

# Monorub

## Class R1 Fine Grade Fairing Coat

### Product Overview

Fine grade, polymer modified mortar for filling blow holes and minor surface defects.

### Description

**MONORUB** is a single component, polymer modified cementitious mortar for the filling of blow holes and small surface defects in precast and in-situ concrete to produce an aesthetic durable finish. The incorporation of a polymer enhances adhesion and imparts a high degree of water repellence to the surface of concrete, making it denser and less permeable. If required, it can be overcoated with specialist membranes in the Flexcrete range to provide further protection and aesthetic quality.

### Uses

Suitable for repair methods 3.1 as defined by EN 1504-3.

### Advantages

- Pre-packaged material simply requires mixing with clean water on-site.
- Incorporates innovative styrene acrylic copolymer technology.
- Uses ordinary Portland cement, which is fully compatible with precast and in-situ concrete.
- Available in Grey and White for colour matched repair.
- Economic mortar generally requiring no substrate or inter-layer priming.

### Compliance

- UKCA & CE marked in accordance with EN 1504-3.

### Application Instructions

#### Preparation

The areas to be treated must be free from all unsound material including laitance, dust, oil, grease and organic growth.

The prepared surface should be thoroughly soaked with clean water until uniformly saturated without any standing water.

Alternatively, porous substrates can be primed with **CEMPROTEC EF PRIMER**.

#### Mixing

**MONORUB** should be mechanically mixed in a clean drum using a slow speed drill and paddle with the mix ratios given. A normal concrete mixer is **NOT** suitable. Normal mixing time is approx. 2 minutes. Use without delay.

Mixed Colour	Water Addition Per 25kg (Litres)		Volume Mix Ratio Powder:Water
	Range*	Typical	
<b>GREY</b>	2.9 – 3.3	3.125	5:1
<b>WHITE</b>	5.75 – 6.25	6.0	3:1

\*Depending on desired consistency.

#### Placing

Apply by wooden or sponge faced float or by 'bag rubbing' techniques. Use a circular motion to completely fill all blow holes and defects. As a final finishing process, before the material has fully hardened, excess material should be scraped from the surface using a steel float and any residue removed with a dry sponge.

If necessary, large surface defects and voids must be pre-filled with **MONORUB** mixed to a stiffer consistency. Apply by palette knife or steel float. This should be allowed to harden for a minimum of 24 hours before proceeding with the application.

#### Limitations

Do not use **MONORUB** when the temperature is below 5°C and falling. Do not use **MONORUB** on waterproof concrete without referring to the Flexcrete Technical Department. Not suitable for use on trafficked areas.

## Cleaning and Storage

- All tools should be cleaned with water immediately after use.
- Materials can be stored for 12 months (Grey) or 24 months (White) in dry, frost free conditions with unopened bags at 20°C.

## Packaging

- **MONORUB** is supplied in 25kg bags.

## Yield

- Grey: 14 litres per 25kg at 3.125 litres water addition
- White: 15.9 litres per 25kg at 6.0 litres water addition

## Coverage

Thickness	Coverage Per 25kg Unit (m <sup>2</sup> )	
	Grey	White
1mm	14.0	15.9
2mm	7.0	8.0

## Health and Safety

- Safety Data Sheets are available on request.

## Application Top Tips

1. Experiment with application techniques and blends of Grey and White to provide a colour match before undertaking repairs.
2. Finish in the same direction to produce an even colour and texture.
3. Ensure all applicators use the same application techniques to avoid variation in final finish.
4. Apply from the top working down to avoid contaminating previously treated areas.
5. When treating large flat panel areas, divide the surface into smaller sections using either lines from joins in the formwork or masking tape. Treat each section within the working life of the mixed material.
6. If mortar thickens, remix but **DO NOT ADD EXTRA WATER.**
6. Cold Weather Working (See separate Guide)
  - ≥3°C. on a rising thermometer.
  - ≥5°C. on a falling thermometer.
7. Hot Weather Working (See separate Guide)
  - Store material in cool conditions to maximise working life.
  - Shade applied material from strong sunlight.
  - If possible, avoid extreme temperatures by working at night.

The information herein is correct to the best of our knowledge, but it does not necessarily refer to the particular requirements of the customer. If the customer has any particular requirements it should make them known in writing to Flexcrete Technologies Limited, and obtain further advice accordingly.

## Technical Data

Property	Standard	EN 1504 R1 Requirement	Typical Result	
			Grey	White
Compressive Strength Development @20°C	EN 12190	≥10 MPa (28 days)	1 day 35 MPa 7 days 55 MPa 28 days 60 MPa	1 day 6 MPa 7 days 25 MPa 28 days 35 MPa
Adhesive Bond	EN 1542	≥0.8MPa	2.73 MPa	2.5 MPa
Chloride Ion Content	EN 1015-17	≤ 0.05%	≤ 0.004%	≤ 0.004%
Flexural Strength	EN196-1	-	10 MPa	6.5 MPa
Coefficient of Thermal Expansion	BS EN 1770	Declared Value	1.73 x 10 <sup>-5</sup> °C <sup>-1</sup>	1.49 x 10 <sup>-5</sup> °C <sup>-1</sup>
Freeze/Thaw cycles	BS EN 13687-1	Average crack width ≤0.5mm. No crack wider than ≥0.1mm. No delamination	Pass	Pass
Mixed Density		-	1900-2100kg/m <sup>3</sup>	1900-2000kg/m <sup>3</sup>
Mixed Colour		-	Grey	White
Min Application Thickness Max Application Thickness		-	0mm 2mm (overall) 6mm (blow holes)	
Min Application Temperature Max Application Temperature		-	5°C 35°C	
Working Life (approx.)		-	60 minutes at 20°C	
Reaction to Fire	EN 13501-1	-	Class F	

The properties given above are obtained from laboratory tests: results obtained from on-site testing may vary according to site conditions.

