

Waterproofing of wet Areas covering with tiles



- Bathroom
- Kitchen
- Terrace

1. RELATED MATERIALS



PC-Sealcoat® Flex

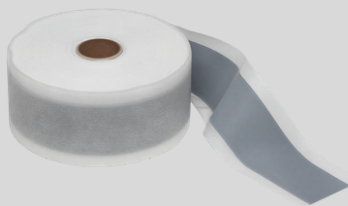
Two-part, flexible, cement-based waterproof coating.

PC-Sealcoat® Flex is a waterproofing coating made from an acrylic copolymer-modified cement base, designed to create a durable shield against water infiltration. It consists of a cement-based powder and an acrylic copolymer liquid, which, when mixed, form a seamless slurry that can be easily applied with a brush to create a water-resistant barrier on concrete surfaces.

PC-Conrend® HS RM

Polymer-modified, fiber-reinforced, repairing mortar

PC-Conrend® HS RM is a polymer and fiber-enhanced pre-mixed cement mortar, safe for interior and exterior use. It offers abrasion resistance, strong adhesion, and water impermeability, streamlining construction. Classified as PCC R3 type for concrete restoration, it meets EN 1504-3 standards (Certificate No. 2032-CPR-10.11).



PC-Seal® Tape Flex

Waterproofing flexible sealing tape

Waterproof flexible sealing tape, made from non-woven fabric or polyester polymer, offers strong adhesion and flexibility. It seals joints and seams to prevent water ingress, making it ideal for construction and repair in various environments, from bathrooms to underground garages. It allows for easy application and works with multiple substrates for effective waterproofing.

PC-Tilefix® 202

Polymer modified tile adhesive

PC-Tilefix® 202 is a polymer-modified, thin-set tile adhesive specifically designed for ceramic tiles within interior spaces. This versatile adhesive is ideal for use on both vertical and horizontal surfaces, applied over a cementitious substrate. Supplied as a dry-mix mortar, it requires the addition of water prior to application.



PC-Tilefix® grout EP

Hygienic, durable, stain-free epoxy resin tile grout.

PC-Tilefix® Grout EP is a two-component, water-mixable epoxy tile grout formulated using advanced, next-generation epoxy resin technology. Supplied in pre-measured packs, it is ready for hassle-free onsite mixing and application. This innovative formulation ensures consistent performance, excellent adhesion, and a smooth, durable finish, making it ideal for both residential and commercial tile installations.

2.CHARACTER OF THE ISSUE - REQUIREMENTS

Areas that are consistently exposed to moisture, such as bathrooms, showers, kitchens, and sanitary facilities constructed with drywall materials (e.g., gypsum boards, chipboards), must be adequately waterproofed. This measure is crucial to prevent moisture-related damage and to avoid water leakage into adjacent spaces.

Typically, waterproofing is applied beneath the tiles in these humid environments. The waterproofing layer must ensure complete watertightness while also providing sufficient elasticity, as it is situated on substrates that may experience dimensional instability or vibrations. Additionally, this layer must be resistant and durable, as any future repairs to the waterproofing would be both challenging and costly.

For terraces that are to be tiled, the waterproofing layer should not only be compatible with the tile adhesive but also demonstrate elasticity, strong adhesion to the substrate, and long-lasting durability. These characteristics are particularly vital, as any necessary repairs—due to the location of the waterproofing layer—can be both expensive and time-consuming.

3.SOLUTION

To meet waterproofing requirements, we recommend applying **PC-Sealcoat® Flex**, a highly flexible, two-component, cement-based slurry, to the walls and bottom of the pool. This waterproofing layer offers several advantages:

Effective waterproofing capabilities

Strong adhesion to the substrate with high resistance

Exceptional flexibility

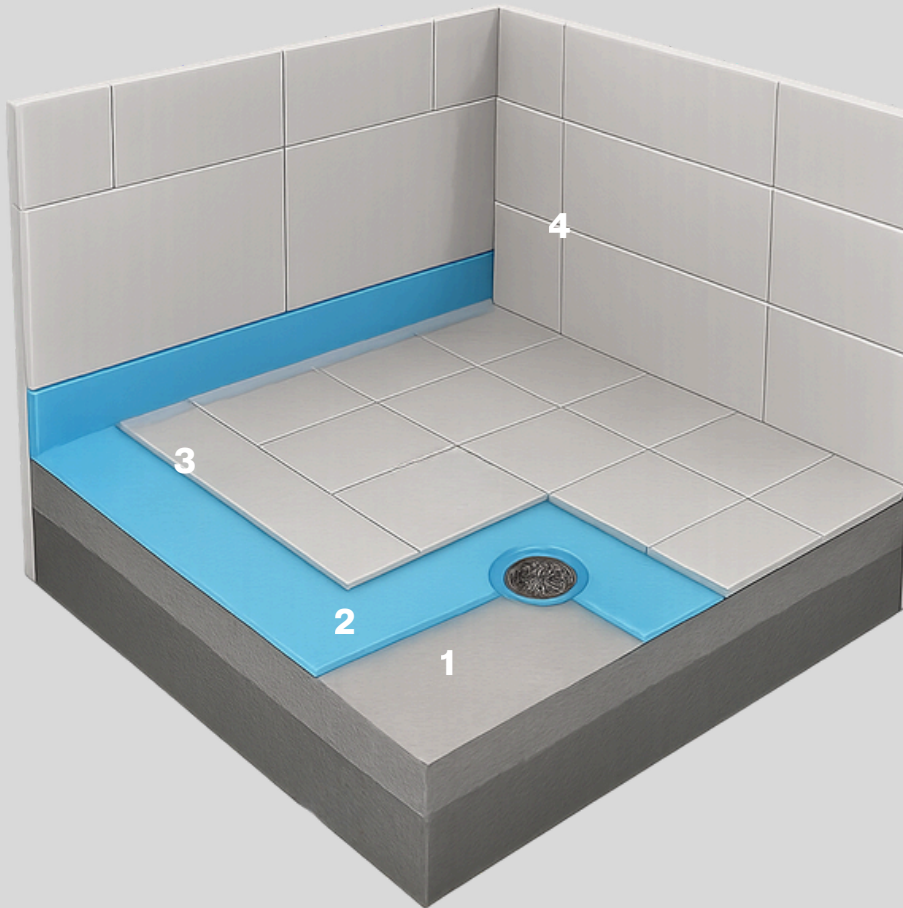
Long-lasting durability

Resistance to negative pressures, ensuring protection against leaks and water ingress

When overlaying with ceramic tiles, it is crucial to create a smooth and stable substrate for proper adhesion. If necessary, the substrate can be smoothed using a robust cement mortar.

Tiles should be affixed to the walls and bottom of the pool using a polymer-modified tile adhesive such as **PC-Tilefix® 202**.

For grouting the Wet area tiles , we recommend **PC-Tilefix® EP**, a high-strength, chemical-resistant, two-component epoxy grout.



1. **Concrete**
2. **PC-Sealcoat® Flex**
3. **PC-Tilefix® 202**
4. **PC-Tilefix® EP**

4.APPLICATION

4.1.PREPARATION OF THE SUBSTRATE

To ensure effective surface preparation, please follow these actions:

Conduct a comprehensive cleaning to eliminate grease residues, deshuttering agents, dust, loose materials, and other contaminants from the surface.

Remove loose particles from any existing cavities in the concrete.

Trim form wires and spacers to a depth of 3 cm.

Open existing construction joints in a V-shape, directing the cut inward along their entire length to a depth of 3 cm.

The aforementioned areas should be adequately dampened and filled with **PC-Conrend® HS RM**, a polymer-modified cementitious repair mortar. Alternatively, for expedited work, the filling can be accomplished with **PC-Conrend® Plug**, a rapid-setting polymer-modified cementitious repair mortar. The estimated consumption of **PC-Conrend® HS RM** is approximately 25 kg for filling a surface area of 30-40 m², based on typical requirements for a standard concrete wall surface.

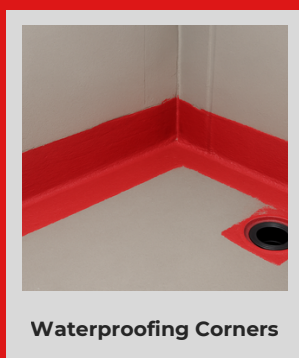


4.2. WATERPROOFING WITH PC-SEALCOAT® FLEX : A TWO-COMPONENT, FLEXIBLE SLURRY

In this instance, the application of a robust cement mortar is unnecessary. The **PC-Sealcoat® Flex** waterproofing membrane can be directly applied to the smooth substrate.

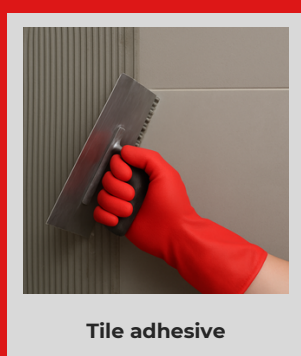
Combine the contents of the 20 kg bag (Component B) of **PC-Sealcoat® Flex** with 10 kg of liquid (Component A) while continuously stirring until a uniform, viscous mixture is achieved, suitable for brush application. A low-speed mixer (approximately 300 rpm) is recommended for this process.

Apply 2 layers of **PC-Sealcoat® Flex** to the walls and floor, ensuring that each layer is allowed to dry before the next is applied. To prevent cracking, each layer should not exceed a thickness of 1 mm. The total consumption should be approximately 1-1.5 kg/m². At the intersections of walls and between the wall and bottom, it is advisable to reinforce the **PC-Sealcoat® Flex** with **PC-SealTape® Flex**, approximately 10 cm in width. This reinforcing strip should be placed immediately following the application of the first layer of **PC-Sealcoat® Flex** while it is still fresh. After this layer has dried, apply two to three additional layers of **PC-Sealcoat® Flex**.



4.3. FIXING CERAMIC TILES

Ceramic tiles should be adhered to the bottom and walls of the pool using one of the following tile adhesives: **PC-Tilefix® 202**.



4.4.TILE GROUTING

It is recommended to grout the tiles on the pool walls and floor with **PC-Tilefix® Grout EP** epoxy tile grout.



5.ADVANTAGES OF WET AREA WATERPROOFING

Structural Protection and Durability

- Prevents foundation decay and protects against water infiltration.
- Guards metal reinforcements from corrosion, maintaining load-bearing capacity.
- Extends the lifespan of renovations and buildings by reducing moisture exposure.

Health and Hygiene

- Inhibits mold and mildew growth, preventing odors and stains.
- Improves air quality, reducing respiratory issues and allergies.
- Controls bacteria in damp areas, ensuring a cleaner environment.

Financial and Aesthetic Advantages

- Reduces long-term repair costs by preventing leaks.
- Increases property value by maintaining a leak-free condition.
- Preserves the appearance of finishes, preventing damage from moisture.

Safety and Efficiency

- Enhances electrical safety by keeping moisture away from wiring.
- Improves energy efficiency by maintaining dry insulation, lowering heating and cooling costs.
- Offers slip-resistant surfaces for added safety.



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