

Industrially dry-mixed 100% waterproof breathable plastering mortar with dehumidifying ability based

DESCRIPTION

100% waterproof plastering mortar (resistant against water pressure 1 BAR / 0.1 MPa with water penetration less than 1mm) and dehumidifying plastering mortar (with high volume of micro-pores which allows permanent dehumidifying process of wet substrate). 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).

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 underground smooth vertical and horizontal concrete surfaces as replacement for general purpose plastering mortars, renovation plastering mortars and diffusion-closed waterproof membranes and coatings.

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.
- Highly breathable (water vapor diffusion coefficient < 15).

Statement of Responsibility (Disclaimer)

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- 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 (smooth concrete wall - precast or cast-in-place) and horizontal surface (concrete slab - floor and 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.

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TECHNICAL DATA

Appearance / color	Powder / grey
Chemical composition	Silica sand, Portland cement, natural admixture Izocomponent, PP fibers
Size of silica sand particles	0 - 0.6 mm
Packaging	25 kg plastic woven bag
Shelf life	Minimum 18 months
Water / powder ratio	6.2 -6.5 liters of clean water / 25 kg of Ducon Izonil powder
Pot life / workability	Minimum 3 hours (at temperature 20 °C)
Thickness of layer	One layer from 5 mm to 7 mm
Coverage / consumption	At thickness 5 mm 1 m² = 7.1 kg of Ducon Izonil powder 25 kg of Ducon Izonil powder = 3.5 m² At thickness 7 mm 1 m² = 10 kg Ducon Izonil powder 25 kg Ducon Izonil powder = 2.5 m²

PARAMETERS TESTED ACCORDING EN 998-1

TEST PARAMETER	MEASURED VALUE	TEST METHOD
Flow of fresh mortar after mixing	167 mm	EN 1015-3
Workable life of fresh mortar	≥ 180 minutes	EN 1015-9, method B
Dry bulk density of hardened mortar	1390 kg/m ³ ± 50 kg/m ³	EN 1015-10
Compressive strength after 28 days	≥ 20,0 N.mm ⁻²	EN 1015-11
Flexural strength after 28 days	≥ 3,0 N.mm ⁻²	EN 1015-11
Adhesive strength of hardened mortar on substrate	≥ 1,5 N.mm ⁻² - FP a)	EN 1015-12
Coefficient of capillary absorption	≥ 0,3 kg / m ²	EN 1015-18
Water penetration depth after the test of capillarity	≤ 1 mm	EN 1015-18
Water penetration depth under pressure 1 BAR (0,1 MPa)	≤ 1 mm	EN 12390-8 *
Thermal conductivity coefficient	≤ 0,45 W/m.K (P=50%)	STN EN 1745, tab. A.12
Water vapor permeability coefficient (μ)	< 15	EN 1015-19
Frost resistance coefficient after 10 cycles freeze thaw	> 0,85	STN 72 2452

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Reaction to fire	A2 - s1, d0	Without testing
Release of dangerous substances to environment	Existence of SDS	Safety Data Sheet (SDS)
Specific activity of ^{226}Ra	$11,7 \pm 2,0 \text{ Bq.kg}^{-1}$	Gamaspectrometry analysis
Index of specific activity of radionuclides	$0,15 \pm 0,02$	Gamaspectrometry analysis

* **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 Ducon Izonil. Water pressure 1 BAR (0,1 MPa) is equivalent to pressure of water column with height 10 meters.

SURFACE PREPARATION

Ducon Izonil is designed to be applied on smooth concrete substrates (precast concrete wall, cast-in-place concrete wall and concrete slab). 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 Ducon Izonil and subsequently, a cement adhesive bridge (Portland cement mixed with water) must be applied to the substrate. The thickness of the cement bridge should not exceed a few millimeters. Ducon Izonil is applied prior to hardening of the cement bridge. It is recommended to clean the substrate with a water pressure cleaner.

MIXING

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

Water is always added first, 6.2 - 6.5 l of water per 22 kg of Ducon Izonil. Nothing else is added into mixed composition.

Gravity mixer: Add the prescribed amount of water into the mixer first, followed by Ducon Izonil 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 Ducon Izonil 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 Ducon Izonil must be used within 3 hours

APPLICATION

Ducon Izonil is applied by a plaster spraying machine or manually using plastering trowel.

Ducon Izonil is being laid on to prepared surface in the recommended layer of 5 mm. Subsequently fiberglass mesh is applied (pressed into) to the fresh layer of Ducon Izonil and smoothed down with a trowel.

The fiberglass mesh should be as close as possible to the surface of Ducon Izonil. We recommend roughening the surface with a sponge or plastic broom. Recommended size of fiberglass is 5 x 5 mm and weight 145 grams / m².

We recommend to apply Ducon Izonil at the temperatures from +5 to + 25 C. Do not apply if freezing weather is expected. Do not apply Ducon Izonil in direct sunlight and / or strong

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wind or rain. Protect from rain for at least 24 hours from application (at 20°C). If Ducon Izonil is applied inside, try to ensure proper room ventilation to achieve optimum wall drying.

CLEANING

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

CARE AFTER APPLICATION

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

Protect freshly applied Ducon Izonil 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

If Ducon Izonil is applied on concrete wall and it is required to align the surface before final coating / painting, product IZONIL HARD can be used as second layer after Ducon Izonil to align the surface. IZONIL HARD can be applied 24 hours after application of Ducon Izonil.

Let Ducon Izonil to dry / harden at least 3 weeks before finishing the surface. Ducon Izonil 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 use usual tile adhesive to stick tile to the surface. Grout for tile gaps should be breathable (not silicone-based) to preserve breath-ability of the surface.

IMPORTANT

When plastering extremely moist sub-states with Ducon Izonil (e.g. basement), aggregation of water drops onto Ducon Izonil surface can occur. It is inherent forcing the water out of vicinity and the drops will disappear when Ducon Izonil 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 Ducon Izonil (by email info@duconchemical.com or through website www.duconchemical.com where you can also find video tutorials for preparation and application)

LIMITATIONS AND WARNINGS

- No additives other than pure water are added to Ducon Izonil
- Ducon Izonil is not applied at direct sunlight and / or strong wind or rain
- Ducon Izonil is only applied on a solid, pre-prepared substrate
- The freshly applied Ducon Izonil must be protected from rain for at least 24 hours (at 20 ° C)
- The newly applied Ducon Izonil must be protected from direct sunlight for at least 48 hours

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- If Ducon Izonil is applied inside, it is necessary to ensure proper ventilation of the room for optimum drying of the wall
- Mixed Ducon Izonil can only be processed at air and substrate temperature above + 5 ° C
- With the expected freeze, it is not recommended to use Ducon Izonil the product
- Potable water or water according to EN 1008: 2003 is used for mixing of Ducon Izonil
- Unused Ducon Izonil remnants are mixed with water, allowed to cure and disposed as construction waste
- Contaminated packaging are disposed as hazardous waste (see safety data sheet)

Address: House No.115 (Level-6), Flat-6B, Al Nannu Tower, North Kalshi, Shagufta New Road, Mirpur DOHS, Dhaka-1216

Email: info@duconchemical.com

Website: duconchemical.com

Phone: +8801924424342

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 Ducon Izonil safety data sheet.

MANUFACTURER

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Ducon Construction Chemicals Industries Ltd.
www.duconasia.com

Email: info@duconasia.com
Phone: +60176183394