

# PRB TP RÉPAR R4 PR

QUICK-SETTING, FINE-GRAIN, FIBRE-REINFORCED MORTAR FOR STRUCTURAL REPAIRS TO CONCRETE



## The +s of PRB TP RÉPAR R4 PR

- + Restructuring structures
- + Shrinkage-compensated & very smooth finish
- + Can be applied in thicknesses up to 100 mm
- + High adhesion and very high compressive strength
- + Excellent resistance to abrasion and aggressive environments



### PACKAGING

– Paper bag containing 25 kg.

**STORAGE LIFE:** 12 months.

### CONSUMPTION/USE

As a guide: 2 kg/m<sup>2</sup>/mm of thickness.

**COLOUR:** Light grey.



PRB TP RÉPAR R4 PR  
CONCRETE REPAIRS: STRUCTURAL REPAIRS

## AREA OF USE

### USES

- Concrete repairs.
- 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, bridge pillars, 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

The NF030 certified characteristics are based on a mixing ratio of 16%.

### INGREDIENTS

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

### PRODUCT POWDER

- Bulk density of the powder: 1.4 t/m<sup>3</sup>.

### PASTE

- Manipulation time (workable life of the mix): Approx. 15 mins at 20°C.

• Setting time:

Temperature	Starts to set	Completely set
at 20°C	30 mins	60 mins
at 5°C	1.5 hrs	3.5 hrs

- Workable time - trowelling: 25 mins.
- Waiting time before removing shuttering/formwork: 2 to 3 hrs.

**Performance when hardened**  
Class R4 in accordance with EN1504-3

- Mechanical strength in MPa in accordance with EN12190.

Strength	after 24 hrs	7 days	28 days
Flexural	4	8	9
Compressive	30	40	50

- Adhesion to concrete: ≥ 2 MPa.
- Thermal compatibility (Parts 1, 2 & 4): ≥ 2 MPa.
- Resistance to carbonisation: OK.
- Chloride ion content: ≤ 0.05%.
- Modulus of elasticity: 25 GPa.
- Reaction to fire: A1.

- Capillary Absorption: ≤ 0.5 kg/m<sup>2</sup>.h<sup>0.5</sup>
- Consistency according to concrete slump test (Abrams cone test): 3 cm.
- Waiting time before covering/coating:
  - Glued tiles: 48 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.

## UTILISATION

### SUBSTRATE PREPARATION

- The substrate must be hard, adherent, rough, clean and free from dust.
- Hammer out the areas to be repaired and remove any 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.

### APPLYING TO SOUND STEEL REINFORCEMENTS

- Completely expose the reinforcement bar(s), including the reverse side, to a depth of 1 to 2 cm so that the mortar can embed around the reinforcement bar(s).
- 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 TP RÉPAR R4 PR and 50% pure PRB LATEX resin to the steel 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\* (not certified)

- If necessary, apply a mixture of PRB TP RÉPAR R4 PR and a PRB LATEX resin + water solution 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 brush or wide paintbrush, spread the mixture onto the concrete in layers approximately 2mm thick.

### PRODUCT PREPARATION

Mix PRB TP RÉPAR R4 PR with clean water in a clean container:

- Approx. 4 L of water per 25 kg bag.
- 0.80 L of water per 5 kg bag.

### MANUAL APPLICATION

- The 1st layer of PRB TP RÉPAR R4 PR can be applied:
  - As soon as PRB PASSIVANT ACIER (Option 1) or the PRB TP RÉPAR R4 PR/PRB LATEX mixture (Option 2) has dried/set.
  - If you have applied a PRB TP RÉPAR R4 PR/PRB LATEX/water mixture for IMPROVED ADHESION\*: as soon as it becomes firm but before it has completely hardened.
- Apply PRB TP RÉPAR R4 PR in successive layers of 5 to 100 mm thick.
- Fill any cavities and press the mortar firmly into place.
- Wait until the first layer has hardened before applying the next.

- Profiling: trim any excess with the edge of the trowel or a straight edge.
- 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.
- For paint and thick paint coatings, the minimum drying time will depend on the thickness, ambient conditions and the recommendations of the paint manufacturer.

Technical Data Sheet - 11 January 2024

This technical data sheet is provided for the sole purpose of informing our customers about the characteristics of the product. Its content is based on up-to-date information. Before using the product, the user is advised to check whether this sheet has been replaced by a more recent version. The warranty conditions for our products, processes and systems are specified at the beginning of this catalogue. You can also find them, along with all regulatory and safety documents, online at [www.prb.fr](http://www.prb.fr).

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