

PRB MORTIER DE RÉPARATION R3 R&D

ECO-DESIGNED FIBRE-REINFORCED QUICK-SETTING FINE

MORTAR FOR STRUCTURAL REPAIRS TO CONCRETE



The **+**s of PRB MORTIER DE RÉPARATION R3 R&D

- + Reduced carbon footprint*
- + Excellent compressive and flexural strength
- + Can be applied in thicknesses up to 100 mm
- + Excellent performance in harsh environments
- + Manual or machine application



EN 1504-3
Class R3



* Reduced carbon footprint compared to a product of the same category from our PRB range.

PACKAGING

– Paper bag containing 25 kg.

STORAGE LIFE: 12 months.

CONSUMPTION/USE

As a guide: 2 kg/m²/mm of thickness.

COLOUR: Light grey.



AREA OF USE

USES

- Structural repairs to concrete.
- Can be applied vertically, horizontally, on the underside of surfaces, indoors or outdoors.
- Perfect for repairing and filling in gaps, cracks, the front edges of steps and balconies, holes, grooves, etc.
- Repairing damaged structures: pillars, slabs, archways, beams, etc.
- Filling dormant cracks

SUITABLE SUBSTRATES

- Concrete.

PROHIBITED SUBSTRATES

Do not use on:

- Plaster.
- Organic coverings (to be avoided completely).
- Crumbling or weak surfaces.
- Industrial floors or floors subject to frequent use that are not covered with a suitable coating.

APPLICATION CONDITIONS

- Between 5°C and 30°C.
- Do not apply to frozen, thawing, hot or damp surfaces. Do not apply to surfaces in full sunlight or during heavy rain and strong winds. Do not apply if there is a risk of frost or freezing temperatures within the next 24 hrs.

TECHNICAL CHARACTERISTICS

INGREDIENTS

- Fluid binders, sand, fibres and additives.
- Grain size: 0-0.8 mm.

PRODUCT

POWDER

- Bulk density of the powder: 1.3 t/m³.

PASTE

- Manipulation time (workable life of the mix): Approx. 1 hour at 20°C, 30 mins at 30°C.

- Setting time:

Temperature	Starts to set	Completely set
at 20°C	5 hrs ± 1 hr	6.5 hrs ± 1 hr

- Workable time - trowelling: 1 hr.
- Waiting time before removing shuttering: 24 hrs.

Performance when hardened

Class R3 in accordance with EN1504-3

Resistance	7 days	28 days
Flexural strength	≥ 4	≥ 5
Compressive strength	≥ 15	≥ 25

- Mechanical strength in MPa in accordance with EN12190.
- Adhesion to concrete: ≥ 1.5 MPa.
- Thermal compatibility (Parts 1, 2 & 4): ≥ 1.5 MPa.
- Resistance to carbonisation: OK.
- Chloride ion content: ≤ 0.05%
- Modulus of elasticity: 15 GPa.
- Reaction to fire: A1.
- Capillary Absorption: ≤ 0.5 kg/m².h^{0.5}

- Consistency according to concrete slump test (Abrams cone test): 3 cm.
- Waiting time before covering:
- – Glued tiles: 24 hrs.
- Mortar rendering: ≥ 7 days.
- Paints & thick paint coatings: 24 to 72 hours, depending on the ambient conditions and the thickness applied.

These values are estimates based on laboratory tests carried out in accordance with the applicable technical guidelines. The application conditions can significantly change these values. These times are based on an ambient temperature of 20°C. They will be longer at lower temperatures and shorter at higher temperatures

APPLICATION

SUBSTRATE PREPARATION

- The substrate must be hard, adherent, rough, clean and free from dust.
- Hammer out the areas to be repaired and pick out the damaged sections until you reach the sound concrete.
- Leave sharp edges on the edges of the repair.
- For grooves: open each groove to create a square or triangular section of at least 1 cm wide, with a depth equal to or less than the width of the groove.

WORKING AROUND SOUND STEEL REINFORCEMENTS

- Completely expose the reinforcement bars, including the reverse side, to a depth of 1 to 2 cm so that the mortar can embed around the reinforcement bars.
- Remove any rust from the bars by brushing or sandblasting and then apply a protective coating.

- **Option 1:** Apply PRB PASSIVANT ACIER to the bars and leave to dry.
- **Option 2:** Use a brush to apply a mixture of 50% PRB MORTIER DE RÉPARATION R3 R&D and 50% PRB LATEX pure resin to the steel reinforcement bars.
- Remove any dust from the areas to be repaired.

MOISTENING THE SUBSTRATE

- Moisten the areas to be repaired beforehand and leave to dry (the surface should be damp but not dripping wet).

FOR IMPROVED ADHESION*

- If necessary, apply a mixture of PRB MORTIER DE RÉPARATION R3 R&D and a PRB LATEX resin + water solution (1/3 resin and 2/3 water) to the areas to be repaired. For example:
- 0.4 L of PRB LATEX + 0.8 L of water for 5 kg
 - 2 L of PRB LATEX + 4 L of water for 25 kg

Using a wide brush, spread the mixture onto the concrete in layers approximately 2 mm thick.

PREPARING THE PRODUCT

- Mix PRB MORTIER DE RÉPARATION R3 R&D with potable water in a clean container:
- Approx. 4.4 to 5 litres per 25 kg bag.
 - 0.88 to 1 litres for 5 kg.

PUMP/SPRAYER SETTINGS

Mortar pump

- Set the water pressure to: 10 to 12 bars.
- Paste operating pressure: 14 to 18 bars.
- Spray nozzles (min. Ø): 12 mm.

MANUAL APPLICATION

- Apply the 1st coat of PRB MORTIER DE RÉPARATION R3 R&D:
- As soon as the PRB PASSIVANT ACIER is dry (Option 1), or when the PRB MORTIER DE RÉPARATION R3/PRB LATEX mixture has hardened (Option 2).

– If you have applied a PRB MORTIER DE RÉPARATION R3/PRB LATEX/water mixture for IMPROVED ADHESION:* as soon as it becomes firm but before it has completely hardened.

- PRB MORTIER DE RÉPARATION R3 R&D can be applied in thicknesses from 5 to 100 mm.
- Fill any cavities and press the mortar firmly into place.
- Wait until the 1st coat has solidified before applying the next one.
- Smooth with a smoothing trowel or float, or finish with a polystyrene or plastic finishing trowel.

PRECAUTIONS FOR USE

- Contains cement and/or lime.
- Please read the packaging safety label and safety data sheet before use.
- Please respect the applicable regulations.

Technical Data Sheet - 5 March 2024