

PRB CEL CÉRAMIC

UNDER-TILE AND UNDER-SCREED LIQUID SEALER SYSTEM



PRBCEL CÉRAMIC

SEALING AND WATERPROOFING: UNDER-TILE AND UNDER-SCREED SYSTEMS

ADHESIVES & FLOORING

The +s of PRB CEL CÉRAMIC

- + Ideal for showers and communal kitchens, terraces and swimming pools
- + High flexibility
- + Seals against water pressure and back pressure
- + Smooth texture for quick and easy application

PACKAGING

– 32 kg kit.

STORAGE LIFE: 12 months.

CONSUMPTION/USE

Mixing instructions
Powder + Resin in 2 coats: 2.5 to 3.5 kg/m².

COLOUR: Grey.

ACCESSORIES

- PRB ARMACEL mesh (0.80 x 50 m).
- PRB Bande SM 200 (0.20 x 15 m).
- Natte Céramic EPI/SPEC for plates and strips (1 x 30 m).
- PRB Bande NC (0.20 x 25 m).



CE CM Category 01P
according to EN 14891



CSTB Technical Notice 13/18-1412 - Swimming pools
CSTB Technical Notice 13/18-1413 - Sealer

AREA OF USE

USES

- Interior and exterior floors.
- Communal kitchens (P4-P4S).
- Interior walls - wet rooms.
- Swimming pools, ponds and pool surrounds.

PRB CEL CÉRAMIC can be used for under-tile sealing in new and renovation work:

WALLS

- Walls in EC and communal and private EB + wet rooms.
- Spas, steam rooms, multi-jet showers and hydromassage cubicles in thalassotherapy centres.

INTERIOR FLOORS

- Interior intermediate floors in P2 and P3 areas.
- Communal kitchens and annexes classified as P4/P4S, on new or exposed cement.
- Cold-storage rooms at positive temperatures.

SWIMMING POOLS

- Indoor or outdoor* swimming pools made of class A or B concrete, with walls and flooring in accordance with specification 74 issued by the Ministry of Public Works (N 98-3 T.O.).
 - Public swimming pools, aquatic centres & thalassotherapy centres.
 - Waterfalls and fountains.
 - Indoor swimming pool surrounds.
 - Outdoor* swimming pool surrounds with a slab on grade foundation.
- * Outdoor use is restricted to regions with a lowland climate and the French Overseas Departments and Territories (DROM).

BALCONIES, TERRACES, LOGGIAS & COURTYARDS

- Outdoor terraces and balconies: locations with a lowland climate in mainland France and Europe and in the French Overseas Departments and Territories (DOM).

- Specifications & 2 Scientific and Technical Center for Building (CSTB) Technical Notices:

- 1) Intermediate floor sealing
 - 2) Sealing swimming pools and pool surrounds
- French DTU Standards, Technical Specifications and regulations in force.
 - Technical notice for the substrates.

Swimming pools:

- Specification 74 issued by the Ministry of Public Works (N98-3 T.O.).
- NF EN 1992 (Eurocode 2).
- I.T.B.T.P. annals No. 350 of May 1977 and No. 486 of May 1986.

COMPATIBLE COATINGS & COVERINGS

Ceramic coverings or similar: stoneware, natural stone, pâte de verre mosaics, enamel or earthenware, in compliance with the Specifications for PRB CEL CÉRAMIC.

For floors: tiles must comply with the UPEC classification of the premises and the requirements of standard XP P 05-011 in terms of tile slip resistance and maintenance advice for barefoot and shod areas.

For P3 areas: Stoneware, at least P3 certified and at least 7.5 mm thick.

- Permitted slenderness ratio: ≤ 8 (Technical Specification 3666 V2).
 - Wooden substrates: sizes of up to 1,600 cm² (slenderness ratio of 1) and 1,200 cm² (slenderness ratio of 3).
- The use of sizes <100 cm² on the ground is mainly limited to areas of private use.

For P4/P4S areas (kitchens and annexes, cold-storage rooms): P4S certified stoneware of at least 12mm thick,

- for areas of 100 to 400 cm² with drains or gutters,
- for areas of up to 3,600 cm² in areas with no drains.

For walls: The weight of the coating/covering must not exceed 40 kg/m².

For pools: Frost-resistant stoneware (enamelled or otherwise). The maximum surface area for ceramic tiles is 900 cm² for pools and 3,600 cm² for pool surrounds. Other sizes: please contact us beforehand.

Glass mosaics (pâte de verre) and enamels:

Only mosaics with paper on the front side may be used, in accordance with NF P 61-341.

Natural stone:

Private indoor and outdoor pools. Frost-resistant stone suitable for wet environments, in accordance with NF B 10-601 and the French DTU 52.2.

SUITABLE SUBSTRATES

PRB CEL CÉRAMIC sealer is suitable for the following substrates, in accordance with the process Specifications and the regulations in force:

INTERIOR FLOORS

- Concrete.
- Concrete floors (1) in accordance with the French DTU 52.2, with a deflection factor less than or equal to 1.
- Bonded concrete slab or cement screed.
- Liquid cement screed.
- Concrete floors with underfloor heating (DTU 65.7 /65.8).
- P3 or P4S floor coverings & coatings.
- Old tiles**.

+ in areas with no drain or gutter:

Private wet rooms, office toilets and hotel bathrooms:

- Wood panel flooring* Chipboard, Plywood, OSB3 or OSB4 (*) in accordance with the French DTU 31.2 and 51.3 standards. (*) Important: sand and remove dust before application.

INTERIOR WALLS

- Solid cast-in-place or pre-cast concrete.
- Cement-based or single coat covering (CS category IV).
- CS III covering (all interior wall tiles).
- Autoclaved aerated concrete*.
- Terracotta tile walls*.
- Cement or calcium silicate boards with AT*.
- Gypsum blocks (water-resistant or standard)*.
- Plasterboard (water-resistant or standard)*.
- Old tiles**.

* To be applied after a primer: ACCROSOL PLUS or ACCROSOL AG.

** To be applied after preparation (washing, scraping, scratching or sanding) and a primer: ACCROSOL PLUS or ACCROSOL AG.

(1) excluding cellular floors, floating screeds, unbonded screeds and steel-frame flooring, whether structural or not.

Tile sizes are limited depending on the substrate: please refer to the Specifications in force and the selection guides.

EXTERIOR FLOORS

- Reinforced concrete slab on grade foundation (DTU 13.3).
- Solid concrete flooring (DTU 52.2).

SWIMMING POOLS

- Stable, crack-free reinforced or prestressed concrete in accordance with Specification 74 (General Technical Specifications for the Construction of Concrete Water Tanks): class A or B structures.

+ Other substrates not included in the Specifications (please contact us beforehand):

INTERIOR WALLS AND FLOORS

- Ready-to-tile panels with AT (including shower trays).

PROHIBITED SUBSTRATES

Do not apply to:

- Bare plaster.
- Large metal surfaces.
- Other substrates (please contact us for more information).
- Roofs.

COMPATIBLE ADHESIVE MORTARS

The following PRB adhesive mortars can be used to lay tiles over PRB CEL CÉRAMIC:

FOR FLOORS OF CATEGORY P3 AND BELOW AND WALLS:

- PRB•COL MONOFLEX HP.
- PRB•COL DUO FLEX.
- PRB•COL FLEX.
- PRB•COL FLUID N (floors).
- PRB•COL FLUID HPR (floors)
- PRB•COL TOP (for interior applications).
- PRB COL & JOINT ÉPOXY.

FOR FLOORS IN COMMUNAL KITCHENS AND ANNEXES (P4-P4S INDOOR AREAS):

- For bonding directly onto PRB CEL CÉRAMIC or bonding onto an unbonded screed - PRB MANUCEM N/CHAPECEM N:
- PRB•COL TOP.
 - PRB•COL FLUID HPR.
 - PRB•COL FLUID N.
 - PRB COL & JOINT ÉPOXY.

FOR POOLS:

- PRB•COL MONOFLEX HP.
- PRB•COL FLEX.
- PRB COL & JOINT ÉPOXY.

COMPATIBLE GROUTING MORTARS

The following PRB grouting mortars are suitable for grouting tiles over **PRB CEL CÉRAMIC**:

FOR FLOORS OF CATEGORY P3 AND BELOW AND WALLS:

- PRB JOINT FR.
- PRB JOINT RECTIFLEX.
- PRB JOINT XT.
- PRB JOINT LARGE.
- PRB JOINT SOUPLE.
- PRB JOINT HPR.
- PRB TOP JOINT.
- PRB JOINT OPUS.
- PRB COL & JOINT ÉPOXY.

FLOORS IN INDOOR AREAS (UP TO P4-P4S) AND AREAS EXPOSED TO CHEMICAL OR MECHANICAL AGGRESSION (COMMUNAL KITCHENS, ETC.):

- PRB COLLE ET JOINT ÉPOXY

Depending on the use of the premises and the maintenance protocol, PRB JOINT FR can be used in public wet rooms, except those exposed to acidic agents with a pH < 4.

FOR PUBLIC SWIMMING POOLS, AQUATIC CENTRES & THALASSOTHERAPY CENTRES: POOLS, POOL SURROUNDS AND STEAM ROOMS:

- PRB COL & JOINT ÉPOXY.

NB: in public swimming pools, the use of PRB JOINT FR in areas exposed to high pressure water jets and weak acids with a pH ≥ 4 will require a preliminary study of the surface maintenance protocols by the project manager and the client.

FOR PRIVATE SWIMMING POOLS: POOLS AND POOL SURROUNDS

High resistance

PRB JOINT FR and PRB COL & JOINT ÉPOXY.

Standard

PRB JOINT LARGE, PRB JOINT XT, PRB TOP JOINT and PRB JOINT RECTIFLEX.

+ For pool surrounds

PRB JOINT OPUS.

APPLICATION CONDITIONS

- The product must be applied in the absence of any traces of condensation, at ambient temperature and at the temperature of the substrate, between +5°C and +30°C and protected from frost. The area must be covered.

TECHNICAL CHARACTERISTICS

INGREDIENTS

CEL CÉRAMIC resin

- Appearance: milky white liquid.
- Waterborne resin.
- Dry extract: 55 ± 2 %.
- pH: 7.5.
- Properties: makes binding agents more elastic and water-resistant.
- 12 L container.

CEL CÉRAMIC powder

- Fine mortar containing hydraulic binders, mineral fillers and specific additives.
- Colour of the mortar: grey.
- Density in T/m³: 1.20 ± 0.10.
- Grain size in µ (microns): ≤600.
- 20 kg bag.

PROPERTIES OF THE MIXTURE PRODUCT

- Density of the mixture: 1.50 ± 0.10.
- Manipulation time (workable life) of the mixture (at 10 to 30°C): 2 hrs ± 1 hour.
- Resting time after mixing: 3 mins.
- Number of coats: 2.
- Consumption: 2.5 to 3.5 kg.
- Minimum continuous thickness: 1.5 mm.
- Minimum waiting time before tiling: the next day.
- Max. waiting time before covering: 28 days*.
- * Must not be walked on without protection.
- Exposure to water after grouting, for shower floors: 48 hrs, for floors in communal kitchens: 3 to 5 days, contact with rain (exterior floors): 24 hrs, submerged in water (pools, foot baths): 7 days.

PERFORMANCE OF CEL CÉRAMIC AFTER CURING:

		Test method /ref/ Etag005/022
Resistance to water pressure	≥ 1.5 bar	EN 14891
Resistance to water back pressure	≥ 0.5 bar	NF P85-451
Adhesion of CEL CÉRAMIC to concrete, with or without Armacel	≥ 0.5 Mpa	EN 14891
Adhesion of CEL CÉRAMIC + PRB Bande SM 200/Natte Céramic	≥ 0.5 Mpa	EN 14891
Adhesion of tiles to CEL CÉRAMIC	≥ 0.5 Mpa	EN 14891
Reaction to Fire classification	NPD	NF P92-507 EN 13501-1
Resistance to cracking (without reinforcement) - CEL CÉRAMIC at 23 °C - CEL CÉRAMIC at -5 °C	≥ 0.75mm	EN 14891

NB: laboratory values - for guidance only.

PREPARATION

SUBSTRATE PREPARATION

- Moisture: there is no specified maximum moisture content. Concrete substrates must be slightly moistened prior to application and the sealer should only be applied once the residual water has been absorbed (not seeping).
- On sealed cement substrates, sand or sandblast as appropriate to expose the substrate.

The substrates must be suitable for the use of the premises and must have:

- A resistant, clean, sound, cohesive and dust-free surface, free from all traces of formwork removal oil, curing compounds, laitance and other powdery substances: these elements are detrimental to adhesion and must be completely removed.
- A surface cohesion of at least 1 MPa for concrete and mortar:
 - 0.5 MPa for P3 areas, walls, pools and pool surrounds
 - 0.8 MPa for floors in P4-P4S areas
- Good flatness, with a tolerance of 5mm under a 2m straight edge and 1mm under a 20cm straight edge.

RENOVATION WORK:

For interior use, the substrate must be validated and prepared in accordance with Technical Specifications 3528 v3 for walls and 3529 v4, 3530 v4 for floors. After appropriate cleaning, and depending on the situation, an adhesion test should be carried out as defined by the project manager to check that the surface is sufficiently clean for renovation (e.g. in a communal kitchen), see annexes to the Specifications.

INSPECTING THE SUBSTRATE

It is essential to inspect the substrate and drains to ensure that they are in good condition for both new build and renovation work:

Fill in the Inspection Sheet (annexed to the Specifications) for each room or pool/pool surround to be sealed.

Depending on the situation, an adhesion test should be carried out to check the adhesive properties and preparation of the substrate.

For floors SLOPES:

In all cases, the substrate must have a minimum slope of:

- ≥ 1% indoors
- ≥ 1.5% outdoors
- 2% for gutters
- 3 to 5% for pool surrounds and pool edge drains

A steeper slope can be provided in accordance with the requirements (DPM) for premises intended for professional use. To create the slope with a quick-setting screed, use PRB CHAPECEM N mortar, suitable for use in damp environments, on a bonding slip (or PRB MANUCEM N, a binder to be mixed with sand). For pools: PRB IMPERFOND mortar should be used to level the floors and walls.

APPLYING TO SPECIFIC POINTS

Specific points should be treated before the rest of the area. The main specific points are detailed in the following 2 documents: Specifications for the Scientific and Technical Center for Building (CSTB) Technical Notice for PRB CEL CÉRAMIC and Specifications for balconies-terraces (50+ diagrams).

PROFILING AND SEALING:

Use PRB TP RÉPAR mortars for:

- Swimming pools: profiling the pool edge drains, edges, gutters, starting blocks and channels.
- Sealing elements (drains, gutters, lights, etc.) or other sealing mortars as recommended by the manufacturer of the part to be sealed.

Use chemical cartridges for sealing after waterproofing (LH diagram 23 in the CDC_EPI specifications).

DRAINS, GUTTERS & FITTINGS:

All types of drain or gutter must be fitted with a plate approximately 12cm wide (bonded or loose) to provide a continuous seal (e.g. Limatec).

- Drains and gutters must not be fitted without a plate.

- To facilitate maintenance, a minimum distance of ≥ 25cm should be maintained between outlets or drains and walls or partitions.
- Joints at drains should be made using a "Natte" or "Membrane" plate with an overlapping edge: Details:
- The sealing plate must be fixed to the ground in accordance with the manufacturer's recommendations. For stainless steel, degrease, clean with an abrasive medium and remove dust.
- For the joint between the plate and the sealer, cut a "plate" of the same size with 5cm around the edges from the PRB Bituminous Membrane or Natte Céramic, then bond it to the stainless steel and concrete using PRB MASS MS (or PRB COL & JOINT ÉPOXY for pools).
- Then apply a fresh coat of PRB CEL CÉRAMIC sealer.

Rigid metal or PVC pool fittings:

- These substrates should be prepared by scrubbing (especially metal substrates, in order to remove limescale or surface oxidation), scratching and then degreasing with a non-greasy, solvent-based cleaner such as MEK or methylated spirits.
- For the joint between the metal or PVC substrate and the CEL CÉRAMIC, the surface of the substrate should be treated with PRB ACCROSOL TECHNIC primer with dry, unmixed sand.
 - During the sealing process, a reinforcement should be positioned to bridge the joint and over the entire metal or PVC fitting, which should be sandblasted and epoxy treated beforehand.
 - When bridging the joint with Natte Céramic, the strip or plate should be bonded to overlap the fitting using PRB COL & JOINT ÉPOXY or PRB ACCROSOL TECHNIC.

For walls: upstands and concrete blocks HEIGHT OF THE UPSTANDS (Reliefs_exl. pools)

A sealed upstand should be created at the base of walls/partitions/raised floors using CEL CÉRAMIC:

- minimum height of 7cm (indoors)
- minimum height of 10cm (outdoors)

- Use a CS category III or IV PRB rendering mortar for float finishes on terrace upstands or internal walls.
- For upstands and protrusions in communal wet rooms, use PRB TP RÉPAR mortar for thicknesses up to 100 mm or PRB IMPERFOND mortar for thicknesses up to 20 mm.
- A concrete block or base should be placed at the foot of each element that crosses the floor.

PROTECTING WALLS AND PARTITIONS

PRB CEL CÉRAMIC sealer can be used to seal wall surfaces exposed to moisture, regardless of the intensity of use, including in areas subject to high-pressure water jet cleaning.

The minimum height to be sealed is specified in Table 1 of the Specifications and in the DPM, and depends on the substrate and the degree to which the wall is exposed to water.

PRIMING

- Cement substrates: before applying the primer, lightly moisten the substrate by spraying or wiping and allow the water to be absorbed by the concrete. To facilitate this preparation*, a PRB primer can be applied.
- Other substrates, Renovation work: See Table 1 of the Specifications (aerated concrete, brick tiles, old tiles, etc.) and, for renovation work, apply PRB ACCROSOL PLUS* fixative primer or PRB ACCROSOL AG*, then leave to dry for 3 to 12 hrs.

*NB: These primers should not be used in swimming pools or footbaths, or on concrete slab on grade foundations or exterior floors.

Metal substrates: use with ACCROSOL TECHNIC with sand, see the Specifications.



UTILISATION

Please refer to the specifications in force (Specifications/CSTB Technical Notice)

SUBSTRATE PREPARATION

PRB CEL CÉRAMIC must not be walked on without protection. The protective tiles should be bonded to the structure.

Other trades should not be allowed to circulate until the tiles have been laid, unless special precautions are taken and circulation is restricted to walking only.

MIXING

Pour 3/4 of the bottle of CEL CÉRAMIC resin into a clean mixing bucket then gradually add 1 bag of CEL CÉRAMIC powder. Mix with a mixer at low speed (300rpm) until a smooth paste is obtained with no lumps.

Then add the rest of the resin (1/4 of the bottle) and mix until you obtain a smooth paste with no lumps.

Allow the mixture to rest for 3 minutes before use.

APPLYING CEL CÉRAMIC

- Liberally apply 2 coats of PRB CEL CÉRAMIC using a float, wide brush (corners and details) or roller (walls):
 - 1st coat: 1.5 to 2 kg/ m² (drying time: 4 to 24 hrs).
 - 2nd coat: 1 to 1.5 kg/ m² (drying time: min. 12 hrs).
- Depending on the roughness of the substrate, you can also use a V4 or V6 mm serrated trowel, followed by smoothing with a stainless steel float.
- The minimum thickness to be obtained is 1.5mm. Minimum consumption should be 2.5 kg/m², excluding at specific points.
- All corners, floor-wall joints, rebated edges and specific points require reinforcement. Incorporate a suitable reinforcement strip into the 1st coat:

Localised reinforcement (≥ 20 cm) Corners, floor-wall joints, bases of frames & rebated edges	Work
PRB Bande SM 200 or Natte Ceramic EPI SPEC, ARMACEL mesh	Interior/ exterior
Natte Ceramic EPI SPEC or ARMACEL mesh	Pools

Completely cover the reinforcement strips when applying the 2nd coat. The sealed upstands must be at least 7 cm above finished level (10 cm for exterior applications).

Once the Treillis ARMACEL mesh has been laid in the corners, extra reinforcement can be applied over the top using PRB Bande SM 200 or Natte Ceramic.

REINFORCING THE SEALER WITH ARMACEL

The sealer should be reinforced with Treillis ARMACEL mesh if there are generalised hairline cracks in the substrate, in the corners of swimming pools or to provide extra strength.

Incorporate the ARMACEL into entire surface of the 1st coat of PRB CEL CERAMIC with an overlap of 5 to 10 cm between each band.

APPLYING TO CRACKS

Hairline cracks – cracks of 0.3 to 1mm (excluding pools) (LH diagram 11b)

Reinforce with ARMACEL mesh by incorporating it into the 1st coat of PRB CEL CÉRAMIC, with 10 cm on either side of the crack. This should be done locally if there is only one crack and over the entire surface if there are several cracks.

Cracks >1mm and <2mm (excluding pools) (LH diagrams 11c & 11d)

A preliminary assessment of the stability of the structure should be carried out before applying to cracks larger than 1mm.

In accordance with LH diagram 11 c

- saw a line through the crack and remove any dust,
- fill with epoxy resin (PRB ACCROSOL TECHNIC) without sand.

In accordance with LH diagram 11 d

- widen the crack into a V shape and fill with PRB TP REPAIR mortar or PRB SCEL CALAGE mortar,
- apply PRB CEL CÉRAMIC to a pre-cut strip of PRB Bande SM 200 or Natte Ceramic, then apply the 1st coat of PRB CEL CÉRAMIC + insert a continuous layer of Treillis ARMACEL mesh.

POOLS: applying to dormant cracks

See the Specifications, Technical Notice for Swimming pools and BP diagrams 71 and 72.

SANITARY FACILITIES - FIXINGS

Washbasins, bidets and toilets should be fixed to the wall, otherwise a base must be made at the bottom.

In all cases, sanitary installations must be fitted after the CEL CÉRAMIC has been tiled.

Applying sealer after sealing (LH 23)

Fixings must not compromise the integrity of the sealer. Use chemical cartridges suitable for the element to be sealed.

Without floor sealing

CEL CÉRAMIC must be used:

- for waterproofing walls, with a minimum overlap of 10 cm on the floor (+ reinforcement in all corners),
- over the entire floor and edges for wooden floors.

PRECAUTIONS FOR USE

- Between +5°C and +30°C.
- Do not apply in direct sunlight or strong winds.
- Do not apply to frozen or thawing substrates or if there is a risk of freezing within 24 hrs.
- When freshly applied, the product can be cleaned with water.
- Gloves are recommended.
- Please read the safety data sheet before use.

TILING

BONDED TILING

- After the sealer has dried for 24 to 48 hrs, use the PRB adhesive mortars and grouts indicated above in accordance with the applicable Specifications.
- Depending on the adhesive mortar used, the tiles can be laid with or without back buttering; tiles should be pressed firmly into the fresh grooves to ensure good adhesion and continuous contact with no cavities or voids.
- For floors and walls subject to water runoff and for swimming pools, the tile design should not include any gaps.
- The back buttering technique must be used for outdoor floors, ponds, swimming pools and pool surrounds.
- Leave space for an edging joint between the tiles and the vertical walls.
- A suitable grout from the PRB JOINTS range should be used for grouting.
- The method for applying to dividing and expansion joints is described in each of the Specifications.
- The provisions of the French DTU 52.2 and the Technical Specifications must be complied with.

- For bonding mosaics: use PRB COL MONOFLEX HP, PRB COL & JOINT ÉPOXY.

TILING AND GROUTING FOR INTERIOR FLOORS (EXCLUDING POOLS)

- Once the sealer has dried (after 24 to 48 hrs), tiles can be laid and grouted in accordance with NF DTU 52.1.
- Tiles must always be separated from the sealer by means of a 150 g/m² non-woven fabric covered with a 150 micron polyethylene film (DTU 52.1).