

Shieldrep FC

Single-component, Polymer-modified, Thixotropic, Cement-based Fairing Coat
(Formerly Known as Rep FC)



Description

Shieldrep FC is a single-component, polymer-modified, cement-based fairing coat, supplied as a ready-to-use blend of dry powders requires the addition of water on site, designed to be applied from 1 to 3 mm thickness in a single application and higher thicknesses can be achieved by applying multiple layers up to 15 mm. **Shieldrep FC** is suitable for vertical, horizontal, and overhead applications.

Uses

- Levelling of vertical, horizontal, and overhead surfaces.
- Filling of static cracks up to 4 mm in width.
- Improving the aesthetic appearance of concrete surfaces.
- Suitable for indoor and outdoor applications, in both dry and wet conditions.

Characteristics / Advantages

- Factory-controlled pre-blended dry mix which only requires the addition of water.
- Polymer-modified, with low permeability to water, CO₂, and chlorides.
- Easy and fast application.
- Excellent adhesion to substrates.
- Suitable for vertical and overhead applications for filling blemishes up to 3 mm deep in the concrete surface and blow holes to a thickness of up to 10 – 15 mm.
- Can be applied on horizontal surfaces, after being protected with a sealer.
- High freeze/thaw resistance.

Standard Compliance

EN 1504-3: Class R1

Shelf Life and Storage

Shieldrep FC has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Typical Properties

Color / Appearance	Grey powder
Fresh Wet Density (@ 23°C)	1.70 ± 0.05 g/ml
Working Time (@ 23°C)	Approx. 30 minutes
Maximum Aggregate Size	100 microns
Yield / 20 kg bag	~15.5 Liters
Compressive Strength (EN 12190) @ 28 days	≥ 11.0 MPa
Flexural Strength (ASTM C348) @ 28 days	≥ 2.0 MPa
Bond Strength (EN 1542)	≥ 1.0 MPa Substrate F.
Restrained Shrinkage	No signs of surface cracking, delamination observed (> 0.90 MPa, Substrate F.)
Chloride Content	0.02%
Application Thickness	1-3 mm in a single layer Up to 15 mm in multiple layers

Packaging

Shieldrep FC is supplied in 20 kg bags.

Safety Instructions

Shieldrep FC contains hydraulic cement and may cause irritation to skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product.

Application Instructions

1. Surface Preparation

The substrate must be free from dust, loose materials, surface contamination and materials that may reduce bond or prevent adhesion of the repair mortar. Remove damaged concrete by suitable means. All substrate surfaces in the repair area shall be roughened by suitable means e.g., light scabbling or grit blasting to provide a key for the repair material. Remove by suitable means from any exposed steel reinforcement; rust, scale, mortar, concrete, dust and any other loose or deleterious material which reduces bond or contributes to corrosion. Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

Prior to application, thoroughly saturate concrete surface to provide a saturated surface dry condition (SSD). Poor quality concrete may require soaking for a significant time. Any surface water should be removed using an oil-free compressed air jet.

2. Mixing

Shieldrep FC requires 7.0 liters of potable water per 20 kg bag for manual hand application. For optimum results, mixing should be performed using a forced action mixing paddle powered by a heavy-duty electric mixing drill.

Add the pre-measured amount of water to a clean mixing bucket.

Add **Shieldrep FC** powder slowly to water whilst mixing and continue mixing for 3 – 5 minutes until a homogenous, lump-free consistency is achieved.

3. Application

Shieldrep FC is applied to the prepared substrate using a steel trowel. Scratch coat technique is used to ensure filling of blow holes prior to building to the finished level. Final troweling to a smooth finish should commence once the material has partially set. Alternatively, the applied material may be finished using a damp sponge.

4. Cleaning

All mixing and application equipment should be cleaned immediately with clean water. Hardened material should be mechanically removed.

5. Curing

Curing is not normally necessary, but freshly applied material should be protected from rain and strong drying winds.

Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions, store the material in a cool environment prior to mixing.
- Shieldrep FC** is not suitable for use in trafficked areas.
- Protect freshly applied material from direct rain until at least final set to prevent surface scouring.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.