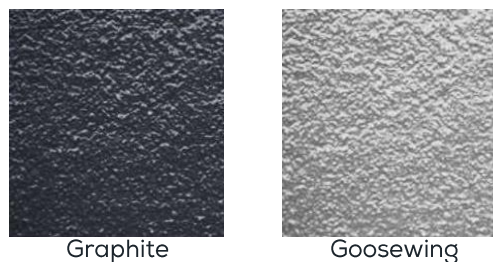
4. Protec Evolve Resin

## Colours & Finishes

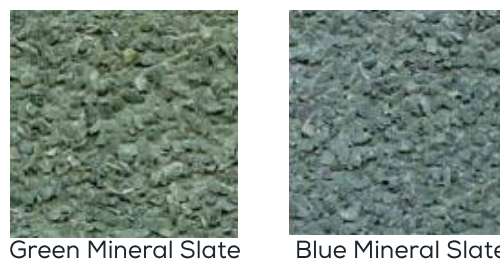
Protec Evolve is pre-pigmented in the following available colours:



*Low Odour Sealer Coat is available in the following colours:*



*Mineral Slate grit is available in the following colours:*



## Certification

Protec Evolve has been independently tested to the very highest standards and has British Board of Agrément.



**BBA Certificate Number: 09/4676**

## Fire Classification

Tests show that the system achieves Broof T4 in accordance with BS EN 13501-5: 2016.

## Physical Properties

Test	Result
Thickness	1.845mm (average)
Weight	3.4kg / m <sup>2</sup>

## Foot Traffic / Mechanical Impact

Test	Method	Result
Static indentation	EOTA TR 007	L4
Dynamic Indentation	EOTA TR 006	
on hard substrate		I4
on soft substrate		I3

The standard system is suitable to accept occasional foot traffic and light concentrated loads associated with installation, maintenance and pedestrian traffic. Optional anti-slip finishes are available for accepting regular foot traffic.

## Root Penetration

Protec Evolve system will resist penetration by plant roots and can be used as a waterproofing layer in green roof specifications.

## Durability / Maintenance

The system has a BBA durability rating of 30 years.

The system does not require any ongoing maintenance by the manufacturer, however standard biannual inspections and standard flat roof maintenance, good practice should be followed by clients as recommended in BS6229.

## Packaging

Product	Pack Size	Code
Protec Evolve Resin – Cirrus Light Grey	10 ltr	121404
Protec Evolve Resin – Nimbus Dark Grey	10 ltr	121412
Protec Evolve Accelerator	0.5 litre	121406
Polymat 450	17m <sup>2</sup>	104003
Polymat 450	30m <sup>2</sup>	104016
Protec Evolve Catalyst	2.2kg	102019
Protec Evolve Catalyst Pump Dispenser	Each	109138
Metal Detailing Primer	25ml x 6	122067

Quick Dry 2-Pack Epoxy Primer	4 ltr	122066
SP Primer 202	1 ltr	122006
Low Odour Sealer Coat – Goosewing Grey	2 ltr	121450
Low Odour Sealer Coat – Graphite Grey	2 ltr	121451
Low Odour Sealer Coat – Clear	2 ltr	121452
Quartz Sand Fine*	25 kg	109053
Green Mineral Slate Grit	15 kg	109046
Blue Mineral Slate Grit	15 kg	109049
Taping Mat 450 (75mm)	110 lm	104004
Taping Mat 450 (300mm)	18 m	104021

\*A wide range of coloured aggregates are available on special order for use with Low Odour Sealer Coat – Clear. Please contact technical services for full details.

A wide range of GRP Trims are also available. Please refer to separate Technical Data Sheet for details.

## Shelf Life / Storage

Shelf life 12 Months for Protec Evolve. This is based on unopened containers stored in dry, frost-free conditions away from heat.

## Health & Safety

Workers should wear appropriate PPE as detailed in the safety data sheet. Safety Data Sheet available on request.

## Specifying the System

Polyroof offer a free specification service. It is recommended that Polyroof Technical Services are contacted to provide specific advice on any project.

## Application

The system must only be applied by contractors who have been trained and approved by Polyroof and have a valid contractor's certificate.

## Temperature

The system may be applied between 2°C\* and 30°C.

\*Protec Evolve Accelerator is essential for applications between 2°C and 7°C.

## Equipment

Apply using a Medium Pile Roller or Brush.

## Preparation

All surfaces to be coated (including any coatings, repairs or test areas) are to be inspected and made good where required to provide a sound substrate for the new waterproofing system.

All areas must be clean dry and free from contaminants such as dust, oil, grease, organic growth, sand and free from corrosion, laitance etc.

Specific guidance should be sought for any unidentified coatings such as solar reflective paint or any unidentified single ply membranes. Adhesion tests may be required.

Any unsound, loose or flaking material should be removed by mechanical means back to a sound surface.

Areas where the insulation or underlying substrate has collapsed or is defective or decayed, should be cut out, repaired and reinstated on a like-for-like basis to provide a good solid base for the coating system.

For full guidance on preparation of substrates please refer to the Protec Evolve Manual or contact Polyroof Technical Services for advice on 0800 801 890.

## Priming

The requirement for a primer will be dependent on the substrate. It is recommended Polyroof Technical Services are contacted for advice on 0800 801 890.

SURFACE	PRIMER
Felt Asphalt Bitumen Surfaces Polyroof SA Carrier layer	No primer required as standard*
Polyroof RES Insulation (T&G) Polyroof RES Balcony Insulation (T&G)	*Note: Any friable felts, and any areas of volatile bitumen should be primed (Consult Polyroof Technical Services for Advice).
Porous Surfaces Concrete Timber (details only)	Polyroof Quick Dry 2-Pack Epoxy Primer  Coverage Rate – Approx. 10-15m <sup>2</sup> /litre.

Metal Surfaces (Detailing Only)	Polyroof Quick Dry 2-Pack Epoxy Primer  Coverage Rate – Approx. 15m <sup>2</sup> /litre.  Alternatively, Polyroof Metal Detailing Primer may be considered (Contact Technical Services for further advice).
Single-Ply	*Note: Adhesion tests are required to confirm compatibility and priming requirements. Consult Polyroof Technical Services for further guidance.
<b>IMPORTANT</b> For cure times of primers refer to Primer TDS or Manual	

## Product Accelerators

Protec Evolve Accelerator must be used in cold conditions. The product will shorten the pot life and curing time whilst also improving flow and mat impregnation.

**IMPORTANT: Protec Evolve Accelerator is not designed as a replacement for the catalyst. After the Protec Evolve Accelerator has been added to the resin you will need to add the catalyst before you use the product.**

When to use

- It **MUST** be used if the temperature is **below 7°C**.
- It **MAY** be used if the temperature is between **8°C and 17°C**.
- It **MUST NOT** be used if the temperature is **above 18°C**.

How to mix

- Thoroughly mix 1 tin of Protec Evolve Accelerator into a 10 litre tin of Protec Evolve Resin before the catalyst is added.
- **It is important to note that the Protec Evolve Accelerator is not a substitute for catalyst which is still required.**

## Catalyst

The amount of catalyst added can be varied according to the temperature range. Never use

more or less than the minimum and maximum amounts stated under any circumstances.

Temperature Range (°C)	Cold	Medium	Warm
	2-7	8-17	18-30
	Accelerators Required?		
	<u>YES</u>	<u>OPTIONAL</u>	No
Evolve Resin Volume (Litres)	Catalyst Addition (Number of Pumps)		
10	16	12	8
7.5	12	9	6
5	8	6	4
2.5	4	3	2

\*In cold conditions 2-7°C Protec Evolve Accelerator MUST always be used and added to the resin PRIOR to adding the catalyst.

**How to Mix**

Shake the catalyst container, with its original closure in place before decanting. The catalyst should be added using the pump dispenser in accordance with the table above. Ensure that the resin is thoroughly mixed prior to use.

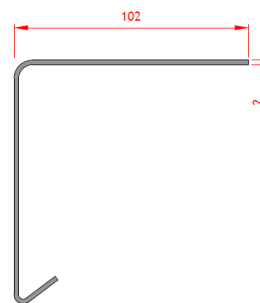
**Local Reinforcements / Detailing**

Protec Evolve may be applied to suitable existing detailing subject to preparation and (where necessary) priming. Alternatively, a range of Pre-formed Polyroof GRP trims may be used.

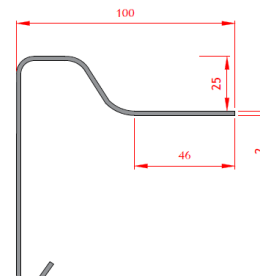
All detailing should be locally reinforced with Protec Evolve Resin and PolyMat 450 reinforcement prior to application of main system.

**Trims**

The Polyroof range of rigid GRP trims offer a fast, reliable way of installing finishing trims and ensuring perfect detailing. These trims are optional as, in many cases, the existing detailing can be retained. A wide range of non-standard profiles exist. Consult Polyroof with specific requirements



Typical Drip Trim



Typical Upstand Trim

**Main System / Coverage Rates**

**20 Year System**

**Application Colours** - Note Protec Evolve is a 2 coat application. The product is available in Cirrus light grey and Nimbus dark grey. The recommended colour for the first coat is Cirrus light grey for optimum application performance. The system may be finished using either Cirrus light grey or Nimbus dark grey as the second coat.

1 <sup>st</sup> Coat (with PolyMat 450)	2 <sup>nd</sup> Coat
Smooth Surfaces: 1.3-1.5 Litre / m <sup>2</sup>	0.5 Litres / m <sup>2</sup>
Rough / De-Chipped Surfaces: 1.5-2.0 Litre / m <sup>2</sup>	

Important: All coverage rates are indicative only and it is the contractors' responsibility to ascertain the exact coverage rates on site. Coverage will always vary depending on substrate and the environment. Additional materials over and above this will be required to any areas that require local reinforcements, detailing etc.

**Main System Cure Time (Per Coat)**

Typically 45mins - 1 hr

(Incorporating Protec Evolve Accelerator and catalyst as required)

**Anti-Slip Finish (Optional)**

**Note - The following should be carried out upon completion of the application of the full Protec Evolve waterproofing system.** Please note that there is a maximum over coating time of up to 7 days. After this period cleaning with Acetone will be required allowing another 7 days over coating time.

**Maintenance Walkways**

Mask off the perimeters of the walkway / roof to provide a neat termination of the anti-slip finish. Ensure masking tape is removed whilst resin is still wet.

Apply addition coat of Protec Evolve Resin at a minimum coverage rate of 0.5Litres/m<sup>2</sup> (2.0m<sup>2</sup>/Litre) and whilst wet broadcast Mineral Slate Grit at a minimum coverage rate of 2.5kg/m<sup>2</sup>. Once cured remove loose grit. Approximate finished coverage rate of grit will be 1.5kg/m<sup>2</sup> and the remaining grit may be recovered for future use

**Heavily Trafficked Areas**

Mask off designated area.

Apply additional coat of Protec Evolve Resin at a minimum coverage rate of 0.5Litres/m<sup>2</sup> (2.0m<sup>2</sup>/Litre) and whilst wet broadcast clean dried quartz sand 30 mesh (approx. 0.4mm - 0.8mm) at an approximate coverage rate of 2.6kg/m<sup>2</sup>. Once cured remove loose sand. Approximate finished coverage rate of sand will be 1.6kg/m<sup>2</sup> and the remaining 1.0kg may be recovered for future use.

Apply Low Odour Sealer Coat at a minimum coverage rate of 0.2Litres/m<sup>2</sup> (5.0m<sup>2</sup>/Litre). Allow to cure. Refer to separate technical data sheet for low odour sealer coat mixing instructions.

**NB: Note Low Odour Sealer should only be applied over quartz sand to the main deck. It is not designed for use directly over un-gritted surfaces (e.g. Verticals).**

**Cleaning**

All tools should be cleaned with Acetone immediately after use.

**Disclaimer**

Polyroof Products reserve the right to amend product specifications without prior notice. The information provided in this literature is given in good faith. Recommendations for use should be verified to ensure compliance with all current building regulations and standards. Please check that this data sheet is the latest version by contacting technical services on 0800 801890 or visiting [www.polyroof.co.uk](http://www.polyroof.co.uk).

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