

## IZONIL HARD

Industrially dry-mixed 100% waterproof breathable plastering mortar with dehumidifying ability based on Portland cement, silica sand, unique natural admixture (Izocomponent) and reinforced with fibers for external / internal and positive / negative application on above-ground and under-ground clay brick wall, concrete brick wall, concrete hollow block wall and concrete slab as replacement for general purpose plastering mortars, renovation plastering mortars and diffusion-closed waterproof membranes and coatings.

### DESCRIPTION

100% waterproof plastering mortar (resistant against water pressure 1 BAR / 0.1 MPa with water penetration less than 1 mm) and dehumidifying plastering mortar (with high volume of micropores which allows permanent dehumidifying process of wet substrate). Meets the requirements of EN 998-1 as renovation plaster. Provides long-term solution to a problem of water penetration on the surface of the wall (when applied on negative side) and long-term solution to a problem of water penetration to the wall (when applied on positive side) and simultaneously provides long-term solution of ventilation and drying of wet walls (when applied both on negative and positive side). It does not contain any harmful or toxic ingredients (suitable to be used in direct contact with drinking water).

### ADVANTAGES

- ⊙ World-unique plastering mortar simultaneously 100% waterproof, breathable and dehumidifying
- ⊙ Resistant against penetration of rain water and running water
- ⊙ Resistant against penetration of water under pressure up to 1 BAR (tested according EN 12390-8)
- ⊙ Water penetration less than 1 mm under 1 BAR water pressure during 72 hours test
- ⊙ Meets requirements for general purpose plastering mortar (EN 998-1)
- ⊙ At the same time meets requirements for renovation plastering mortar (EN 998-1)
- ⊙ Highly breathable (water vapor diffusion coefficient  $\leq 12$ )
- ⊙ Excellent adhesion to the substrate with minimum waste during application
- ⊙ Resistant against salt crystallization and sulphur-resistant
- ⊙ Applicable on damp surface
- ⊙ Applicable manually or by plastering machine
- ⊙ Applicable above-ground and underground, externally and internally, positive and negative side
- ⊙ Non-toxic, suitable to be used in direct contact with drinking water

### USAGE

Applicable on vertical surface (brick walls, light concrete block walls, rough concrete walls) and horizontal surface (concrete slabs -floor, roof deck) both for renovation of existing / historical buildings and new buildings:

- ⊙ Basements, cellars, shafts and underground parts of buildings
- ⊙ Wall plinths or whole wall areas internally and externally
- ⊙ Roof decks, balconies, terraces
- ⊙ Bathrooms, showers, toilets to prevent water penetration between floors
- ⊙ Concrete water tanks, swimming pools, fish ponds or other concrete water-storage facilities

IZONIL HARD can be also used as second layer to align the surface of the wall after application of products IZONIL EXTRA or IZONIL PLUS.



\* Note: Discrepancy to unified method was used, the samples were exposed to water pressure 1 BAR (0,1 MPa) instead of 5 BARs (0,5 MPa). The reason is that testing method EN 12390-8 (Testing hardened concrete, part 8: depth of penetration of water under pressure) is designed to test concrete, not plastering mortar. We used lower water pressure to test depth of penetration of water under pressure of product IZONIL HARD - RENOVATION AND WATERPROOF PLASTER. Water pressure 1 BAR (0,1 MPa) is equivalent to pressure of water column with height 10 meters.

## **SURFACE PREPARATION**

IZONIL HARD is designed to be applied on vertical substrates (brick walls, light concrete block walls, rough concrete walls) and horizontal substrates (concrete floors and concrete roofs).

The substrate must be solid, cement grout-free, free of dirt, oil, grease, dust, paint or other dirt and loose parts. It must not be greasy, acid, water-repellent or alcoholic base. The substrate must be thoroughly moistened immediately before applying IZONIL HARD and subsequently it is recommended to apply cement adhesive bridge (Portland cement mixed with water) on the substrate. The thickness of the cement bridge should not exceed a few millimeters. IZONIL HARD is applied prior to hardening of the cement bridge.

## **MIXING**

It is advisable to use a gravity mixer (concrete mixer) or hand-held electric mixer to mix the plaster.

Water is always added first, 3.7 - 4.0 liters of water per 25 kg of IZONIL HARD. Nothing else is added into mixed composition.

Gravity mixer (concrete mixer): Add the prescribed amount of water into the mixer first, followed by IZONIL HARD powder and mix for at least 10 minutes in constant slowly mixing, into a homogeneous smooth slurry.

Hand-held electric mixer: Add the prescribed amount of water into a suitable mixing container, followed by IZONIL HARD powder. Mix for at least 5 minutes with constant slowly mixing into a homogeneous smooth slurry. Then let the slurry rest for 5 minutes and then mix again for 1 minute. Mixed IZONIL HARD must be used within 3 hours.

## **APPLICATION**

IZONIL HARD is applied manually (using standard tools for plastering) or by a plastering machine pump (it is important to set up and test fresh mixture for specific type of machine pump before application).

Although IZONIL HARD contains PP fibers for elimination of surface hairline cracks, it is recommended to use fiberglass mesh to prevent hairline cracks. Recommended specification of fiberglass mesh is 5 mm x 5 mm (size) and 145 g / m<sup>2</sup> (weight).

Fiberglass mesh is applied close to the final surface. First apply approx. 70% of total thickness of IZONIL HARD (e.g. 7 mm at 10 mm total thickness), then gently press fiberglass mesh with trowel into fresh layer of IZONIL HARD and immediately apply the rest 30% of total thickness of IZONIL HARD (e.g. 3 mm at 10 mm total thickness).

IZONIL HARD is applied in maximum 3 layers with total thickness maximum 30 mm. Total thickness is determined by the degree of moisture load in the substrate and by requirement of layer thickness to align the surface of the wall. One layer is applied in total thickness 10-15 mm. Before application of next layer, it is recommended to slightly roughen the surface of previous layer. Each layer is applied at least after 24 hours since previous layer was applied. In case of application 2-3 layers, it is enough to use fiberglass mesh in last layer in manner described above. Surface of IZONIL HARD is finished in the same way as ordinary cement-based plasters by foam trowel.

## **CLEANING**

Clear water is used for disposal of IZONIL HARD for the tools and equipment. Hardened material can be disposed only in a mechanical way.

## **CARE AFTER APPLICATION**

It is necessary to prevent the IZONIL HARD from too fast drying since the optimal moistness enables permanent hydration of cement materials and minimization of cracking.

Protect freshly applied IZONIL HARD prior to rapid drying using appropriate protective methods for at least 5 days, especially at dry and windy weather, or when exposed to direct sunlight.

## FINAL COATING / PAINTING

Let IZONIL HARD to dry / harden at least 3 weeks before finishing the surface. IZONIL HARD can remain exposed without any final coating / painting. If final coating / painting is required, decorative coatings with high water vapor permeability should be used (highly breathable - diffusion-open decorative coatings / paints like silicate paints, cement paints, lime paints). If you are using a different type of paint, check its suitability with the distributor.

In case tiles are used, it is recommended to roughen the surface of IZONIL HARD and to use usual tile adhesive to stick tile to the surface. Grout for tile gaps should be breathable (not silicone-based) to preserve breathability of the surface.

## IMPORTANT

When plastering extremely moist substrates with IZONIL HARD (e.g. basement), aggregation of water drops onto IZONIL HARD surface can occur. It is inherent forcing the water out of vicinity and the drops will disappear when IZONIL HARD cures.

Individual parameters of preparation, mixing and application of the product stated in this data sheet could vary by country, conditions and climate where the product is used. It is important to adjust parameters for specific conditions of usage. Please contact us in case of any questions regarding the usage of IZONIL HARD (by email [vietnam@izonil.eu](mailto:vietnam@izonil.eu) or through website [www.izonil.eu](http://www.izonil.eu) where you can also find video tutorials for preparation and application).

## LIMITATIONS AND WARNINGS

- ⊙ No additives other than pure water are added to IZONIL HARD
- ⊙ IZONIL HARD is not applied at direct sunlight and / or strong wind or rain
- ⊙ IZONIL HARD is only applied on a solid, pre-prepared substrate
- ⊙ The freshly applied IZONIL HARD must be protected from rain for at least 24 hours (at 20 ° C)
- ⊙ The newly applied IZONIL HARD must be protected from direct sunlight for at least 48 hours
- ⊙ If IZONIL HARD is applied inside, it is necessary to ensure proper ventilation of the room for optimum drying of the wall
- ⊙ Mixed IZONIL HARD can only be processed at air and substrate temperature above + 5 ° C
- ⊙ With the expected freeze, it is not recommended to use IZONIL HARD
- ⊙ Potable water or water according to EN 1008: 2003 is used for mixing of IZONIL HARD
- ⊙ Unused IZONIL HARD remnants are mixed with water, allowed to cure and disposed as construction waste
- ⊙ Contaminated packagings are disposed as hazardous waste (see safety data sheet)

## LEGAL NOTICE

The information and, in particular, the recommendations relating to application and final use of IZONIL products are provided in good faith, resulting from the present knowledge and experience with the products when properly stored, handled and applied under normal conditions in accordance with the recommendations of RED LION COMPANY LTD. or its distributors. As long as the use and processing of the product is not subject to our direct influence, we will not be liable for any damages caused by its misuse. We reserve the right to make changes resulting from technical progress.

## FIRST AID, SAFETY AND HYGIENIC RULES

Detailed safety and health information as well as detailed precautions are provided in the IZONIL HARD safety data sheet.

## MANUFACTURER

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