Technical Data Sheet

BC Repair FC

High-Quality, Water-Resistant Smoothing & Crack Repair Mortar

1). Product Description

BC Repair FC is a single-component, polymer-modified, water-resistant fine repair mortar formulated from high-quality Portland cement, precisely graded limestone fillers, and special performance additives. It provides a smooth, durable finish for concrete surfaces and is ideal for fine crack filling and surface levelling prior to the application of coatings, paints, or waterproofing systems.

2). Features & Benefits

- Excellent adhesion to concrete and masonry substrates.
- Can be applied on both dry and damp surfaces.
- Smooth and workable consistency for easy trowelling.
- Water-resistant — ideal for humid and exterior conditions.
- Resistant to UV radiation and rain.
- Non-shrink formulation ensures durable crack repair.
- Suitable for both vertical and horizontal surfaces.
- Compatible with cementitious coatings and paints.
- Environmentally safe — contains no chlorides.

3). Uses

- Filling cracks, blow holes, and surface imperfections up to 4 mm width.
- Levelling uneven concrete or masonry surfaces.
- Finishing coat before application of waterproofing membranes or protective coatings.
- Fine smoothing of repaired or new concrete surfaces.
- Ideal for both interior and exterior wall and ceiling applications.

4). Technical Data

Property	Test Method / Standard	Result / Typical Value
Appearance	-	Grey, fine powder
Binder Type	ASTM C150	Portland Cement
Filler Type	-	Crushed limestone, max. grain size 0.3 mm
Density (mixed)	ASTM C138	~1.67 kg/L
Water / Powder Ratio	-	0.4 L/kg
Workability Time	-	Approx. 3 hours at 25°C
Initial Setting Time	ASTM C191	60 – 90 minutes
Final Setting Time	ASTM C191	2 – 3 hours
Adhesion Strength	ASTM C1583	≥ 1.0 N/mm²
Compressive Strength	ASTM C109	≥ 15 MPa at 28 days
Flexural Strength	ASTM C348	≥ 3.0 MPa at 28 days
Water Absorption	ASTM C140	< 5%
UV Resistance	Internal Test	No discoloration or cracking
Application Temperature	-	+5°C to +40°C

5). Surface Preparation

- The substrate must be sound, clean, and free from dust, loose particles, oil, grease, laitance, or any contaminant that may impair adhesion.
- Remove all loose or weak material by wire brushing, sanding, or mechanical means.
- Damp the surface with clean water but ensure no standing water before application.

Mixing

1. Pour the measured amount of clean water (approx. 0.4 L/kg) into a clean mixing container.
2. Gradually add BC Repair FC powder while continuously mixing with a slow-speed drill (400–500 rpm) fitted with a suitable paddle.
3. Mix for 3–5 minutes until a smooth, lump-free, uniform paste is obtained.
4. Allow to stand for 10–15 minutes, then remix before application.
5. Use the mixed material within 3 hours.

6). Application Guidelines

As a Crack Filler:

- Apply the mixed mortar into the cracks using a spatula, putty knife, or trowel.
- Press firmly to ensure full contact and compaction within the crack.
- Smoothen the surface using a damp sponge or trowel.

As a Smoothing / Levelling Mortar:

- Apply a thin coat with a steel trowel on the prepared surface.
- For best results, apply in layers of 1–3 mm thickness per coat.
- Avoid applying over surfaces with active movement or structural cracks.

Curing:

- Keep the repaired area moist for at least 2–3 days after application.
- In hot or windy conditions, cover the surface with damp hessian or use a curing compound.

7). Consumption

Application	Approximate Coverage
Fine Smoothing (1 mm thick)	1.6 m²/kg
Crack Filling	Depending on crack depth and width

(Coverage may vary depending on substrate roughness and porosity.)

8). Packaging

- 20 kg bags

9). Storage & Shelf Life

- Store in a dry, shaded area at temperatures between +5°C and +35°C.
- Protect from direct sunlight and moisture.
- Shelf life is 12 months from the date of manufacture in unopened, original packaging.

10). Health & Safety

- Contains cement; avoid contact with skin and eyes.
- Use gloves and safety glasses during handling.
- In case of contact, rinse immediately with plenty of water and seek medical advice.
- Refer to the Safety Data Sheet (SDS) for detailed information.