RESTEC roofing systems

FLEXITEC Multi-surface GRP roofing system

Flexitec Resin Technical Datasheet

1. Flexitec Resin

1.1. Application

Flexitec Resin is primarily designed for use as the liquid resin component of the Flexitec liquid applied roofing system. It is a flexible hybrid Polyester resin, cured with a specialised Peroxide catalyst offering optimum curing across a wide range of application conditions.

1.2. Description

Characteristic	Benefit
Flexible Polyester Resin	Excellent crack resistance and water resistant properties
Excellent adhesive properties	Can in many cases be applied over the existing roof membrane without the need to remove and re-board*
Single resin product	No need to stock separate basecoat and topcoat
Dark Grey self -coloured	No need to stock separate pigments
Reduced Styrene emission	Lower odours
Pre-accelerated	All year round fast curing
Low viscosity / fast wetting	Rapid wetting of the glass fibres and early conforming to detail work. Can be applied using only a fluffy roller.
Thixotropic	Prevents drainage/sagging from vertical surfaces

* Contact our technical services department for specific recommendations

1.3. Catalysing

For most conditions Flexitec Powder Hardener should be added between 3 and 4% (see manual for % versus volume addition charts). For very cold temperatures 4% is typical, and for very warm conditions 2% is typical. Adjust the catalyst level up or down to obtain the desired pot life and cure. Never add less than 2% or more than 4% as full cured properties will not be achieved. In very cold conditions (1-10°C) – Flexitec Winter Accelerator can be used to normalise pot life and laminate curing despite the temperature.*

***Check with our technical services department for specific details**

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1.4. Typical Liquid Resin Properties

Viscosity at 25°C (Brookfield) Spl 4, 6 RPM	6200 MPas
Viscosity at 25°C (Brookfield) Spl 4, 60 RPM	2000 MPas
Thixotropic index	3.1
Gel time (25°C, 3.75% Catalyst)	18 Mins
Specific Gravity @ 25°	1.40
Flashpoint	32°C
Shelf life (unopened containers stored at < 30°C)	12 Months Minimum from delivery date

1.5. Typical Cured Resin Properties

Test	Method	Unit	Un-reinforced resin	Reinforced system (1)
Tensile Strength	Iso 527	MPa	5	27
Tensile Modulus	Iso 527	MPa	22	1370
Shore D Hardness	ASTM D2240	SD	40	60

(1) 1 x 225 g/m^2 CSM, 1 litre / m^2 Resin used in base layer plus 0.5 litres/ m^2 as topcoat. Catalysed with 3.75% Flexitec Catalyst and post-cured for 16 hours at 45°C

1.6. Storage

Store in closed containers, ideally below 30°C in a well-ventilated place. Storage for prolonged periods at temperatures > 30°C or significant exposure to higher temperatures may reduce the shelf life. Avoid sources of ignition.

1.7. Recommendations

Read the full Flexitec application manual before use. Wear PPE and observe all safety instructions.

- Protect the containers from extremes of temperature in storage and especially just before use.
- Do not begin work in wet conditions or if rain is likely.
- Use only above 5°C air and deck temperature (1°C with Winter Accelerator) and below 30°C air temperature.
- Ensure substrate is 100% dry before application.
- For best results apply in cool overcast conditions – avoiding direct sunlight if possible
- Always stir well in the original container before use or decanting.
- Add Flexitec Powder Hardener between 2% and 4% depending on conditions and desired pot life. Follow the addition methods outlined in the manual.
- Intended application rate is 0.85 litre/m^2 when using 225 gm CSM on flat substrate (Higher rate may be required over uneven substrates. Plus 0.5 litre/m^2 applied as topcoat
- Apply by synthetic roller.
- Clean tools with Acetone after use.

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