Waterproofing

ISOMIX HYBRID ELASTIC 2K

HYBRID WATERPROOFER

Technical Data Sheet

Revised: 06.06.2026

DESCRIPTION

ISOMIX HYBRID ELASTIC 2K is an innovative hybrid cementitious waterproofing system for multiple applications. With the addition of ISOMIX RP1100 acrylic emulsion, a flexible, fiber-reinforced, 2-component, high-strength waterproofing system is produced for demanding waterproofing applications. It exhibits increased resistance to positive and negative hydrostatic pressures and is capable of bridging microcracks. The product is classified as a concrete surface protection system according to EN 1504-2.

ADVANTAGES

- Fast curing
- High mechanical strength
- Strong adhesion
- Flexible
- Crack bridging up to 2mm
- High resistance to positive hydrostatic pressure, providing waterproofing even under pressure up to 5 atm (EN 12390-8)
- Capable of withstanding negative hydrostatic pressure
- Vapor permeable
- Ageing resistant
- Excellent adhesion on damp surfaces without prior priming
- Easy and economical application
- Suitable for interior and exterior use
- Protects concrete against carbonation

APPLICATIONS

- Waterproofing and sealing of roofs, balconies and other wet areas such as bathrooms and kitchens that will be covered with tiles or other final coatings.
- Waterproofing and sealing of basements, externally or internally, even in cases of negative hydrostatic pressure.
- Used as a waterproofing zone in external thermal insulation systems (ETICS).
- Waterproofing of surfaces made of concrete, plaster, brick, cement blocks, aerated concrete, mosaic, gypsum board and other common building substrates.

INSTRUCTIONS FOR USE

Application Preparation

1. Surface Cleaning: Ensure surfaces are free from dust, salts, oils, and loose residues.
2. Sealing Leaks: Cracks, capillaries, and leakage points must be sealed using the same material if there is no water flow or with ultra-fast setting cement if water flow is present.
3. Filling Holes & Cavities: Holes or voids in concrete should be filled and leveled with **ISOMIX RAPID CEMENT** or **ISOMIX MECHANIC** after removing loose materials and moistening the surface.
4. Exposed Reinforcement: Any exposed reinforcement should be cut to a depth of approximately 20-30 mm into the concrete, and the holes should be filled using the above method.
5. Construction Joints: Joints should be opened along their entire length, approximately 35 mm deep in a V-shape, and filled with **ISOMIX RAPID CEMENT** or **ISOMIX MECHANIC**.
6. Basement Waterproofing (Old Constructions): In the case of underground waterproofing for existing buildings, the existing plaster must be removed at least 50 cm above the underground water level, followed by the application of **ISOMIX HYBRID ELASTIC 2K**.
7. Corners & Junctions: Floor-to-wall junctions and other corners should be rounded using **ISOMIX RAPID CEMENT** or cement mortar reinforced with **ISOMIX RESIN SBR 400**, forming a triangular shape.
8. Surface Leveling & Slope Creation: Where surface leveling or slope formation is required, the use of **ISOMIX SELF LEVEL 1-30** self-leveling mortar is recommended.
9. Pre-Wetting the Surface: Before application, homogeneously moisten the dry, porous surface using clean water. Avoid excessive water accumulation.

Application

1. Mixing the Components: in a clean container, first add component B, ISOMIX RP 1100, then gradually add **ISOMIX HYBRID WATERPROOFER 3X** mortar under continuous stirring (mixing ratio 9:25). Use a low-speed electric mixer to prevent air bubble formation. Mix until a uniform, thick, and spreadable mortar is obtained, capable of being applied in thin layers without running.
2. Application Method: apply the mixture using a trowel, spatula, brush, or roller. Each layer should be maximum 1mm thick, ensuring full coverage of the surface.
3. Reinforcement (For Enhanced Strength): While the first layer is still wet, embed 65-90 gr/m² or ή 150-160gr/m² fiberglass mesh into it. In this case, three layers are required.
4. Second Coat: Once the first coat has dried (4-8 hours), apply the second coat crosswise, fully covering the embedded mesh.
5. Third Coat (For High-Performance Applications): For more demanding structures, a third coat is recommended. The total thickness should not exceed 2,5mm.
6. Workability: The mixture remains workable for up to 1 hour, depending on the temperature.
7. Moisten the surface before each coat, ensuring it is damp but without standing water.
8. Waiting Time Before Overcoating: Before covering the waterproofing layer with another cementitious material, wait 2 – 7 days (longer in lower temperatures, shorter in higher temperatures).

CLEANING

Clean the tools immediately after use with soap and water. The polymerized - dried material can only be removed by mechanical means.

CONSUMPTION

2,0 – 4,0kg/m² applied in two or three layers depending on the application thickness and the requirements of the project.

REMARKS

- Do not apply more than 1,5 kg/m² per layer.
- Protect the surface from rain or frost for at least the next 48 hours.
- Do not finish the surface with a straightedge or float after it has dried.
- Do not add water or aggregates to the mixture.
- Embed fiberglass mesh tape or polyester fabric at wall–floor junctions and along joints to reinforce the waterproofing layer.
- Do not expose the two components to intense sunlight before use.
- Do not apply at temperatures below 5°C or above 35°C.
- In very hot or dry conditions, if the application cannot be postponed, lightly spray the surface with water during the first two days to prevent cracking.
- The substrate must be designed to statically withstand hydrostatic pressure.
- If tiles are to be installed after applying the waterproofing system, choose a resin adhesive of at least C2TES1 category for application in swimming pools or at least C2TE for other simpler applications.
- Do not apply to substrates that have not fully cured.
- In cases of backfilling, install a protection membrane (e.g. a dimpled drainage membrane) over the water proofing layer.

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TECHNICAL CHARACTERISTICS

Component A

Base: Cementitious mortar with special additives
Form: Powder
Color: Grey, White
Shrinkage: Minimal
Maximum grain size: 0,5 mm
Bulk density: 1,40 ± 0,05 g/cm³

Component B: ISOMIX RP1100

Base: Acrylic polymer emulsion
Form: Aqueous emulsion
Color: Milky
Density: 1,00 ± 0,05 g/cm³

Final mixture

Mixing ratio: 25:9 (for every 25 kg of mortar, 9 kg of resin are required)
Density: 1,70 ± 0,05 g/cm³
Mixing time: 3–5 minutes
Pot life: 60 minutes at +20°C
Maximum layer thickness: 1 mm
Minimum total thickness: 1,5 mm
Maximum total thickness: 2,5 mm
Application temperature: From +5°C to +35°C

Cured product

Temperature resistance: -30°C to +80°C
Resistance to positive hydrostatic pressure: No penetration (5 bar, 3 days)
Resistance to negative hydrostatic pressure: No penetration (1,5 bar)
Static Crack Bridging (+23°C): EN 1062-7: Class A2
Capillary water absorption: w < 0,1 kg/m²·h$^{0.5}$
Water vapor permeability: Sd < 5 m (Class 1 – permeable)
CO_2 permeability: Sd > 50
Reaction to fire: Euroclass F
Exposure to stress:
Light rain: after 6 hours
Light foot traffic: 6–12 hours
Foot traffic: 24–48 hours
Water under pressure: ~7 days
Backfilling: after 3 days
Tile installation: after 1 day
Compressive strength: ≥ 20 N/mm²
Flexural strength: ≥ 9 N/mm²
Adhesion to concrete: ≥ 1,5 N/mm²
Walkability: Not recommended as a final coating
Flammability: Non-flammable

STORAGE

Store in dry and cool storage conditions at temperatures +5ºC to +25ºC. Protect from moisture, frost and direct sunlight.

SHELF LIFE

At least 18 months in the above-mentioned storage conditions. Products should remain in their original unopened sealed bags, bearing the manufacturers batch number.

PACKAGING

SET of 13,6kg (GREY)
SET of 34kg (GREY or WHITE)

HEALTH AND SAFETY INFORMATION

Consult recent Safety Data Sheet before application.

CE MARKING	
CE	
EVOCHEM S.A. Tzaverdella Place 13341, Fyli, Attica, Greece	
25	
DoP No.: 116,117	
EN 1504-2:2004	
ISOMIX HYBRID ELASTIC 2K	
Surface protection products - Coating	
Permeability to CO_2	S_d>50m
Water vapor permeability	Class I (permeable)
Capillary absorption	w<0,1kg/m²•h^{0,5}
Adhesion	>1,0 N/mm²
Reaction to Fire	Euroclass F
Dangerous substances	Comply with 5.3

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