



CONSTRUCTION CHEMICALS TECHNOLOGIES

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## WATERBLOCK PENETRATE

In depth crystallizing waterproofing slurry

### Properties

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**WATERBLOCK PENETRATE** is a dry mortar applied after mixing with water. It is a mixture of cement, siliceous aggregates and chemical additives which in the presence of water are reacted with calcium hydroxide and other products of the cement hydration. By this way insoluble crystals are being formed which seal the pores and the capillary voids of the concrete to a depth of about 400 microns.

For its crystallizing action the presence of water is necessary. The absence of moisture stops the chemical reaction, whereby the chemical components remain dormant. The crystallization mechanism is activated again by re-contact with water.

**WATERBLOCK PENETRATE** compared to simple WATERBLOCK ensures waterproofing of the concrete in two ways. Combines coating of the surface with penetration-crystallization in depth.

- Sealing is not affected in case of injury of the waterproofing coating.
- Adheres and embedded in the concrete so it offers a permanent solution to treat water.
- It applies to both positive and negative water pressure side to the concrete.
- Sealing cracks and pores of the range around 0,4 mm even if they appear afterwards
- It protects concrete from frost, chloride penetration, attack of corrosive salts and carbonation.
- It enables the permeability of water vapor so transpiration of building elements.
- It is suitable for applications to surfaces in contact with potable water.
- Can be applied to wet or damp concrete.



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## Applications

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**WATERBLOCK PENETRATE** is suitable for waterproofing and protection of every concrete structure.

Ideal for any waterproofing demand from simple moisture cases to water under pressure.

Typical application cases:

- Basements
- Tanks of potable water
- Tanks of biological cleaning
- Pools
- Wells
- Flower pots
- Garden Terraces
- Foundations
- Tunnels
- Channels
- Plates and concrete ceilings
- Damp areas in general, under tile coverings

## Substrate preparation

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1. Seal any water leakage points, using the fast-setting **WATERFIX** cement
2. The surface, apart from cleaning of dust, oil, loose materials or any wooden formwork oil remains, demands “roughness” by using sand blasting , water blasting or chemical treatment in order to obtain open porosity.
3. Fill the cavities in concrete by using ready-mixed resin improved repairing cement mortar **VIMACRET**.
4. Cut out wooden murel and pins around 3 cm into the concrete and fill the craters in the above-mentioned way.
5. For the joints caused by work interruption and cracks bigger than 0,4 mm, they are being widened in 3 cm depth and filled also with **VIMACRET**.
6. The edges of the shear wall to floor junction must be rounded and filled with a repair mortar (gutters configuration with side 5-6 cm).



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## How to use

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### Mixing

The dry powder is slowly added to the water with stirring to form a homogeneous pulp suitable for spreading or spraying. After waiting time of five minutes ( maturing time of fresh mortar) the mixture is stirred again so it is ready for use. Pot life is approximately 20-30 minutes.

### Application

The substrate must be well moistened, but not formed puddles.

The application is done by brush or airless spray equipment in two coatings. The thickness of each layer should not exceed 1 mm.

The second coating is made on the still fresh previous one. If the bottom coating has dried must be wetted before applying the next.

### Maturation treatment

After completion of the application wetting of the surface is required for 2-3 days by applying 2-3 sprays per day. By this way the proper curing of the material is being done so it completes the chemical process and the acquisition of mechanical strength of the sealing coating. The fresh mortar must be protected from rain and frost.

## Mixing proportions

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Application	Water / Dry mortar
Brushing	27%
Spraying	29%

## Consumption

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Consumption of **WATERBLOCK PENETRATE** is calculated in 1,5-2,0 kg/m<sup>2</sup> for two coatings. Consumption also depends on roughness of the substrate.



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## Special applications

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1. **Construction joints:** Before concreting a coating layer is applied (1,2-1,4 kg/m<sup>2</sup>) to the substrate of the existing concrete.
2. **Foundation plates:** concrete is being coated with a layer (1,2-1,4 kg/m<sup>2</sup>) followed by concreting of the foundation immediately.

In both these cases the application of **WATEBLOCK PENETRATE** can be done by dusting of dry mortar instead of coating.

3. **Concrete Floors:** And here a watery coating is being applied (1,2 kg/m<sup>2</sup>) on the surface of the hardened concrete. Alternatively it can be done on dusting of dry mortar on the fresh concrete, so the surface must be formulated by using a spatula or power trowel.

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## Life span - Storage

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The life span is 12 months for storage in a dry environment in the sealed original packaging, because the material is hygroscopic.