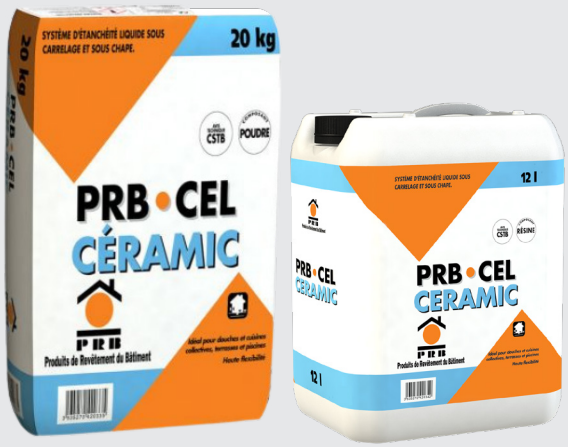
PRB CEL CÉRAMIC

UNDER-TILING AND UNDER-SCREED LIQUID WATERPROOFING SYSTEM

Benefits of the PRB CEL CÉRAMIC

- Ideal for commercial, community and domestic showers, kitchens, patios balconies, spas, pool decks and swimming pools
- High performance with high flexibility
- Watertight to water pressure and back-pressure
- Silky texture for quick and easy application



KEY PRODUCT INFORMATION

- 32kg two part kit comprising of a 20kg bag and a 12L resin container

STORAGE: 12 months

CONSUMPTION

- Consumption will vary subject to substrate condition
- Powder + resin in 2 layers: Approx. 9 - 12 m² based upon 2.5 to 3.5 kg/m² per 32kg kit.

COLOUR: Grey

ACCESSORIES

- **PRB AVN MESH** (1 m x 50 m roll)
- **PRB ARMACEL MESH** (0.80 x 50 m)
- **PRB SM 200 BAND** (0.20 x 15 m)
- **Céramic EPI / SPEC MAT** for plates and bands (1 x 30 m)
- **NATTE CÉRAMIC BAND** (0.20 x 25 m panel)

AT CSTB 13/18-1412 Swimming pools
AT CSTB 13/18-1413 Waterproofing renders

USAGE GUIDE

WHERE TO USE?

- Interior & exterior floors.
- Commercial, community kitchens: Light to heavy traffic.
- Interior wet room walls.
- Swimming pools, ponds, balconies, etc.

PRB CEL CÉRAMIC is used for waterproofing under tiling for new build and refurbishment applications:

WALLS
- Commercial, community & domestic wet room walls.
- Turkish baths, multispray showers and hydro spa massage pools in Thalassotherapy centres.

INTERIOR FLOORS
- Domestic interior floors.
- Commercial, community kitchens classified light to heavy traffic on new concrete or screed.
- Positive temperature cold rooms.

POOLS
- Indoor or outdoor* swimming pools when completed in accordance with a PRB specification..
- Public swimming pools, Aquatic centres, Thalassotherapy centres.
- Waterfalls and fountains.
- Indoor pool decks.
- Outdoor pool decks* with slabs or tiles on solid substrates.
- *Outdoor use is limited to certain climatic conditions. Check with the PRB Technical Department.

BALCONIES-PATIOS, LOGGIAS, PASSAGES
- Flooring for patios and balconies to open areas of buildings: *Outdoor use is limited to certain climatic conditions. Check with the PRB Technical Department.

Swimming pools, pool decks and pool surrounds:
- Contact the PRB Technical Department for a specification.

ASSOCIATED COATINGS

Ceramic or similar tiles of stoneware, natural stone, glass and enamel mosaics:

On flooring: The tiles must meet the UPEC classification of premises and the requirements of the standard in terms of tile slip resistance, care advice, zones walked on in shoes or bare feet.

For internal floors: The tile must be at least 7.5 mm thick minimum but the slip resistance can be less than those specified around wet areas kitchens etc), pools and for external use.

Accepted slenderness ratio:
- Wood substrate: Formats up to 1600 cm² (slenderness of 1) and 1200 cm² (slenderness of 3).
- The use of formats < 100 cm² on the ground is mainly limited to domestic use areas.

For kitchens, utilities, cold rooms, pool surrounds: The highest slip resistance is required for the specified tiling of at least 12 mm thick.
- 100 to 400 cm² formats with floor drain or gutter
- Formats up to 3600 cm² in premises without a floor drain.

On walls:
- The **PRB CEL CÉRAMIC** coating weight is limited to 40 kg/m².

In swimming pools:
- The tiles must be frost resistant and the authorised surface area for ceramic tiles is 900 cm² in pools and 3600 cm² on the pool surrounds. Other formats: contact us.

Glass, stone and ceramic mosaic tiles:
- Only mosaics with paper on the face and must be compliant with BS 5385-1.

Natural stone & Porcelain:
- For indoor pools and domestic outdoor areas, frost resistant stone and porcelain tiles suitable for wet environments must be used.

SUITABLE SUBSTRATES

PRB CEL CÉRAMIC waterproofling render is suitable for all the following substrates:

INTERIOR FLOORS

- ✓ Concrete - Pre cast, cast insitu.
- ✓ Concrete floors (1).
- ✓ Bonded cement screeds.
- ✓ Liquid cement screeds.
- ✓ Covered under floor heating.
- ✓ In premises without floor drains or gutters.
- ✓ Old tiling**.
- ✓ Private wet rooms, office and hotel room toilets: Wood panel flooring* e.g. Plywood, Chipboard, OSB. It is important to remove all dust and dirt.

INTERIOR WALLS

- ✓ Cast concrete or pre-cast concrete.
- ✓ CS IV suitably sound render.
- ✓ CS III performance render (all indoor wall tiling).
- ✓ Lightweight aircrete concrete blockwork*.
- ✓ Terracotta tile partitions*.
- ✓ Cement or silica-sandstone tiles*.
- ✓ Plaster whether water-repellent or not*.
- ✓ Plasterboards whether water repellent or not*.
- ✓ Old tiling**.

* Using **PRB ACCROSOL PLUS** or **PRB ACCROSOL AG** primer.
** After suitable preparation (washing, vaccuming, scraping, scabbling, sanding, rubbing down etc) before applying **PRB ACCROSOL PLUS** or **PRB ACCROSOL AG** primer.
(1) Except for vented floors, floated floors, unbonded screeds or when the substrate has debonded.
Tile format restriction will apply depending on the substrate: Read applicable specifications and selection guides.

EXTERIOR FLOORS

- ✓ Concrete - Pre cast, cast insitu.
- ✓ Concrete floors (1).

SWIMMING POOLS

- ✓ Contact the PRB Technical Department for a specification.

For all other substrates not featured contact the PRB Technical Department.

INTERIOR WALLS AND FLOORS

- ✓ Ready to tile panels including pre-formed shower trays designed for tiling over.

PROHIBITED SUBSTRATES

Do not apply to:

- ✗ Directly on plaster.
- ✗ Large metal surface areas.
- ✗ Other substrates (contact us).
- ✗ Roofs.

ASSOCIATED ADHESIVE MORTARS

The associated PRB adhesive mortars for tiling on **PRB CEL CÉRAMIC** are:

For floors and walls subjected to high traffic use**:**
- **PRB COL MONOFLEX HP**.
- **PRB COL DUO FLEX**.
- **PRB COL FLEX**.
- **PRB COL FLUID N (floor)**.
- **PRB COL FLUID HPR (floor)**.
- **PRB COL TOP (indoor)**.
- **PRB COLLE ET JOINT ÉPOXY**.

For commercial kitchens floors etc**:**
For direct laying on **PRB CEL CÉRAMIC** or for laying on a floating screed **PRB MANUCEM**.
N /CHAPECEM N:
- **PRB COL TOP**.
- **PRB COL FLUID HPR**.
- **PRB COL FLUID N**.
- **PRB COLLE ET JOINT ÉPOXY**.

In swimming pools**:**
- **PRB COL MONOFLEX HP**.
- **PRB COL FLEX**.
- **PRB COLLE ET JOINT ÉPOXY**.

APPLICATION CONDITIONS

Application must be at room temperature, condensation free and substrate temperatures of between +5°C and + 30°C, and protected from freezing temperatures. The work area must be covered to protect against weather, particularrly external pools to prevent dirt and dust ingress and the working environment must be uncovered to allow the moisture to evaporate fully.

ASSOCIATED GROUTING MORTARS

The associated PRB grouting mortars for tiling on **PRB CEL CÉRAMIC** are:

For floors and walls subjected to high traffic use**:**
- **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 COLLE ET JOINT ÉPOXY**.
- **PRB JOINT ÉPOXY**.

For internal floors subjected to very high traffic use e.g. supermarkets and surfaces subjected to chemical and mechanical use e.g. Commercial 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 commercial locations, except in the presence of acid agents with a pH < 4.

In public swimming pools, aquatic centres, Thalassotherapy centres, pools, pool decks, pool surrounds, Turkish baths, etc:
- **PRB COLLE ET JOINT ÉPOXY**.
- **PRB JOINT ÉPOXY**.

Note: In public swimming pools, carry out a surface inspection first as part of the regular maintenace service programme prior to the use of high pressure cleaning and using weak acid cleaners of pH ≥ 4 on **PRB JOINT FR**.

In private pools, pool surrounds and pool decks:
For higher resistance capability:
- **PRB JOINT FR**, **PRB COLLE ET JOINT ÉPOXY**, **PRB JOINT ÉPOXY**.

For normal use:
- **PRB JOINT LARGE**, **PRB JOINT XT**, **PRB TOP JOINT**, **PRB JOINT RECTIFLEX**.

On pool surrounds and decks:
- **PRB JOINT OPUS**.

TECHNICAL SPECIFICATIONS

COMPOSITION

CEL CÉRAMIC resin components

- Appearance: Milky white liquid.
- Resin in aqueous dispersion.
- Dry extract: 55 ± 2 %.
- pH: 7.5.
- Properties: Provides binder elasticity and sealing.
- 12 L container.

CEL CÉRAMIC powder components

- Fine mortar based on hydraulic binders, mineral fillers and specific additives.
- Mortar colour: Grey.
- Density in T/m³: 1.20 ± 0.10.
- Grading in µ (microns): ≤ 600.
- 20 kg bag.

MIXTURE PROPERTIES

PRODUCT PERFORMANCE

- Mixture density: 1.50 ± 0.10.
- Mixture DPU (at T of 10 to 30 °C): 2 h ± 1.
- Standing time after mixing: 3 mins.
- Number of layers: 2.
- Consumption: 2.5 to 3.5 kg.
- Minimum continuous thickness required: 1.5 mm.
- Minimum time before laying tiling: Next day
- Maximum time before covering: 28 days*. *Not walkable without protection.
- Water use after grouting, on shower floors: 48 hrs, on commercial kitchen floors: 3 to 5 days, rain on outdoor floors: 24 hrs, immersion (pools, foot baths, ponds etc): 7 days.

HARDENED CEL CÉRAMIC PERFORMANCES:

		Test method /ref/Etag/005 022
Resistance to water pressure	1.5 bars	EN 14891
Resistance to water back pressure	> 0.5 bars	NF P451-85
Adhesion of CEL CÉRAMIC to concrete, with or without ARMACEL MESH	> 0.5 Mpa	EN 14891
CEL CÉRAMIC + Band adhesion SM 200 / Céramic mat	> 0.5 Mpa	EN 14891
Tiling adhesion on CEL CÉRAMIC	> 0.5 Mpa	EN 14891
Fire behaviour classification	PND	NF P507-92 EN 1-13501
Non reinforced crack resistance • CEL CÉRAMIC at °23C • CEL CÉRAMIC at – °5C	> 0.75 mm	EN 14891

NB: Laboratory values for information.

SUBSTRATE PREPARATION

- Moisture: There is no predefined maximum moisture level. Before application, the cement substrate must be wetted but not to excess, e.g. not running with water. The first coat is only applied once the residual water from wetting down has been absorbed, leaving a dampened surface.

- On very smooth concrete substrates, the surface must scabbled, sand blasted etc, to provide a substrate key.

- The surface condition must be sound, dust and powder free, and free of all traces of releasing agent, curing products, laitance, etc: Or any other elements that can affect adhesion, must be completely removed.

- Surface cohesion of at least 1 MPa on concrete should be achieved and on mortar:
  0.5 MPa to walls and floors in high traffic areas.
  0.8 MPa to floors of very high traffic use locations.

- Flat surfaces: Tolerance of 5 mm under a 2 m rule and 1 mm under a 200 mm rule.

Refurbishment:
The surface must be sound and suitable for the application to be effective.

Prepare the surface accordingly by scabbling, sanding, sand blasting etc and ensure the surface condition is as detailed above. After suitable preparation work and depending on the project, an adhesion test can be conducted to check that the surafce prperation is suitable.

1. SUBSTRATE DIAGNOSIS

Check the condition of the substrate and ensure the surface is suitable for application.

If required, fill in a Pre Check Form and obtain a PRB Specification. **This is required for all pools, pool surrounds and pool decks.**

Depending on the project, an adhesion test can be used to check the surface preparation and bond / cohesion to the substrate.

On sloping floors:

In all cases the substrates must have a minimum slope:
- ≥ 1 % indoors.
- ≥ 1.5 % outdoors.
- ≥ 2 % in gutters.
- 3 to 5 % on pool decks and pool edges.

Steeper slopes can be created depending on the requirements - For guidance contact PRB.

Create the slope shape using a suitable screed. For wet environments use **PRB CHAPECEM N** on a slurry mix bonding coat or use **PRB MANUCEM N**, bonding coat to be mixed with sand.

In pools: The floors and walls must be levelled using **PRB IMPERFOND** mortar.

2. SPECIAL ZONE TREATMENT

Special zones are treated before the standard application is carried out. The treatment of the main special zones is detailed in the two AT CSTB specifications for **PRB CEL CÉRAMIC** and the Balcony-patio specifications (over 50 diagrams).

Profiling features, embedment of floor drains etc:
Use **PRB TP RÉPAR** mortars for:

- Pools: Profiling the pool head, edges, gutters, starting blocks, fillets, grooves etc.
- Embedding floor drains, gutters, portholes, pool lights etc depending on the manufacturer of the part to be embedded.

For embedding items after sealing use an appropriate bonding sealant.

FLOOR DRAINS, GUTTERS, ETC:
Each type of floor drain or gutter must have a suitable back plate of at least 120 mm wide, either fixed or separate, to ensure appropriate waterproofing can be completed so that the drain, gutter etc is fully sealed within the waterproofing process.

- The installation of floor drains and gutters without a back plate is not allowed.
- To facilitate cleaning operations, the minimum distance between each drain/gutter is ≥ 250 mm from walls and partitions.
- Connection to drains is carried out using a "Mesh or Membrane" a minimum of 50 mm wider than the back plate.
- The back plate, gutter etc is fixed according to the recommendations of the manufacturer. For stainless steel, degrease, apply an abrasive and remove dust.
- To bond the sealing render to the back plate, cut the appropriate size shape mesh or membrane then bond it to the stainless steel and concrete using **PRB MASS MS** or **PRB COLLE ET JOINT ÉPOXY** in pools.
- Then apply the **PRB CEL CÉRAMIC** to overlap.

Metal / rigid PVC pool elements:
These substrates are prepared by rubbing, scouring, scratching etc especially metal substrates to eliminate scale or surface oxidation. Degreased using an appropriate solvent based cleaner e.g. methylated spirits.

- Before applying the **PRB CEL CÉRAMIC**, treat the surface of the metal or PVC substrate using the **PRB ACCROSOL TECHNIC** epoxy primer together with dry sand to saturation.
- When the sealing is applied, embed a reinforcement mesh or **PRB MATT CERAMIC** to bridge the join and over the entire metal or PVC element treated by sanded epoxy.
- When using the **PRB MATT CERAMIC**, bond to the metal or plastic using **PRB COLLE ET JOINT ÉPOXY** or **PRB ACCROSOL TECHNIC**.

On walls: Raised upstands and concrete cubes
Raised upstand heights (except for pools) A sealed **PRB CEL CERAMIC** raised edge must be created at the foot of walls / partitions / projections on the floor:

- Height of at least 70 mm (indoors)
- Height of at least 100 mm (outdoors)
- To create a floated render finish on the patio or interior wall edges, use a class CS III or CS IV PRB render mortar.
- To shape raised edges, fillets and projections to communal wet locations, use **PRB TP RÉPAR** mortars for thicknesses up to 100 mm or **PRB IMPERFOND** up to 20 mm.
- At the foot of each passage through the floor, a concrete cube or base is created.

Wall and partition protection
Sealing with **PRB CEL CÉRAMIC** provides watertight protection of wall substrates exposed to damp or water however intense the use, including premises subjected to high pressure water spray cleaning.

The minimum height to waterproof depends on the substrate and the wall's level of exposure.

3. APPLICATION OF PRIMER

- Cement based substrates: Slightly wet the substrate by spraying or brushing and wait for the substrate to absorb the water to leave a dampend surface. PRB primer can be applied to facilitate the preparation*.

- Other substrates, Refurbishment:
  See Table 1 of the specifications (cellular concrete, brick tiles, old tiling...) and for refurbishment, apply **PRB ACCROSOL PLUS*** or **PRB ACCROSOL AG*** **primer**, then leave to dry for 3 to 12 h.

* **Note:** Do not use these primers for pools, foot baths, concrete slabs on solid ground and outdoor floors.

- Metal substrates: With sanded **ACCROSOL TECHNIC**. Obtain a PRB specification.

APPLICATION

Please refer to the applicable specifications (CDC / AT CSTB)

SUBSTRATE PREPARATION

Do not walk on **PRB CEL CÉRAMIC** without applying suitable rigid temporary protection or by applying the specific finished floor covering.

If temporary rigid covering is used, ensure the surface is fully sealed against dust ingress first and limit the passage of trades or pedestrian traffic.

MIXING

Using a clean mixing bucket, pour 3/4 of the **CEL CÉRAMIC** resin, then gradually add 1 bag of the **CEL CÉRAMIC** powder, mixing using a low speed paddle mixer (300 rpm) until a consistent, lump free mix is obtained.

Then add the remaining 1/4 of the **CEL CÉRAMIC** resin to the mixture, then mix until a consistent, lump-free mixture is obtained. Leave to stand for 3 minutes before using.

APPLICATION OF CEL CÉRAMIC

- Generously apply **PRB CEL CÉRAMIC** using a trowel, spatula, wide brush or roller or a combination of these in 2 cross coats ensuring corners and detailing are fully covered with no gaps:
  - 1st application of 1.5 to 2 kg/m² Drying time 4 to 24 hrs).
  - 2nd application of 1 to 1.5 kg/m²
  - Drying time 12 h minimum).

- Alternatively apply using a V4 or V6 mm serrated trowel depending on the roughness of the substrate, then smooth using a stainless steel float or spatula.

- The minimum thickness to achieve is 1.5 mm. Minimum consumption must be 2.5 kg/m², except for special zones where a greater thickness may be required.

- **PRB AVN MESH**, **PRB ARMACEL**, mesh reinforcement is mandatory to internal corners, wall and floor connections, falls and special areas. Add a suitable width strip a minimum of 300 mm wide in the 1st layer, overlapping 100 mm.

Make sure the 2nd layer fully covers the mesh. Extend the waterproofing /sealing layer a minimum of 70 mm internally and 100 mm externally beyond the required point of waterproofing/sealing.

When **PRB ARMACEL** mesh is used in the corners, a double reinforcement is possible using **PRB BANDE SM 200** or **PRB NATTE CÉRAMIC** applied over the top.

REINFORCED WATERPROOFING/SEALING USING PRB ARMACEL
It is mandatory to use **PRB ARMACEL** to reinforce the sealing coat on substrates where widespread micro-cracking is evident, in pool corners etc and when higher strengths are required.
PRB ARMACEL is embedded into the entire surface of the 1st coat of **PRB CEL CERAMIC**, with the mesh layers overlapping by 50 to 100 mm.

CRACK TREATMENT
Microcracks – cracks of 0.3 to 1 mm (except pools) (diagram LH n°11b)
Use the **PRB ARMACEL** mesh embedded into the 1st coat of **PRB CEL CÉRAMIC** overlapping the crack a minimum of 100 mm in all directions. Continue the same procedure for all other cracks within the project.

Cracks > 1 mm and < 2 mm (except pools) (diagrams LH n°11c / 11d)
Before treating cracks > 1 mm, check the structural stability of where the crack is.

As per diagram LH n°11 c
- Make a cut to open up the crack and fully remove the dust.
- Fill using non-sanded epoxy resin **(PRB ACCROSOL TECHNIC)**.

As per diagram LH n°11 d
- Open the crack to a V shape and fill using **PRB TP REPAR** or **PRB SCEL CALAGE** mortar.
- Using the **PRB CEL CÉRAMIC** embed precut lengths of **PRB BANDE SM 200** or **PRB NATTE CÉRAMIC**, then apply the 1st coat of **PRB CEL CÉRAMIC** embedded fully with the **PRB ARMACEL** mesh throughout.

POOLS: inert crack treatment
Refer to the Specifications / AT Pools and diagrams BP n° 71 and 72.

APPLICATION

TOILET FACILITIES – FIXINGS
Washbasins, bidets and toilets bowls are fixed to the wall, otherwise a support must be created at their base.

In all cases, the sanitary appliances are installed after the tiling has been laid on the CEL CÉRAMIC.

Embedding after sealing with CEL CÉRAMIC
Fixings must not interrupt the continuity of the sealing. Use chemical cartridges suitable for the item to be bonded.

Without floor sealing CEL CÉRAMIC must be applied:

- Protect walls and partitions from water, with an overlap on the ground of 10 cm minimum (+ reinforcements in all corners), on the entire floor and the edges if there is a timber substrate.

PRECAUTIONS FOR USE

- Between +5°C and +30°C.
- Do not apply in direct sunlight or in strong winds.
- Do not apply on a frozen or thawing substrate or if there is a risk of frost within 24 hrs.
- Clean fresh product using water.
- The wearing of gloves is recommended.
- Read the safety data sheet before using.

HEALTH & SAFETY

- Contains cement.
- May produce an allergic reaction. Harmful if inhaled, irritating to eyes and skin. Wear suitable protective clothing, gloves and eye/face protection.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical help. After contact with skin, wash immediately with plenty of soap and water.
- Keep out of the reach of children.
- For further information, please read the Material Safety Data Sheet for this product.

LAYING TILING

ADHESIVE INSTALLATION

- Once the sealing has dried for 24 to 48 hrs, use the PRB adhesive mortars and grouting mortars detailed above and in the applicable specifications.
- Laying is by single or double sided bonding application depending on the adhesive mortar; the tiles should be pressed hard onto the fresh ridges to obtain good bonding and a continuous layer of mortar without any voids (full bond).
- For floors and walls subject to water run-off and in pools, avoid voids in the bonding layer.
- For outdoor, floors, ponds, swimming pools and decks, adhesive application on both surfaces is imperative.
- Create an edge joint between the tiles and vertical walls.
- For the grouting, use the **PRB JOINTS** associated with the system.
- The treatment of special requirements and expansion joints is described in each specification.
- Mosaic bonding: Use **PRB COL MONOFLEX HP**, **PRB COLLE ET JOINT EPOXY** or **PRB JOINT EPOXY**.

MORTARED INSTALLATION ON INTERIOR FLOORS (EXCEPT POOLS)

- After 24 to 48 hrs drying of the **CEL CÉRAMIC**, tiling can be laid. Tiles are systematically laid separated from the sealing using a non-woven 150 g/m² fabric covered by a 150 micron thick polyethylene film. For full guidance contact the PRB Technical Department.

SCAN THE QR CODE BELOW TO FIND THE MATERIAL QUANTITY NEEDED

01242 524228
technical@prbsystems.co.uk
www.prbsystems.co.uk
Montis Court, Bouncers Lane, Cheltenham, GL52 5JW