

## PRODUCT DATA SHEET



### BETOMIX-ITH

#### Cement-Based Crystal Producing Concrete Waterproofing Admixture

#### DESCRIPTION

The BETOMIX-ITH® additive is a dry one-component powder admixture of grey color with white inclusions. BETOMIX-ITH® which consists of cement and active chemical components is added at the time of concrete batching.

BETOMIX-ITH® is a waterproofing material that produces crystals by penetrating the concrete against moisture after being mixed into the concrete as an additive.

The active chemicals which penetrate the surface react to moisture and hardened concrete components and enter into a catalytic reaction.

This reaction creates insoluble crystal formation in both the cavities and capillary channels and cracks of the concrete, and it provides the concrete permanently impermeable to water.

It does not allow water or other liquids to leak from any direction, even under high hydrostatic pressure.

#### INTENDED USE

The BETOMIX-ITH® additive increases the water-proofing properties, frost resistance and strength of concrete constructions by filling the pores with crystalline particles.

The BETOMIX-ITH® is added at the time of concrete batching. Water-soluble chemicals are uniformly distributed in the concrete mix.

The active components of the BETOMIX-ITH® additive provide crystallization of insoluble hydrates in the porous space of the concrete. The needle-shaped crystals fill capillaries, microcracks and pores in the concrete bulk.

The crystallization continues only in contact with water until the pores are completely clogged. As a result, a strong and durable internal structure is created. This prevents further penetration of water and provides waterproofing properties. No additional waterproofing of constructions is required after using the BETOMIX-ITH® additive. It is compatible with other additives for concrete mix (plasticizing, frost resisting, etc.).

### TECHNICAL FEATURES AND ADVANTAGES

- It prevents water penetration into the concrete bulk under high pressure.
- It completes water impermeability so it is achieved due to filling of all the cracks up to 0.4-0.5 mm.
- In the case of mechanical damage and water ingress a self-healing effect starts immediately after the contact with water.
- It provides diffusion transition in the concretes. It allows the wall to dry by evaporating between the crystal cavities.
- It eliminates the disadvantages of surface insulation materials by using instead of cover type materials.
- It prevents the freezing of the concrete and increases the tensile strength
- It integrates with the concrete
- It protects the iron from the corrosion in the concrete
- It is non-toxic and it can be used in both drinking water tanks and facilities
- It is resistant to high hydrostatic pressure. It does not lose its insulation features under high hydrostatic pressure
- It is applied to the concrete surface both positively and negatively
- It allows the concrete to breathe
- It is durable to aggressive chemicals
- It does not require dry surface
- The edges of the concrete structure are not punctured, torn or broken.
- It does not require priming or correction on the surface which have high cost before application
- It does not require insulation, sealing or finishing the entire surface at corner and edge joints or between coating
- It can be applied to both previously treated or new concretes.
- It does not require protective material while using steel, mesh or other materials.
- It is currently reactive; it becomes active in contact with water.
- It protects the concrete from chemicals such as sea water, waste water, oil, etc.
- Its application cost is less than other methods.
- No deterioration in the crystal structure occurs. It is permanent.
- It can be easily added to the concrete at the plant or at the construction site.
- It minimizes cracks and shrinkage in concrete.

### AREAS OF USAGE

- |                             |                         |                       |
|-----------------------------|-------------------------|-----------------------|
| • Shear concrete            | • Water storage tanks   | • Docks and Piers     |
| • Concrete block structures | • Elevator shafts       | • Swimming Pools      |
| • Dams                      | • Tunnels, underpasses  | • Underground parking |
| • Industrial Buildings      | • Construction joints   | • Concrete Channels   |
| • Concrete dwelling houses  | • Multistorey car parks | • Bridges             |
| • Roof and Balconies        | • Roads                 |                       |
|                             | • Wastewater facilities |                       |

## CONSUMPTION

1.0% dry admixture of the mass of cement in the concrete mix or 4 kg per 1 cubic meter of concrete.

## INSTRUCTION MANUAL

### Mixing:

Clean tap water is added to BETOMIX-ITH® and it is mixed until a pasty consistency is achieved. It is mixed with a paint mixer at low speed for 2 minutes until it reaches a homogeneous consistency. The prepared mixture should be used within 5 minutes. If the mixture is starting to harden, add some water. Add BETOMIX-ITH® mortar to the concrete mix. Mix for 1-2 minutes with a low-speed drill. If added to a concrete mixer (truck mixer) mix within 10 minutes. Pour the concrete mixture in accordance with the rules of concrete usage.

## COMPATIBILITY:

The combined use with frost resisting, plasticizing and other additives is possible.

## WARNINGS/LIMITATIONS:

The BETOMIX-ITH® is efficient only in the case of cement-containing mineral materials. It is poorly efficient when applied to the microsilica-containing and polymer concretes. It should not be used for gypsum and lime mortars.

## OTHER

**Color:** Gray

**Package:** 5 and 10 Kg PP buckets

**Shelf life :** The product has an 18 month- shelf life in a dry environment in its original and undamaged packaging.

**Transportation and storage:** It can be transported by all vehicle types at the temperature range from - 50°C to + 50°C.

## HEALTH AND SAFETY:

BETOMIX-ITH® is non-toxic and does not harm the environment and human health during transportation, storage and application. It belongs to the 4th hazard class in terms of physico-chemical and sanitary-biological characteristics according to GOST 12.1.007-76 (less hazardous substances - maximum pollution level is 50 mg/m<sup>3</sup>). Wear suitable protective goggles and rubber gloves when using the product. In case of contact with eyes and skin, rinse immediately with plenty of water and seek medical care.

## TECHNICAL SUPPORT

You can find detailed information about the use and composition of BETOMIX-ITH® on the web-site [www.hydroisol.com](http://www.hydroisol.com)

## MANUFACTURER:

Institute of Technical Chemistry of Ural Branch- Russian Federation

## Distributor:

NOTERSON Yalıtım ve Kimya A.Ş. (Turkey, Europe and Middle-East Region Distributor)

## CERTIFICATES:

- CE Document
- GOST Sheet
- ISO 9001
- Health Certificate
- MSDS
- TDS

## GUARANTEE

Institute of Technical Chemistry of Ural Branch of RAS guarantees that the products will not contain defects and that the compounds in its formulation are complete.

In the case that the products are defective, the manufacturer's liability is limited to the replacement of the product proven to be defective with Hydroisol products from the factory or the relevant distributor, or a refund of the products at the net warehouse sales price valid at the date of supply.

Within the framework of the permission rules, manufacturer cannot be held liable for any damage, cost, expense, loss, compensation or other liability that may arise directly or indirectly from defective products. The manufacturer cannot provide fit for purpose guarantee.