PRB TP RÉPAR R4

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

The + s of PRB TP RÉPAR R4

- Restructuring structures
- Shrinkage-compensated & very smooth finish
- Can be applied in thicknesses up to 70 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/m²/mm of thickness.

COLOUR: Light grey.

CE *EN 1504-3 Class R4*

NF PRODUITS SPÉCIAUX DESTINÉS AUX CONSTRUCTIONS EN BÉTON HYDRAULIQUE

ÉMISSIONS DANS L'AIR INTÉRIEUR A+

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, abutments...
- Filling dormant cracks.
- Suitable for use in ponds and swimming pools.
- Industrial floors with a suitable coating: please contact us beforehand.

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 20%.

INGREDIENTS
- Fluid binders, sand, fibres and additives.
- Grain size: 0-0.7 mm.

PRODUCT
POWDER
- Bulk density of the powder: 1.4 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	3 hrs	3.5 hrs
at 30°C	65 mins	80 mins

- Workable time - trowelling: 1 hr.
- Waiting time before removing shuttering/ formwork: 4 to 5 hours.

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	6	8	9
Compressive	30	45	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: ≤ 0.5Kg.m^{-2}.h$^{-0.5}$.
- Consistency according to concrete slump test (Abrams cone test): 4 cm.
- Waiting time before covering/coating:
  – Glued tiles: 48 hrs.
  – Mortar rendering: ≥ 7 days.
  – Paints & thick paint coatings: 48 hrs to 7 days, 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** 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** 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.
When applying to floors, **PRB TP RÉPAR R4** mortar must always be applied to fresh, sticky bonding slip.

PRODUCT PREPARATION
Mix **PRB TP RÉPAR R4** with clean water in a clean container:
- Approx. 4.75 to 5.4 litres per 25 kg bag.
- 0.95 to 1.08 litres for 5 kg.

PUMP/SPRAYER SETTINGS
Mortar pump
- Water pressure setting: 10 to 12 bars.
- Paste operating pressure: 14 to 18 bars.
- Spray nozzles (min. Ø): 12mm.

APPLICATION
- The 1st layer of **PRB TP RÉPAR R4** can be applied:
  – As soon as the **PRB PASSIVANT ACIER** is dry (Option 1), or when the PRB TP RÉPAR R4/PRB LATEX mixture has hardened (Option 2).
  – If you have applied a PRB TP RÉPAR R4/ LATEX Resin/Water mix for IMPROVED ADHESION: apply **PRB TP RÉPAR R4** over fresh slip (floor) (small wall surface) or apply a coat with a notched trowel and cover after 1 to 4 hours on the same day, or the following day.
- Apply **PRB TP RÉPAR R4** in successive layers of 5 to 70 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.

Technical Data Sheet - 14 June 2022