HIDROFOB KRISTAL

Admixture for concrete and mortar with double effect, construction of concrete with hydrophobic properties in contact with water or increased humidity forms crystals in the cracks and micro-pores of concrete in order to stop future water leaks and water content elimination. Corrosion inhibitor for steel reinforcement.
In compliance with: EN 934-2 T 9

FILED OF APLICATION

Admixture for concrete that prevents occurrence of capillary penetration of water through concrete. It forms crystals structures in contact with water and it seals the pores and cracks in the concrete. It influences the surface as well, increasing the hydrophobic properties of the concrete and the mortar mass. With this the penetration of water and aggressions (e.g. salts, chlorides and sulfates) is prevented. Its use is recommended in concretes of constructions that are in contact with water, like for example: underground parts of constructions, foundations, retaining walls, ports, reservoirs, pools, cooling towers, bridges, manholes, tunnels, etc.)

PROPERTIES

- Increases concrete resistance to penetration of water under pressure;
- Decreases capillary absorption of water through concrete sections with sealing capillaries and micro-cracks due to formed crystals;
- With the disabled penetration of water through the concrete in decreases the carbonation and it increases the durability of the concrete in parts where it's exposed to ice, salts and high concentration of CO_2;
- Inhibitor of corrosion and additional protection of reinforcement;
- Increasing of the ultimate compressive strength of concrete for at least 5%;
- Enables sealing of cracks in the concrete structures with the width of 0.5 mm.

TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	Visual	Creamy powdery substance
Density		0,65 kg/dm^3

DOSAGE AND PERFORMANCE:

Hidrofob Kristal is added in the fresh concrete mixture during the production of concrete after the other admixtures are added.
Recommended dosage is 3- 4 kg/m^3 concrete.
In situations when admixture is added directly in the mixer right before casting in the construction, the quantity of concrete in the concrete mixer needs to be maximum 70% of its full capacity. While adding the admixture in the mixer, the mixing needs to be more intensive and constant. After adding the proper amount of Hidrofob Kristal the intensive mixing needs to continue for at least 1 min/m^3 of concrete, but not to be under 5 minutes. Prolonged mixing is necessary for proper spreading of the admixture through the whole mass of the concrete in order to achieve an accurate effect.
In order to reach high performances of water tightness of concrete surfaces, it's recommended to apply Hidrofob Kristal in concretes with a least C25/30 class of compressive strenght. It is of big importance the whole process of preparation, transport, application and curing of concrete need to be in excellent correspondence with the conditions of the construction.

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The forming of the crystals in the concrete starts with the activation of the substances in the Hidrofob Kristal when in contact or penetration of water in the concrete. Depending on the type of concrete, the dosage, type of used cement, as well as the degree of exposed concrete in contact with water, the forming of the crystals usually begins 1 week at the earliest after the first contact with water and can last for a longer time period. If the concrete isn't exposed for a longer period of water, the forming of the crystals won't happen in the structure of the concrete.

COMPATIBILITY

In order to achieve a high degree of water tightness, it' recommended to use Hidrofob Kristal in a combination with some other admixtures from the group of plasticizers or superplasticizers from the production program of ADING. Hidrofob Kristal is used in a combination with admixtures from the group of Fluiding. Superfluid and Superfluid 21. Different admixtures in the concrete are added separately, meaning that they are not mixed together before adding them in the concrete mixture. The use of some types of cements may cause delayed setting time of concrete and can result with decreased strenghts in the early phase (up till 1 day).
Hidrofob Kristal can be used in a combination while the admixtures for the winter application of concrete from the production program of ADING. It's recommended to combine it with Hidrozim Fluid.
While using two or more admixtures in the concrete, it's necessary to make previous laboratory examinations in order to confirm the correct dosage just to gain the required performances of the concrete.

PACKAGING

Paper bags from: 4 and 20 kg.

STORAGE

In original packaging at temperature from 5°C and 35°C protected from direct sunlight. Shelf life: 12 months.

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EN 934-2:2009+A1:2012

HIDROFOB KRISTAL

Water resisting admixture

EN 934-2:T9

Chloride ion content	**≤ 0,1% by mass**
Alkali content	**≤ 2,0% by mass**
Corrosion behaviour	**Contains components only from EN 934-1:2008, Annex A.1**

Health hazards: Hidrofob Kristal does not contain toxic materials. Nevertheless, avoid contact of the product with skin and eyes and avoid swallowing. In case of contact with skin or eyes, rinse it immediately with clean running water. If swallowed, seek medical assistance. Additional information are provided in the Safety Data Sheet of the product.
Fire**:** Hidrofob Kristal is a non-flammable liquid. Additional information are provided in the Safety Data Sheet of the product.
Cleaning and disposal**:** Residues of Hidrofob Kristal are cleaned with water. Old and used packaging should be disposed of in accordance with local rules and regulations for that type of waste. Additional information are provided in the Safety Data Sheet of the product.

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