

# Flexcem R50

## Non-shrink polymer-modified cementitious repair mortar

### Description

**Flexcem R50** is a pre-mixed, polymer-modified, cement-based mortar, without corrosive ingredients, suitable for indoor and outdoor applications, offering:

- Abrasion resistance.
- Very good bonding to the substrate.
- Water repellency.
- Simplification of works.

Certified according to EN 1504-3 and classified as a PCC R2 mortar for concrete repairs.

### Fields of application

**Flexcem R50** is used for repairs and re-profiling in damaged concrete elements. **Flexcem R50** is used for concrete or brickwork repair and patching, forming fillets at wall to floor junctions, etc. **Flexcem R50** is applied in layers up to 25mm thick for large-scale applications, and up to 50mm thick for localized repairs.

### Technical Data

Form	cementitious mortar
Colour	Grey, white
Water demand	3.25 – 3.8 l/25kg bag
Application temperature	from +5°C to +35°C
Pot life	~60 mins
Bulk Density	
• Dry Mortar	1.35 +/- 0.10 kg/l
• Fresh Mortar	2.05 +/- 0.10 kg/l
Chloride content	0.0%
Compressive strength (ASTM C 579 – 01)	
• 1 day	20 MPa
• 7 days	42 MPa
• 28 days	58 MPa

Flexural Strength, 28 days, at 27°C	10 MPa
Free linear Expansion, (ASTM C 827)	0.2%
Adhesion Strength, 28 days at 27°C	2.0 MPa
Coefficient of Thermal Expansion, per °C	11 <sup>-12</sup> x10 <sup>-6</sup> (Similar to Concrete)

### Directions to use

#### Substrate Preparation

All grouting surfaces should be clean and free of foreign substances including corrosion, if present on steel. Remove all spalled areas and areas of unsound concrete. Preparation work done on the grouting surfaces should be completed by high pressure water blast, breaker, hammer, or other appropriate mechanical means to obtain a properly prepared surface. Saturate repair area with clean water before grouting to ensure SSD condition. No standing water should be left in the repair area.

#### Application

**Flexcem R50** is added to water under continuous stirring, until a mixture of the desired workability is formed. The material is applied with a trowel.

#### Curing

A damp cure of at least 2 days is necessary to control the non-shrink characteristics and maintain strength levels.

## Remarks

- Additions of cement or other materials will eliminate the designed product qualities
- Water quantities may be affected by temperature, mixing method and batch size should not be re-tempered
- Mix no more grout than can be placed in 30 minutes.
- Use a consistent water temperature when mixing multiple batches, to prevent performance fluctuations.
- Temperature during application should be at least +5°C.
- In hot weather, **Flexcem R50** should be watered after application, to be protected from water loss.
- Consult the safety instructions written on the packaging before use.

## Packaging

**Flexcem® GP** is available in plastic containers of 5 kg and 10 kg and HDPE bags of 25kg.

## Shelf life & storage

12 months from production date if stored in original, unopened packaging, in temperature between +5°C and +35°C. Protect from direct sun exposure and frost.

## Health & safety

The product contains cement powders which, when mixed with water, release alkalis that could be harmful to the skin. It is preferable that the application be done in a ventilated area, and to wear protective gear for hands, eyes and respiratory system and to avoid breathing of the dust. Splashes on the skin should be washed away by cleaning with soap and water. In case of contact with eyes, wash thoroughly with clean water. If swallowed, do not induce vomiting, in both cases seek medical attention. The product is non-flammable.

## Notes

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