



PC-Sealcoat® Crystal

Cementitious crystalline waterproofing coating System

PC-Sealcoat® Crystal represents a superior quality cementitious waterproofing system designed to safeguard and waterproof concrete structures through a process of crystallization. The active chemicals react with moisture in the concrete resulting in crystalline microstructure formation within the pores and capillary tracts of concrete and mortar thus waterproofing the structure against penetration of water and other liquids from any direction. **PC-Sealcoat® Crystal** offers robust and enduring waterproofing protection against dampness and hydrostatic pressure from groundwater.

FEATURES

- The material possesses self-healing properties capable of sealing cracks or voids up to 0.5mm through crystal formation.
- Being an integral component of concrete, it eliminates the risk of detachment.
- It can withstand negative hydrostatic pressure exceeding 16 Bar.
- The insolubility of the crystals in water ensures the permanent sealing of voids.
- It demonstrates exceptional effectiveness in negative-side waterproofing applications.
- Non-toxic and safe for both drinking water and aquatic/marine ecosystems.

PRODUCTS PROPERTIES

Physical Properties	Typical Value
Form	Cementitious powder
Colour	Grey
Density	6.40-6.70 l / 20 kg bag
Bulk density of dry mortar	1.06 ± 0.05 kg/l
Compressive strength (EN 196-1)	17.00 ± 2.00 N/mm ²
Flexural strength (EN 196-1)	6.00 ± 1.00 N/mm ²
Adhesion (EN 1542)	≥ 1.0 N/mm ²
CO2 permeability (EN 1062-6 Method A, requirement: Sd > 50m)	181 m
Capillary absorption and permeability to water (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.095 kg/m ² h 0.5
Water vapor permeability (EN ISO 7783-2, Class I < 5m)	Sd=1.40 m
Pot Life	30-60 min at +20°C
Water penetration under positive hydrostatic pressure (EN 12390-8, 3 days at 5 bar)	No penetration
Water penetration under negative hydrostatic pressure: (at 1.5 bar)	No penetration

USES

Recommended for both interior and exterior below-grade concrete surfaces, this product is suitable for negative and positive waterproofing and can be applied on horizontal structural slabs to resist hydrostatic pressure effectively. Its enhanced durability offers superior resistance to impact and abrasion, making it ideal for use in basements, wet areas, tunnels, underground garages, and planter boxes.

SURFACE PREPARATION

The concrete surface must be thoroughly cleansed to eliminate any traces of laitance, oils, grease, curing agents, or other contaminants. It is advisable to either sandblast or acid-etch the surface before proceeding with treatment. Additionally, the concrete surface should be structurally sound. Any visible cracks wider than 0.4 mm, honeycombed pockets with a depth of approximately 40 mm, and a width of 25 mm should be carefully routed out.

Following the repair and cleaning processes, the surface must be saturated with potable water to achieve a saturated surface-dry (SSD) condition. During the coating application, it is imperative to ensure the absence of standing or running water. The recommended mixture consists of three parts **PC-Sealcoat® Crystal** to one part water by weight, mixed until a stiff mortar consistency is attained. Prior to applying the mortar mix for patching, prime the concrete surface with a single slurry coat of **PC-Sealcoat® Crystal** to effectively seal any cavities.

PC-Sealcoat® Crystal must be applied on a damp, SSD substrate only to ensure maximum chemical penetration and uniform application. Pre-wet substrate until damp prior to application of **PC-Sealcoat® Crystal**. To achieve coating consistency, mix approx. 6.5 to 8 liter of water to 20 kg depending on site conditions. It is imperative to combine the powder with clean water using a mechanical stirrer. Stir the mixture for two minutes until a smooth, lump-free consistency is attained.

APPLICATION

Apply a minimum of two coats in perpendicular directions using a block brush or roller. The second coat should be applied while the first coat is still in a green state but adequately set to prevent it from being removed during the application of the second coat. It is crucial to avoid applying the mixed material at temperatures below 5°C or above 40°C.



NEGATIVE WATERPROOFING

Sprinkle **PC-Sealcoat® Crystal** powder directly from the packaging just after the disappearance of bleed water. Sprinkle **PC-Sealcoat® Crystal** at the rate of 2-3 kg/m² evenly and trowel to the required finish manually or power float.

POSITIVE WATERPROOFING

Apply **PC-Sealcoat® Crystal** powder directly from the packaging at a uniform rate of 3 kg/m² onto the lean concrete substrate (PCC) immediately prior to pouring the concrete (RCC).

TREATMENT OF CONSTRUCTION JOINT

All construction joints should be coated with **PC-Sealcoat® Crystal** bar while pouring concrete. For a more detailed explanation, kindly ask for additional information. In case any construction joints are left untreated with **PC-Sealcoat® Crystal**, you can seal external slab and wall joints using **PC-Sealcoat® Crystal** mortar. Simply make a 25mm x 25mm groove along the construction joints and fill it with freshly prepared **PC-Sealcoat® Crystal** following the described method.

SAFTY

- Make sure to wear hand gloves, safety shoes, and safety goggles when using or handling the product.
- If the eyes or mouth come into contact with the product, rinse with plenty of clean water and seek immediate medical attention. Refer to the Material Safety Data Sheet before using.

CURING

Once the **PC-Sealcoat® Crystal** coating has solidified, it is vital to cure the surface by gently misting it with clean water at regular intervals, preferably three times a day, for the first three to seven days. In cases of extreme heat, the curing process may require an extended duration.

PACKAGING

PC-Sealcoat® Crystal comes in 20 Kg Bag and 25 KG bag

SHELF LIFE

12 Months from date of Manufacture if stored in Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost

CLEANING OF EQUIPMENT

When employing the slurry coat/brush application method, it is recommended to apply at a rate of 1-1.5 kg/m² per coat. A minimum of two coats is essential for standard waterproofing, with the number of coats depending on the specific area requiring treatment.

PRECAUTIONS

The protection of **PC-Sealcoat® Crystal** is not mandatory. Nevertheless, if applied to outdoor surfaces exposed to intense rainfall, strong sunlight, or frost, it is advisable to safeguard the finished application for a minimum of 24 hours.



PC-WC GLOBAL FZ-LLC

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TECHNICAL DATA SHEET UPDATED IN
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TDS/PC-SEALCOAT® CRYSTAL/20



All technical data in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

The information, particularly the recommendations relating to the application and end-use of PC-WC products, are given in good faith based on PC-WC's current knowledge and experience of the products when properly stored, handled and applied under normal conditions by PC-WC recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or any other advice offered. The user must test the product's suitability for the intended application and purpose. PC-WC Global FZ-LLC reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our website www.pc-wc.com