

## Product Data Sheet

### CasTech Rep FC

Nov-2025, Ver. 01.01



## Polymer-Modified Cementitious Fairing Coat Repair Mortar

### DESCRIPTION

**CasTech Rep FC** is a ready-to-use, single-component, polymer-modified cementitious fairing coat repair mortar designed for thin-layer surface repairs and finishing of concrete and masonry.

The product is supplied as a factory-blended dry powder and requires only the addition of clean water on site. It produces a smooth, natural concrete-grey finish and may be applied in layers up to a maximum thickness of 3 mm per coat.

### TYPICAL USES

**CasTech Rep FC** is recommended for:

- Thin-layer patching on vertical, horizontal, and overhead surfaces
- Smoothing rough or irregular concrete, brickwork, and masonry
- Leveling uneven surfaces before application of protective or decorative coatings
- Cosmetic repair of precast concrete panels, girders, beams, and columns
- Filling pinholes, blowholes, shallow honeycombing, and minor surface defects
- Restoring a uniform concrete-grey appearance to repaired areas

### ADVANTAGES

#### Key advantages:

- Single-component product—only clean water is required
- Polymer-modified for excellent adhesion to concrete and masonry
- Smooth finish suitable for thin-section cosmetic repairs
- Suitable for vertical and overhead application
- Chloride-free formulation
- Helps reduce carbonation and chloride ingress through repaired surfaces
- Suitable for contact with potable water, subject to project approval and local requirements
- Easy to mix and apply by steel trowel

### TYPICAL PROPERTIES

| Appearance                        | Grey powder                         |
|-----------------------------------|-------------------------------------|
| Chemical base                     | Polymer-modified cementitious blend |
| Water addition                    | 5.0-6.0 L per 20 kg bag             |
| Water/powder ratio                | 0.25-0.30                           |
| Fresh wet density at 25°C         | 1.75 ± 0.05 kg/L                    |
| Working time at 25°C              | Approx. 30 minutes                  |
| Maximum layer thickness           | 3 mm per coat                       |
| 28-day compressive strength       | >20 N/mm <sup>2</sup>               |
| Theoretical coverage              | 1.75 kg/m <sup>2</sup> at 1 mm      |
| Colour / finish                   | Natural concrete grey               |
| Shelf life                        | 12 months                           |
| Form                              | Grey powder                         |
| Fresh wet density - BS EN 12350-6 | 1.75 ± 0.05 kg/L at 25°C            |
| Working time                      | Approx. 30 minutes at 25°C          |
| Compressive strength - ASTM C109  | >20 N/mm <sup>2</sup> at 28 days    |
| Application thickness             | Up to 3 mm per coat                 |

Properties are based on laboratory-controlled testing at a water/powder ratio of 0.25 unless otherwise stated. Results may vary with water addition, temperature, curing, substrate, and test conditions. Typical values are subject to normal manufacturing and test tolerances.

### APPLICATION INSTRUCTIONS

#### SURFACE PREPARATION

##### General requirements

The substrate shall be sound, clean, and free from standing water, dust, oil, grease, laitance, paint, curing compounds, and other contaminants that may impair adhesion. Remove weak or contaminated material by suitable mechanical means until a firm, clean surface is exposed.

##### Cleaning and pre-wetting

Wash or air-blow the prepared surface to remove all loose dust. Thoroughly pre-wet absorbent substrates with clean water and allow excess water to drain. Immediately before application, the surface shall be damp but free from standing water. Do not apply over running water or active leakage.

##### MIXING

Use a clean mixing container and a slow-speed heavy-duty drill fitted with a suitable spiral paddle. Measure 5.0–6.0 litres of clean potable water for each 20 kg bag, depending on the consistency required.

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Place the measured water in the mixing container. Gradually add **CasTech Rep FC** powder while mixing continuously. Mix for approximately 3 minutes until a smooth, homogeneous, and lump-free consistency is achieved.

Mix only the quantity that can be applied within the stated working time. Do not add extra water after the material has started to stiffen, and do not add cement, sand, or other materials.

#### APPLICATION

##### Placement

Apply the mixed material by steel trowel, pressing firmly into the prepared surface to ensure intimate contact and full bonding. Build the repair uniformly and finish to the required profile. The maximum recommended thickness is 3 mm per coat.

##### Multiple-layer application

Where more than one layer is required, apply subsequent material wet-on-wet whenever practical. If a layer has hardened, mechanically roughen or scratch the surface to provide a key, remove all dust, pre-dampen, and apply a compatible CasTech bonding agent where required before the next layer.

##### Finishing

Finish with a clean steel or plastic trowel to achieve the required smoothness. Avoid excessive trowelling or adding water to the surface, as this may cause color variation, crazing, or reduced surface quality.

#### CURING

General curing is normally not required for cosmetic fairing-coat repairs. However, in hot, dry or windy conditions, protect the freshly applied material from rapid moisture loss. Where specified, use a suitable curing method or an approved curing membrane from the CasTech Cure range.

#### COVERAGE

Theoretical powder consumption is approximately 1.75 kg/m<sup>2</sup> for each 1 mm thickness. One 20 kg bag covers approximately 11.4 m<sup>2</sup> at 1 mm thickness.

Actual coverage depends on the substrate profile, porosity,

surface condition, application thickness, and site wastage. Confirm consumption by a representative trial area.

#### CLEANING

Clean tools and equipment with water immediately after use. Hardened material can only be removed by mechanical means.

#### PACKAGING

- 20 kg moisture-resistant bag

#### SHELF LIFE

12 months from the date of manufacture when stored unopened in the original packaging under the recommended conditions.

#### STORAGE

Store under cover in a cool, dry, and shaded area, off the ground, and protected from moisture, direct sunlight, and extreme temperature or humidity. Keep bags sealed until use and follow stock rotation.

#### HEALTH AND SAFETY

**CasTech Rep FC** is cement-based and becomes alkaline when mixed with water. Avoid contact with eyes, skin, mouth, and foodstuffs. Wear suitable gloves, safety goggles, protective clothing, and a dust mask during mixing and application.

In case of eye contact, rinse immediately with plenty of clean water and seek medical attention. Wash affected skin with soap and water. If swallowed, do not induce vomiting; seek immediate medical advice. Keep away from children and animals.

Refer to the latest Safety Data Sheet (SDS) before use.

#### TEST REFERENCES

- ASTM C109/C109M - compressive strength of hydraulic-cement mortars
- BS EN 12350-6 - density of fresh material, as referenced in the original product data

Test references indicate the methods used for the stated properties and do not, by themselves, constitute product certification for a specific project.

#### TECHNICAL SUPPORT

CasTech provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CasTech products and guidance on their use are available on request.