

PRB MANUCEM HPR

HIGH-PERFORMANCE BINDER FOR FAST-SETTING AND FAST-DRYING SCREEDS


The **+**s of PRB MANUCEM HPR

- +** Shrinkage-compensated screed, can be covered 2 to 4 hrs after laying
- +** Particularly suitable for shop renovations
- +** Floors can be used shortly after being laid
- +** Variable dosage mortars and micro-concretes

PACKAGING

– Paper bag containing 25 kg.

STORAGE LIFE: 12 months.

CONSUMPTION/USE

 As a bonding slip - per m²:

- Bonding slip of PRB MANUCEM HPR + sand, 1.5 to 3 kg;
- PRB MANUCEM HPR binder: 0.5 to 1 kg.
- PRB LATEX resin: 0.120 to 0.250 L.

As a mortar:

 3.4 to 4.4 kg of PRB MANUCEM HPR/m²/cm of screed thickness, depending on the dosage: 350 to 450 kg/m³.

Other uses (DTU 26.2):

- P2 - P3 areas: 250 to 300 kg/m³.
- As a mortar bed: 100 to 325 kg/m³.

COLOUR: Grey.

 Suitable for
P4S floors

CSTB Technical Notice:
13/20-1477_V1


AREA OF USE

USES

- Interior floors in all areas subject to moderate or heavy traffic: class P2 to P4S, such as homes, garages, offices, shops and supermarkets.
- **New & Renovation work:** please contact us for any special requirements.
- CSTB Technical Notice N° 13/15-1293
- French DTU Standards, Technical Specifications & regulations in force.
- **Screed solutions (see table):** Ensure that all separation strips are installed and all preparation work is carried out in accordance with the French DTU standards 26.2 and 52.10.
- For other uses: mortar beds & underlaying (see DTU). In order to guarantee the correct performance of PRB MANUCEM HPR, do not add cement or other additives (plasticisers, super-plasticisers, inhibitors or anti-freeze).

TYPE OF WORK	Possible thicknesses		
	Bonded screeds on a fresh bonding slip	Floating screeds on insulation (excluding underfloor heating)	Unbonded screeds on polyethylene film
Private or communal premises up to class P3	• 15 to 100 mm *locally: 10 mm Min. thickness in line with the drain: 5 mm	• 35 to 100 mm	• 35 to 100 mm
Areas subject to heavy traffic P4 / P4s	• 30 to 100 mm Min. thickness in line with the drain: 15 mm	Prohibited	• 50 to 100 mm

SUITABLE SUBSTRATES

- Resistant, adherent, stable substrates suited to the use of the premises:
 - Solid concrete slab.
 - Solid concrete floor or with concrete topping slab.
 - Cement mortar screed bonded to concrete.
- Other substrates in accordance with Technical Notice: please contact us beforehand.
 - Old tiles.
 - Plastic tiles & floors (P2-P3 floors).

LIMITS OF USE

This product should not be applied as a bonded screed on top of:

- crumbling or loose surfaces,
- anhydrite screeds, wooden floors, lightweight concrete or mortar,
- old plaster-based levelling products,
- old synthetic tiles,
- underwater floors,
- substrates with active cracks.

APPLICATION CONDITIONS

- Between 5°C and 35°C.
- Do not apply to frozen, freezing or thawing substrates, soaked substrates, substrates subject to capillary action (rising damp), in high temperatures, or in strong winds.

TECHNICAL CHARACTERISTICS

INGREDIENTS

- High-performance fluid binders and specific additives.

POWDER

- Colour: grey.
- Density: 1 ± 0.1 T/m³.

TYPICAL PERFORMANCE OF PRB MANUCEM HPR

- Density of the mixture: 2.2 to 2.4.
- Compressive strength after 24 hrs: ≥ 20 MPa.
- Residual moisture after 24 hrs (5 cm): ≤ 2%.
- Reaction to fire: A1f.
- Shrinkage: ≤ 0.4 mm/m.
- Class - according to EN 13813: CT - C40 - F6.

DOSAGES

See table.

	In m ³	Per bag	Bonding slip with sand
Rework or bonding slip			
PRB MANUCEM HPR	2 volumes	25 kg	4 volumes
Sand - 0/2 or 0/4 mm			4 volumes
Water	1 volume	12.5 L	1 volume
PRB LATEX resin	1 volume	12.5 L	1 volume
Mortar			
PRB MANUCEM HPR	350 to 450 kg	25 kg	
Sand - 0/4 mm	1 m ³	56 to 71 L	
Water *	90 to 160 L	± 7.5 L	
Micro-concrete			
PRB MANUCEM HPR	350 to 450 kg	25 kg	
Sand - 0/4 mm	700 L	39 to 50 L	
Gravel - 3/8 mm	300 L	17 to 21 L	
Water *	80 to 160 L	± 7.5 L	
Underlaying/Mortar bed (see DTU)			
PRB MANUCEM HPR	80 to 100 kg	25 kg	
Sand - 0/4 mm	1 m ³	250 to 312 L	
Water *	24 to 35 L	6 to 8.75 L	

* The water content varies according to the moisture content of the sand and gravel used.

APPLICATION

- Working time of the mix: 15 to 30 mins.
- Workable time - trowelling: 20 mins.
- Ready to walk on after (light traffic): 2 to 4 hrs.
- **Waiting time before applying floor coverings:**
 - tiles: 2 to 4 hrs,
 - levelling before laying flexible flooring: 4 hrs.

NB: These values are estimates based on laboratory tests. The application conditions can significantly change these values.

UTILISATION

Please refer to the PRB Process Sheets

SUBSTRATE PREPARATION

- Surfaces must comply with the reference DTU (26.2 et seq.) and be suitable for their intended use. For renovation work, please refer to the preliminary ground survey (Technical Specification 3529 v4 & 3530 v4).
- **Checking and Cleaning**
 - The surface must be structurally sound, adherent, solid, dry and free of cracks or rising damp.

FOR BONDED SCREEDS:

- Remove all traces of plaster, varnish, wax, surface laitance, etc. by sanding or scraping.
- Remove all products that may limit adhesion: curing products, surface hardeners, floor treatments (wax,

water repellents, oil repellents, etc.), oils and greases, etc. until you obtain a clean, sound cement substrate.

- Then remove any dust by brushing and vacuuming.
- Pipes must be embedded in an underlay of PRB MANUCEM HPR (see DTU 26.2 and 52.10).

Bonding slip for a bonded screed:

- Prepare a bonding slip using the following proportions:
 - 4 volumes of PRB MANUCEM HPR +
 - 4 volumes of 0/2 mm sand
 - 1 volume of PRB LATEX resin
 - 1 volume of water
- Apply the bonding slip as you go so that the screed is applied to the fresh slip.

FOR UNBONDED SCREEDS:

All preparation work and separation strips must comply with the DTU standards 26.2/52.10.

MIXING PRB MANUCEM HPR

- The mortar or micro-concrete can be mixed using a concrete mixer or a shovel.
- Carefully and quickly mix PRB MANUCEM HPR with the 0/4 - 3/8 aggregates and water for a maximum of 3 to 4 minutes. Adjust the water ratio according to the moisture content of the aggregates.
- The manipulation time of the mix is 20 to 30 mins.
- **Apply immediately.**
- Given the rapid setting time, clean tools (concrete mixer, etc.) before the mortar hardens.

APPLICATION

- Quickly mark levels and slopes, then spread the screed, tamp it and level it. Finish by trowelling within 15 minutes, taking into account the manipulation time (20-30 mins).
- If work is to be stopped for more than an hour, leave a strip of uncoated reinforcement mesh overhanging the mortar or place a strip of 50 x 50 mm metal

reinforcement mesh (50 cm coated, 50 cm overhanging) in the fresh mortar.

- When resuming work, apply a bonding slip to the edge of the screed.

For technical joints

- Leave a 3 to 10 mm joint around the edge: apply a strip of foam (e.g. ISOL 100 PRB) or polystyrene.
- Recreate existing expansion joints using suitable commercially available profiles.
- Dividing the surfaces: to be adapted according to the work (see the DTU).

PRECAUTIONS FOR USE

- Contains cement.
- Please read the packaging safety label and safety data sheet before use.