

YAPIFINE HYDRA[®] CRYSTAL

Cement Based Crystallized Waterproofing Material



Product Definition

Cement based single component crystallized waterproofing material with a capillary effect which can be used on both negative and positive sides that provides waterproofing by permeating into the concrete.

Areas of Use

- On both horizontal and vertical applications
- To provide waterproofing on the exposed concrete surfaces of all buildings
- Elevator pits
- Foundation and basement walls
- To provide waterproofing on both the negative and the positive sides of both old and new structurally intact concrete surfaces.
- Waterproofing for both underground and aboveground structures
- Water tanks and swimming pools
- Irrigation canals
- Elevator shafts, tunnels and metros.

Advantages


- Provides waterproofing by being applied to concrete surfaces on both positive and negative sides and protects the concrete from the harmful effects of water.
- The mixture that is prepared by mixing the product with water only, reacts with the free lime particles on the concrete surface. The crystals formed diffuse into the concrete and by filling the capillary gaps provides waterproofing.
- When applied on fresh concrete surfaces slows down the hydration process and reduces the cracks formed by shrinkage.
- Is permeable to water vapor.
- Is resistant to the freeze-thaw cycle.
- Protects both the concrete and the reinforcement from the corrosive effects of water.

Technical Specifications

Appearance	Grey powder	Pressurized Water Strength	7 bars (Negative & positive side)
Application Temperature	Between +5°C and +35°C	Capillary Water Absorption	≤ 0.1 kg/(m ² .h ^{0.5})
Pot Life	20 minutes	Water Vapor Permeability	Class I; Sd < 5
Time Before Use	5 days	Reaction to Fire	A1
Concrete Adhesion Resistance	≥ 0.8 N/mm ²		

* Hereby technical values and product application instructions are obtained in the wake of tests conducted in environment of +23±2°C temperature with relative humidity of %50±5. Higher temperatures will shorten the time span, while lower temperatures will extend it.

 Packaging	20 kg kraft bag
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 Consumption	~2 kg/m ² for two layers of application Mixture ratio: 6-7 L water/20 kg powder
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Surface Preparation

The surface should be cleaned of all residual materials such as dust, oil, dirt, paint, curing materials, bitumen and other foreign substances.

The damaged parts of the concrete, fractures and static cracks on the surface should be repaired with the appropriate YAPIFINE MEND repair mortar first.

Water infiltration should be eliminated with the usage of YAPIFINE HYDRA SHOCK.

Sharp corner and edge joints should be chamfered.

The application surface should be saturated with water, the saturation procedure should begin 24 hours before the application and the surface should be kept wet during the application as well. Make sure there are no water puddles on the surface.

Mixture Preparation

20 kg of powder is slowly added to 6-7 liters of clean water until a homogeneous mixture is achieved. During this process the mixture should be stirred with a low-speed mixer for a minimum of 5 minutes.

No foreign additives should be added to the mixture other than the ones specified in the application instructions.

Prepared mortar is left to develop for 3 minutes and is then mixed once again after which the mortar is ready to be applied.

The mixture inside the container should be used within 20 minutes.

Application Information



WET MORTAR: Prepared mortar, is applied on the surface which has had its underlayer preparation finished and is already saturated with water with a brush, a trowel or with a spray machine in a minimum of 2 layers.

It should be made sure of that the layers are homogeneous, smooth and even. The application should be done in the same direction on any specific layer.

When the first layer finishes drying the second layer can be applied. The layers should be applied perpendicular to each other.

4-8 hours should pass between the application of the layers.

After the application the surface should be protected from rain and frost for 24-48 hours. As it is in the normal curing process of the concrete HYDRA CRYSTAL should also be prevented from immediately drying, in order not to let it dry off, the application area should be kept wet with water 3 times a day for 5 days.

DRY COATING (negative side): Once the freshly poured concrete somewhat sets itself in place, it is simply coated with YAPIFINE HYDRA CRYSTAL.

DRY COATING (positive side): Right before the pouring of the concrete the surface is simply coated with YAPIFINE HYDRA CRYSTAL and the concrete is poured on top of it.

Application Conditions

Application shouldn't be done on surfaces that were exposed to direct sunlight for too long, surfaces that are too hot or surfaces that are frozen.

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Optimal ambient temperature is between +5°C and +30°C, if the temperature is not within these limits, then the application shouldn't take place.

The application area should be protected from the wind or direct sunlight during the application process.

The final consumption amount might vary depending on application conditions and surface characteristics.

The application area becomes completely waterproof between 5-7 days. In order to achieve the desired and predicted long-term performance results, it is recommended to cover the surface with an appropriate and desired coating material after the application.

Shelf Life

The shelf life of the product is 12 months when stored in its original packaging in dry (maximum relative humidity 60 %), cool (ambient temperature between +10°C and +25°C) and moisture-free environment.

Safety Precautions

The operator should be wearing proper work attire, goggles, mask and protective gloves appropriate to work and worker safety regulations.

In case of contact with the eyes or accidental ingestion of the product, seek immediate medical attention.

Rinse with plenty of water in case of contact with the skin.

Since it's cement based, do not breathe.

For further information on the safe handling of this product please read the Safety Data Sheet (SDS).