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European Technical Assessment

ETA 19/0788
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General part

Technical Assessment Body issuing the ETA: ITeC

ITeC has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product

PRB MONOCEL

Product family to which the construction product belongs

Liquid applied watertight covering kits for wet rooms

Product area code 03: *Membranes, including liquid applied and kits (for water and/or water vapour control).*

Manufacturer

PRB SA

Rue de la Tour – CS 10018
FR85150 LES ACHARDS
France

Manufacturing plant(s)

Rue de la Tour – CS 10018
FR85150 LES ACHARDS
France

This European Technical Assessment contains

10 pages including 3 annexes which form an integral part of this assessment.

This European Technical Assessment is issued in accordance with Regulation (EU) 305/2011, on the basis of

ETAG 022 *Watertight covering kits for wet room floors and or walls. Part 1: Liquid applied covering with or without wearing surface used as EAD.*

General comments

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Specific parts of the European Technical Assessment

1 Technical description of the product

PRB MONOCEL is a liquid applied watertight kit for interior wet room floors and walls. The watertight covering is placed underneath ceramic tiles, which serve as wearing surface.

The kit is composed by a primer, a waterproofing membrane and a tile adhesive. All these components are manufactured by PRB and its characteristics are described in table 1. The kit requires a wearing surface (ceramic tiling) to protect the waterproofing. This ceramic tiling (which is not part of the kit) is fixed to the waterproofing membrane by means of a tile adhesive.

PRB MONOCEL watertight system also includes associated components provided by the holder such as: reinforcement nets for edges and corners and collars for pipes and drains (these components are also specified in table 1). Pipes and drains are not part of the kit.

Component	Description
Primer	PRB ACCROSOL EXPRESS Ready to use one-component liquid acrylic copolymer resin in aqueous dispersion with solvent-free additives. Colour: green. Coverage: 150 g/m ² to 300 g/m ² .
	PRB MONOCEL Ready to use one-component liquid acrylic resin in aqueous phase. Colour: grey. Coverage: 2 x 800 g/m ² to 2 x 1000 g/m ² (it has to be applied in two coats).
Waterproofing membrane	PRB COL FLUID HPR Fast setting tile adhesive consisting of hydraulic binders, fine mineral fillers, sand (quartz), re-dispersible resin, setting regulators and specific additives. It is a powder that requires the addition of 23% to 25% in weight of water. Classification according to EN 12004: C2 FG. Colour: grey.
	PRB COL FLUID N Tile adhesive consisting of hydraulic binders, fine mineral fillers, sand (quartz), re-dispersible resin, setting regulators and specific additives. It is a powder that requires the addition of 23% to 25% in weight of water. Classification according to EN 12004: C2 EG. Colour: grey and white.
	PRB COL MONOFLEX HP Deformable tile adhesive consisting of hydraulic binders (white or grey), siliceous fillers, water retaining agents, setting regulators, specific additives, fibres and a plasticizing resin with high wetting and adhesion power. It is a powder that requires the addition of 26% to 28% in weight of water (grey) or 25% to 27% in weight of water (white). Classification according to EN 12004: C2 S1 ET. Colour: grey and white.
Tile adhesives	PRB COL FLUID HPR Fast setting tile adhesive consisting of hydraulic binders, fine mineral fillers, sand (quartz), re-dispersible resin, setting regulators and specific additives. It is a powder that requires the addition of 23% to 25% in weight of water. Classification according to EN 12004: C2 FG. Colour: grey.
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Component	Description
Ancillary components	<p>PRB COL PRO Tile adhesive consisting of hydraulic binders (white or grey), siliceous fillers, water retaining agents, setting regulators and a plasticizing resin with high wetting and adhesion power. It is a powder that requires the addition of 23% to 26% in weight of water. Classification according to EN 12004: C2 ET. Colour: grey and white.</p>
	<p>PRB COLLE ET JOINT ÉPOXY & JOINT ÉPOXY Epoxy mortar consisting of epoxydic resin, fine mineral fillers, polyamide hardener and hydraulic binders (it does not contain solvents). It is a ready to use product composed by a mortar of resin and a hardener. The two components are mixed before the application. Classification according to EN 12004: R2. Classification according to EN 13888: RG. Colour: white, grey, granite grey.</p>
	<p>PRB NATTE CERAMIC Flexible polyethylene mesh to be used as collar for pipes and drains after being cut into the proper shape. The mesh is faced with a non-woven polypropylene fibre on each side. Colour: red. Thickness: 0,5 mm.</p>
	<p>PRB PLATINE SPEC Preformed sleeve mesh faced with a SEBS (styrene-ethylene-butylene-styrene) resin layer for wall pipes sealing.</p>
	<p>PRB ANGLE SORTANT/RETRANT SPEC Preformed mesh with a SEBS resin layer for outgoing/ingoing corners sealing.</p>
	<p>PRB BANDE D'ARMATURE RENFORCÉE SPEC No woven polyester mesh faced with an elastomeric SEBS layer for the reinforcement of the edges and the unions floor-wall.</p>
	<p>PRB BANDE D'ARMATURE SPEC SIMPLE No woven polyester mesh for the reinforcement of the edges and the unions floor-wall.</p>
<p>PRB MASS MS One-component thixotropic paste based on a hybrid polymer to be used as sealant.</p>	

Table 1.1: PRB MONOCEL watertight kit components.

The kit is placed on site according to the manufacturer's instructions. A summary of the installation is described as follows:

1. Application of a layer of PRB ACCROSOL EXPRESS on the substrate/support.
2. Application of the watertight membrane PRB MONOCEL in two hands with a consumption of 800 g/m² to 1000 g/m² each hand (total consumption of 1600 g/m² to 2000 g/m²). Ancillary components have to be installed following manufacturer's instructions.
3. The tile adhesive is spread in one layer and covering the 100% of the surface once the waterproofing membrane is dry (24 hours after the application of PRB MONOCEL). Then the tiles are laid.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The intended use of PRB MONOCEL waterproofing system is:

- Watertight covering for use beneath a wearing surface (tiles) on moisture and non-moisture sensitive homogeneous substrates (usually “rigid”) susceptible to cracking, like gypsum blocks, in-situ concrete or masonry.
- Indoor applications, where the liquid applied kit is not exposed to temperatures (i.e. temperature of structure) below 5 °C and above 40 °C, in the following uses:
 - o Floor and/or wall surfaces with only occasional direct exposure to water, e.g. at a good distance from shower or bathtub.
 - o Floors and/or walls in shower areas or around bathtubs used for a few showers daily, e.g. in ordinary dwellings, multifamily houses and hotels.
 - o Floor and/or wall surfaces with exposure to water more frequent or of longer duration than normally anticipated in dwellings, e.g. public wet rooms, schools and sport facilities or collective kitchens.

The provisions made in this ETA are based on an assumed working life of at least 25 years for PRB MONOCEL. These provisions are based upon the current state of the art and the available knowledge and experience.

The indications given on the working life cannot be interpreted as a guarantee given by the producer but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and reference to the methods used for its assessment

Performances of PRB MONOCEL related to the basic requirements for construction works (hereinafter BWR) were determined according to ETAG 022 part 1. Essential characteristics of PRB MONOCEL are indicated in table 3.1.

Essential characteristic	Performance
BWR 2 - Safety in case of fire	
Reaction to fire	Not assessed
BWR 3 - Hygiene, health and the environment	
Content, emission and/or release of dangerous substances	Tile adhesive: According to EN 12004 The rest of the components of the kit: not assessed.
Vapour permeability	Not assessed
Water tightness	The kit is watertight.
Crack bridging ability	Test passed. Category 2 (0,75 mm)
Bond strength	Bond strength = 0,9 MPa (worst case among all tile adhesives) Category 2 ($\geq 0,5$ MPa)

Essential characteristic	Performance
Scratching resistance	Not relevant
Joint bridging ability	Not relevant
Water tightness around penetrations	Test passed. The kit is watertight. Category 2
Resistance to temperature	Category 2: - Bond strength (concrete) = 1,0 MPa ($\geq 0,5$ MPa) - Bond strength (wood) = 1,67 MPa ($\geq 0,5$ MPa) - Crack bridging ability (0,75 mm): test passed.
Resistance to water	Bond strength = 0,7 MPa Category 2 ($\geq 0,5$ MPa)
Resistance to alkalinity	Bond strength = 0,7 MPa Category 2 ($\geq 0,5$ MPa)
Resistance to mechanical wear	Not relevant
BWR 4 - Safety and accessibility in use	
Slipperiness	Not relevant
Repairability	Not assessed
Thickness	2,08 kg/(mm·m ²)
General aspects relating to fitness for use	
Cleanability	Not relevant
Applicability	Applicable

Table 3.1: Performance of PRB MONOCEL.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the decision 2003/655/EC, as amended of the European Commission¹, the systems of AVCP (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the following table applies.

¹ Official Journal of the European Union (OJEU) L231/12 of 17.09.2003.

Product	Intended use(s)	Level or class	System
PRB MONOCEL	Liquid applied watertight covering kits for wet rooms not subjected to fire regulations.	--	2+
	Liquid applied watertight covering kits for wet rooms subjected to fire regulations. (*)	--	1, 3 or 4

(*) Not applicable in this ETA because the reaction to fire has not been assessed (see table 3.1).

Table 4.1: Applicable AVPC system.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

All the necessary technical details for the implementation of the AVCP system are laid down in the *Control Plan* deposited with the ITeC², with which the factory production control shall be in accordance.

Products not manufactured by the kit manufacturer shall also be controlled according to the Control Plan.

Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then they shall be subject to suitable checks/tests by the kit manufacturer before acceptance.

Any change in the manufacturing procedure which may affect the properties of the product shall be notified and the necessary type-testing revised according to the *Control Plan*.

Issued in Barcelona on 9 September 2020

by the Catalonia Institute of Construction Technology.



Ferran Bermejo Nualart
Technical Director, ITeC

² The *Control Plan* is a confidential part of the ETA and is only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

ANNEX 1: Classification and built-up of the PRB MONOCEL system

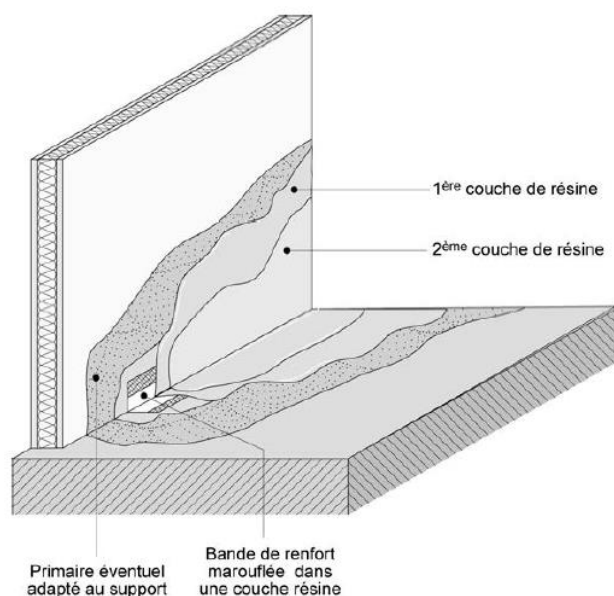


Figure 1: Components of the watertight covering kit for wet room floors and walls PRB MONOCEL. The tile adhesive is applied on the second layer of PRB MONOCEL waterproofing membrane.

Description of the system:

- Support: Moisture and non-moisture sensitive rigid substrates, homogeneous but susceptible to cracking.
- Primer: PRB ACCROSOL EXPRESS (150 g/m² to 300 g/m²).
- Waterproofing membrane: PRB MONOCEL (2 x 800 g/m² to 2 x 1000 g/m²)
- Tile adhesive (to choose among the following):
 - o PRB COL FLUID HPR
 - o PRB COL FLUID N
 - o PRB COL MONOFLEX HP
 - o PRB COL PRO
 - o PRB COLLE ET JOINT EPOXY
- Ancillary components (see Annex 2).
- Ceramic tile and jointing material (grout). These components do not form part of the kit.

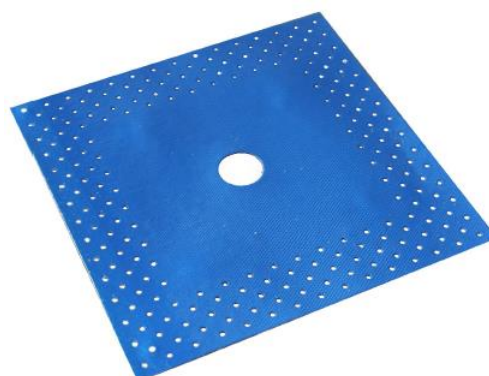
Classification to use categories	
Working life	25 years
Assessment category	Category 2: <ul style="list-style-type: none"> - Bond strength $\geq 0,5$ MPa - Crack bridging ability: tests passed for crack width in test of 0,75 mm.

Table A.1: Assessment categories.

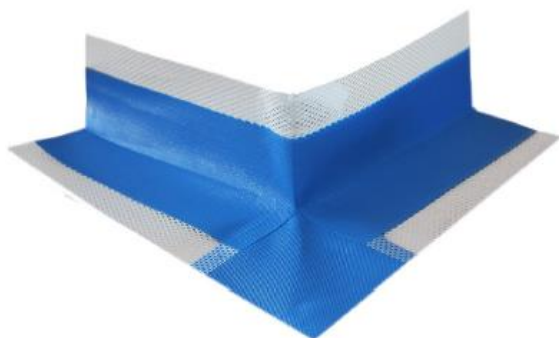
ANNEX 2: Ancillary components of the kit



Picture A2.1: PRB NATTE CERAMIC.



Picture A2.2: PRB PLATINE SPEC.



Picture A2.3: PRB ANGLE SORTANT SPEC.



Picture A2.4: PRB ANGLE RENTRANT SPEC.



Picture A2.5: PRB BANDE D'ARMATURE RENFORCÉE SPEC.



Picture A2.6: PRB BANDE D'ARMATURE SPEC SIMPLE.



Picture A2.7: PRB MASS MS.

ANNEX 3: Installation

The levels of use categories and the performance of the wet rooms watertight covering kit can be assumed only if the installation is carried out according to the installation instructions stated in the technical file of the manufacturer, in particular taking account of the following points:

- Installation by appropriately trained personnel.
- Installation of only those components which are marked components of the kit.
- Installation with required tools.
- Precautions during installation.
- Inspecting the substrate surface for cleanliness and correct preparation/treatment (if necessary). The system can be installed on rigid substrates as masonry, in-situ concrete or gypsum blocks and also on wood (substrate partially assessed).
- Install the system applying the recommended consumption of each product to ensure the water tightness of the assembled waterproofing system (see Annex 1). The thickness of the watertight membrane when dry is, at least, 1 mm.
- Inspections during installation and of the finished watertight system and record of the results.