

PRB MANUCEM N

SEMI-QUICK-SETTING AND DRYING SCREED BINDER



The +s of PRB MANUCEM N

- + Shrinkage-compensated screed, can be covered 24 hrs after laying
- + High performance binder
- + Can be used with a screed pump
- + Variable dosage mortars and micro-concretes

PACKAGING

– Paper bag containing 25 kg

STORAGE LIFE: 12 months.

CONSUMPTION/USE

As a bonding slip - per m²:

- 1.5 to 3 kg. For example:
- PRB MANUCEM N 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 N/m²/cm of screed thickness, according to 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
13/18-1405 V2**



AREA OF USE

USES

- Interior floors in all areas subject to moderate or heavy traffic: Class P2 to P4S, including: Homes, garages, offices, shops and supermarkets.
- Exterior floors for loggias, balconies and footpaths.
- **New & Renovation work and exterior floors:** please contact us for any special requirements.
- CSTB Technical Notice No. 13/18-1405.
- 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.

In order to guarantee the correct performance of PRB MANUCEM N, do not add cement or other additives

TYPE OF WORK	Application 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
Exterior floors	Bonded screeds on a fresh bonding slip		Unbonded screeds on a drainage mat (DTU 52.1)
	• 10 to 100 mm Min. thickness in line with the drain: 5 mm		• 50 to 100 mm with reinforcement mesh*

(plasticisers, super-plasticisers, inhibitors or anti-freeze) and respect the water ratio indicated below.

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.
- Drainage mat.

- For other substrates, please contact us before use.

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 or thawing substrates, soaked substrates, substrates subject to capillary action (rising damp) or high temperatures, or in strong winds.

TECHNICAL CHARACTERISTICS

DOSAGES

	In m ³	Per bag	Bonding slip with sand
Rework or bonding slip			
PRB MANUCEM N	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 N	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 N	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 N	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	

INGREDIENTS

- High-performance fluid binders and specific additives.

POWDER

- Colour: grey.
- Density: 1 ± 0.05 T/m³.

TYPICAL PERFORMANCE OF PRB MANUCEM N

- Density of the mixture: 2 to 2.4.
- Compressive strength after 48 hrs: ≥ 20 MPa.

- Compressive strength after 28 days: ≥ 30 MPa.
- Residual moisture after 48 hrs: ≤ 4.5 %.
- Reaction to fire: A1_{fl}.
- Shrinkage: ≤ 0.8 mm/m.
- Class - according to EN 13813: CT - C30 - F6.

APPLICATION

- Working time of the mix: 60 ± 30 mins.
- Workable time - trowelling: 20 to 30 mins.
- Ready to walk on after (light traffic): 24hrs.

Waiting time before applying floor coverings:

- tiles and textile coverings: 24 hrs,
- levelling before laying flexible flooring: 24 hrs,
- PVC coverings: 72 hrs,
- parquet flooring: 7 days,
- floor paint: 21 days.

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 be compliant 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 Specifications: 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 products that may limit adhesion (curing products, surface hardeners, floor treatments - wax, water repellents, oil repellents, etc.), oils and greases, down to the clean, sound cement substrate by sandblasting or sanding the surface.
- Then remove any dust by brushing and vacuuming.

- Pipes must be embedded in an underlay of PRB MANUCEM N or PRB CHAPECEM N - see DTU 26.2 and 52.10.

Bonding slip for a bonded screed:

- Prepare a bonding slip using the following proportions:
 - 2 volumes of PRB MANUCEM N,
 - 1 volume of PRB LATEXresin,
 - 1 volume of water.

Bonding slip variant:

- Prepare a bonding slip using the following proportions:
 - 4 volumes of PRB MANUCEM N,
 - 4 volumes of 0/2 mm sand,
 - 1 volume of PRB LATEXresin,
 - 1 volume of water.
- Apply the bonding slip as you go so that the screed is applied to the fresh slip. Workable life: ± 30 mins (remix from time to time).

FOR UNBONDED SCREEDS:

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

MIXING PRB MANUCEM N

- The mortar or micro-concrete can be mixed using a concrete mixer or a shovel. When using a pump, remember to take into account the working time of the mixture so as not to block the pump, especially when applying in high temperatures.
- Carefully and quickly mix PRB MANUCEM N with the 0/4 - 0/8 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 60 ± 30 mins (depending on the temperature).
- **Apply immediately.**
- Clean tools (mixer, 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 (workable life).

- If work is to be stopped for more than an hour, leave a strip of uncoated reinforcement mesh overhanging the mortar or place a 1m 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.
- It can be transported using a screed pump.
- **For technical joints**
• Leave a perimeter joint of 3 to 10 mm wide and apply a foam strip (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.