Roka Pro Seal C2

Two Component, Acrylic Reinforced Cementitious Coating

Roka Pro Seal C2 is a two-component acrylic modified Cementitious system that forms a waterproof, flexible coating. The material is ideal for waterproofing and resurfacing concrete, masonry, and most other Construction materials. The system requires only on site mixing and applied simply by stiff brush or roller.

Uses & Advantages:

- Waterproof and can withstand pressure up to 7 Bars (equivalent to a 70-meter water head) when applied at a dry film thickness (DFT) of 2mm.
- Once fully dried, safe for use in contact with drinking water as it is non-toxic.
- Acts as a barrier to waterborne salts.
- High resistance to carbon dioxide and chloride ion diffusion. A 1mm coating offers anti-carbonation protection equivalent to more than 80cm of concrete.
- Immediate protection - can be applied to 24-hour old concrete.
- Suitable for light pedestrian traffic.
- Bonds well to both porous and nonporous surfaces.
- Flexible and breathable (allows substrate to breathe).

Fields of Application:

- Used as a waterproofing solution for roofs.
- Provides protection for building foundations.
- Applied to coat seawater channels.
- Shields concrete surfaces from carbonation and chloride damage.
- Seals and coats tie bar holes to ensure water resistance.
- Waterproofs and protects against exposure to brackish water.
- Serves as a backing layer for marble and granite to prevent water penetration and avoid surface staining.
- Utilized in reservoirs, tunnels, swimming pools, and similar structures.
- Suitable for dams, harbors, canals, and retaining walls.

Consumption:

0.9 kg of mixed material per meter square for one layer. The coverage rate for each layer will be significantly affected by the substrate's roughness. A total of 1.8 kg/m^2 is needed in two coats to achieve a 1mm thickness.

Technical Information:

Color	Cement Grey

Mixed Density	1800 kg/m^3
Mixing Ratio by Weight (Powder : Liquid)	3:1
Pot Life	60 minutes at 25ºC & 30 minutes at 40ºC
Application Temperature	+10ºC to +35ºC
Touch dry	1-2 hours at 25ºC
Recoat-able	4 hours at 25ºC
Full Cure	7 days at 25ºC
Compressive strength	25 – 30 N/mm^2 (28 days)
Shear Strength	6 – 7 N/mm^2
Flexural Strength	10 – 12 N/mm^2
Elongation	>5% (un-bonded)
Dilution	Clean Water (10% only)
Toxicity	Non-toxic when cured
Water Penetration (DIN 1048)	7 bars- no leakage (at 2mm DFT)
Abrasion Resistance (ASTM D4060 CS 17 Wheel)	45 mg/1000 cycles
Initial Surface absorption	>95% reduction against control
Water Vapor coefficient	3.64 x 10-4 cm/s
Oxygen diffusion coefficient	7.6 x 10-6 cm/s
Chloride ion diffusivity	Zero penetration at 90 days

Chloride ion diffusion coefficient	1.04 x 10-7 cm/s
Shelf life	12 months
Storage	Store in a dry, no-frost & away from direct sunlight.

Surface Preparation:

Dirt, Dust, and Debris: Thoroughly clean the surface by removing any dirt, dust, or debris using a broom, vacuum, or pressure washer, depending on the location.

Grease and Oil: If there is any grease, oil, or other contaminants on the surface, use a degreasing cleaner or mild detergent, and make sure to rinse the surface thoroughly.

Mold and Mildew: Treat mold or mildew-affected areas with a solution of water and bleach or a specialized cleaner.

Check for Surface Integrity

- Ensure that the surface is **solid** and free from any loose or flaking material.
- For concrete surfaces, ensure there are no cracks or weak areas that could compromise adhesion. Repair any structural defects before proceeding.
- For wooden surfaces, make sure they are rigid and well-secured to avoid movement.

Smooth the Surface

- Depending on the surface type, it might need to be smoothed. For rough surfaces, you can sand down the high points or fill in the low areas with appropriate fillers to create a flat surface.
- If the surface is too smooth (such as polished concrete), it may require light scuffing to provide better adhesion for the adhesive.

Mixing Process:

Start with a clean container to avoid contamination that can affect the adhesive's performance. Pour the required amount of liquid component into the mixing container. Slowly add the Roka Pro Seal C2 powder to the liquid while mixing with the slow-speed drill fitted with a paddle attachment. This prevents clumping and ensures even mixing. Continue mixing for 3-5 minutes until a smooth, lump-free consistency is achieved. Ensure the drill speed is low to avoid introducing too much air into the mixture. Let the mixed adhesive sit for about 5 minutes. This allows full saturation of the materials and improves the final consistency. After the resting period, remix briefly to restore the consistency before applying the adhesive. Only mix as much adhesive as you can use within 30 minutes, as Roka Pro Seal C2 begins to set after that time.

Remarks:

- **DO NOT** add additional water or liquid to the mixture after it has been prepared, as this can weaken the adhesive.
- Be mindful of environmental conditions like temperature and humidity, which can affect the working time of the mixed adhesive.

Application:

Always apply Roka Pro Seal C2 to a pre-dampened surface. High-suction substrates require more dampening than dense substrates. However, make sure there is no free-ponding water. Apply by brush or broom. Mixed material must be used within 30 -45 minutes, or less under hot weather conditions.

First Coat: Brush or broom the mix firmly onto the pre-dampened, prepared surface. Care must be taken not to spread the material too thinly. When the material begins to drag or “ball”, do not add more liquid/water but dampen the surface again.

Second Coat: Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. Brush or broom the mixed material onto the surface (as above) finishing at the right angles to the first coat.

Roka Pro Seal C2 can be spray applied but should afterwards be brushed well into the substrate to ensure proper adhesion. To avoid this, apply first coat by brush and second by spray application (where required).

Protection on Completion:

The environment around the newly applied Roka Pro Seal C2 should remain within the recommended temperature range, typically between **5°C and 35°C**. Avoid extreme heat, cold, or direct sunlight, which can affect the curing time and adhesive strength.

Temperature and Relative Humidity:

Do not apply concrete/screeds if temperature is below 5°C

Handling & Storage:

This product has a shelf life of 12 months if kept in a dry cool place in the original packaging. In more extreme conditions this period might be shortened.

Important Note:

The information provided in this data sheet is based on ongoing development efforts and extensive field experience. While we strive to ensure the accuracy and reliability of the information, we cannot assume responsibility for any work performed using our materials, as we have no control

over application methods, site conditions, and other factors. Due to ongoing research and development in our laboratories, we recommend that customers verify that this data sheet has not been replaced by a more recent publication.

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