

# Monorub

## Class R1 Fine Grade Fairing Coat

### Product Overview

**Fine grade, polymer modified mortar for filling blow holes and minor surface defects. Available in Grey and White versions to enable colour matching with the parent concrete. CE-marked in accordance with BS EN 1504-3 Class R1.**

### Uses

For the filling of blow holes and small surface defects in precast and in-situ concrete to produce an aesthetic durable finish. Suitable for repair methods 3.1 as defined by BS 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.
- Economic mortar generally requiring no substrate or inter-layer priming. Part bags can be mixed.

### 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, whilst providing an aesthetic yet durable finish. The incorporation of a polymer enhances adhesion and imparts a high degree of water repellency to the surface of concrete, making it denser and more impermeable. Once cured, if required it can be overcoated with specialist membranes in the Flexcrete range to provide further protection and aesthetic quality.

### Compliance

- CE-marked in accordance with BS EN 1504-3 Class R1. Suitable for repair methods 3.1 as defined by BS EN 1504-3.

### Specification Clause

The fairing coat shall be a fine grade, single component, polymer modified cementitious repair mortar. It shall be CE-Marked in accordance with BS EN 1504-3 Class R1 and shall comply with the following performance specification:

- Compressive strength at 20°C of at least 7MPa in 1 day and 35MPa in 28 days.
- Flexural strength at 28 days (20°C & 65% R.H) of at least 8 MPa in accordance with EN196-1.



**Flexcrete Technologies Ltd**  
**Tomlinson Road, Leyland PR25 2DY England**  
**17**  
 0086-CPD-530942

EN1504-3: Concrete repair product for non- structural repair  
 PCC mortar (based on hydraulic cement polymer modified)

Compressive Strength	: Class R1 ≥ 10MPa
Adhesive Bond	: Class R4 ≥ 2.0MPa
Chloride Ion Content	: ≤ 0.05%
Dangerous Substances	: Complies with 5.4
Reaction to Fire	: Class F



Technical Data / Mechanical Characteristics

Property	Standard	BS EN1504 R1 Requirement	Result	
			Grey	White
Compressive Strength	EN 12190	≥10MPa	60MPa	35MPa
Compressive Strength Development @ 20°C.	BS4551		1 day: 30.0MPa 7 days: 55.0MPa 28 days: 65.0MPa	1 day: 7.0MPa 7 days: 25.0MPa 28 days: 35.0MPa
Adhesive Bond	EN1542	≥0.8MPa	2.73MPa Class R4 ≥2.0 MPa	2.06MPa Class R4 ≥2.0 MPa
Chloride Ion Content	EN1015-17	≤0.05%	0.004%	0.004%
Flexural Strength	EN196-1		8.5MPa	8.0MPa
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>
Mixed Density			1900-2100kg/m <sup>3</sup>	1900-2000kg/m <sup>3</sup>
Mixed Colour			Grey or White	
Min Application Thickness			0mm	
Max Application Thickness			2mm	
Min Application Temperature			5°C	
Max Application Temperature			35°C	
Working Life (approx.)			60 minutes at 20°C	
Reaction to Fire	EN13501-1	Euroclass	Euroclass F	Euroclass F

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

Application Instructions

Preparation

The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, 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**. For further information please refer to relevant Data Sheet.

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	
GREY	2.9 – 3.3	3.125	5:1
WHITE	5.75 – 6.25	6.0	3:1

\*Depending on desired consistency.

Placing

Apply by wooden or sponge faced float or 'bag rubbing' techniques using 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 first be pre-filled with **MONORUB** mixed to a stiffer consistency. Apply by palette knife or steel float. This should be allowed to harden (minimum 24 hours) before proceeding with the main application.

Coverage

THICKNESS	COVERAGE PER 25kg UNIT (M <sup>2</sup> )	
	GREY	WHITE
1mm	14.0	15.9
2mm	7.0	8.0

Yield

Grey: 14 litres per 25kg bag at 3.125 litres water addition.

White: 15.9 litres per 25kg bag at 6.0 litres water addition.



### Cleaning and Storage

All tools should be cleaned with water immediately after use.

Materials can be stored in dry, frost free conditions with unopened bags at 20°C.

#### Shelf life

Grey 12 months

White 24 months

### Packaging

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

### 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.

### 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 joints 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.



FM 41091  
EMS 597350  
OHS 597351

Quality  
Environmental  
Health & Safety