VIMAPROOF POWDER

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Concrete mass waterproofing with crystal function – Water absorption reducer

Properties

VIMAPROOF POWDER is a concrete additive in powder form that seals the mass of the cement paste of the concrete. It is classified according to the standard EN 934-2: 2009 as a water absorption reducer (Table 9).
It contains chemical components that react with water and form insoluble crystals that completely block the pores and capillary gaps of concrete.
VIMAPROOF POWDER does not reduce the final strengths of concrete (EN 934-2 standard allows reduction of compressive strength up to 15%).
VIMAPROOF POWDER offers significant advantages during its application

- Resistance to positive and negative hydrostatic water pressure
- Duration of waterproofing in the long run (the crystals do not alter)
- Sealing of capillary cracks that may be created during the life of the structural element up to a thickness of 0,5 mm.
- Free breathability (water vapor permeability) of concrete
- Resistance of concrete to ice and chemical attack (e.g antifreeze salts) due to non-penetration of water into the mass of concrete.

Applications

VIMAPROOF POWDER is suitable for the treatment of water absorption but also water permeability of the concrete that is in temporary or continuous contact with water. Its use is indicated in cases of foundations, basement walls, water tanks, swimming pools, biological treatment wells, tunnels, etc.
It can be added either during the preparation of the concrete or before concreting to the ready-mixed concrete.

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Technical characteristics

Form: powder
Shade: grey
Density of dry mortar: 1,04 kg / l
Water soluble chlorine content: chlorine free

Dosage

0,8-1,0 kg per 100 kg of cement

How to use

Since **VIMAPROOF POWDER** is in powder form, a specific way of mixing the material is required in order to achieve its uniform distribution in the mass of concrete.

Addition in the preparation of concrete

VIMAPROOF POWDER is added to the aggregates with half the required water and mixed for 3-4 minutes. Then cement is being added and the rest of the water and finish mixing for another 3-4 minutes.

Addition to ready-mixed concrete

VIMAPROOF POWDER is first mixed with water to form a thin mixture in a ratio of 20 kg **VIMAPROOF POWDER**: 25 liters of water.
The thin slurry is added to the conveyor mixer (barrel) and the concrete is stirred for at least 5 minutes at high speeds.

Storage

Shelf life of **VIMAPROOF POWDER** reaches 12 months in the original closed package in a place protected from moisture and frost.

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CONSTRUCTION CHEMICALS TECHNOLOGIES

VIMAPROOF POWDER

WATERPROOF CONCRETE

Concrete Technology Regulation defines for concrete with reduced water permeability: minimum cement content 350-400 kg/m^3, maximum ratio Water/Cement (W/C) 0,50 and specific aggregate grain size curve.

According to the Directive of the German Commission for Reinforced Concrete (DAfStb : WU-Richtlinie 2017) a pressure water penetration depth of up to 25 mm is acceptable on the side of the structural element exposed to water pressure. Permeability tests under pressure, according to EN 12390-8, showed that the addition of **VIMAPROOF POWDER** results in a significant reduction of the penetration depth. Thus, a concrete with an initial penetration greater than the permitted limit of 25 mm can show a reduction in water permeability of more than 40%, in which case the requirement of the regulation is easily fulfilled.

Concrete additives offer significant improvements in their properties. In no case, however, are they exempted from complying with the Concrete Technology Rules.

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