

AQUAMAT-ELASTIC

Two-component, highly flexible, waterproofing cement-based slurry

Description

AQUAMAT-ELASTIC is a two-component, highly flexible, brushable waterproofing slurry consisting of a cement-based powder mortar (component A) and an emulsion resin (component B). After hardening, it forms a seamless, jointless membrane, with the following advantages:

- Crack-bridging ability.
- Total waterproofing against positive hydrostatic pressure up to 5 atm according to EN 12390-8. It can also withstand negative pressure.
- Vapor permeability.
- Suitability for potable water tanks, as well as food contact surface according to W-347.
- Resistance to UV radiation.
- Protection of concrete from carbonation.
- No corrosive effect on the reinforcing steel in concrete.
- Resistance to sewage water (sewage water treatment plants, sewers, etc.).
- Resistance to aging.
- Bonding to slightly wet surfaces without priming.
- Simple and low cost application.
- Suitability for green roofs, flower beds, etc., as it is certified as root-resistant.
- Also works as a radon barrier.

Certified according to EN 1504-2 and classified as coating for surface protection of concrete. Certificate No.: 2032-CPR-10.11.

Also certified according to EN 14891 and classified as liquid-applied, two-component, water-impermeable product CM O2P for waterproofing under tiles, in external installations (walls and floors) and swimming pools. Certificate No.: 18/18172-2980 & 20/22565-1686, APPLUS Laboratories. CE marked.

AQUAMAT-ELASTIC has been tested by the accredited German Institute MFPA Leipzig and complies with the wet duty classifications A0 and B0 in accordance with the ZDB technical directive 2010 "Verbundabdichtungen" for waterproofing under plates and tiles in household wet areas, balconies and flat roofs.

Certification No.: P-SAC 02/5.1/16-127 as waterproofing system under plates and tiles, P-SAC 02/5.1/16-129 as waterproofing systems for buildings.

Complies also with the requirements of the German building regulation DIN 18195-2 Tab. 7 & 8 (crack bridging, bonding, waterproofing, resistance to alkalis, etc.) for waterproofing under plates and tiles, as well as waterproofing of building structures.

AQUAMAT-ELASTIC has been also tested and approved by the German Institute TÜV Rheinland LGA Bautechnik GmbH for being resistant, when in contact with sewage water.

It has also been tested and approved as a radon barrier by the Federal Budgetary Scientific Institution, Saint Petersburg Professor P.V. Ramzaev, Scientific Research Institute for Radiation Hygiene.

Also certified as root-resistant, according to UNE CEN/TS 14416 EX: 2014.

Fields of application

It is used for waterproofing surfaces made of concrete, plaster, bricks, cement blocks, terrazzo, gypsum boards, wood, metal, etc. Ideal in cases where high flexibility and good adhesion of the waterproofing layer are required.

Suitable for waterproofing substrates subject to expansion-contraction or vibration and show or are expected to show hairline cracks, such as flat roofs, balconies, above ground water tanks, swimming pools, inverted roofs, etc.

It can also be used for waterproofing basements, internally or externally, against humidity or water under pressure.

Technical data

	<u>Component A</u>	<u>Component B</u>
Basis:	cementitious powder	acrylic polymer dispersion
Colors:	grey, white	white
Mixing ratio:	2.5 parts by weight	1 part by weight

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	<u>Wet mix:</u>	<u>AQUAMAT-ELASTIC Grey</u>
Mixing time:	3 min	Permeability to CO ₂ : 140 m (EN 1062-6 Method A, requirement: S _d > 50m)
Pot life:	60 min (+20°C)	Capillary absorption and permeability to water: 0.00594 kg/m ² ·h ^{0.5} (EN 1062-3, requirement of EN 1504-2: w < 0.1)
Bulk density of dry mortar:	1.40 ± 0.05 kg/l	
Bulk density of fresh mortar:	1.70 ± 0.1 kg/l	
<u>Final properties according to EN 14891</u>		
Initial tensile adhesion strength: (requirement: ≥ 0.5 N/mm ²)	≥ 0.7	Water vapor permeability: (EN ISO 7783-2, Class I: S _d < 5 m)
Tensile adhesion strength after water contact: (requirement: ≥ 0.5 N/mm ²)	≥ 0.6	Compressive strength after 28 days: (EN 12190)
Tensile adhesion strength after heat aging: (requirement: ≥ 0.5 N/mm ²)	≥ 0.8	Flexural strength after 28 days: (EN 12190)
Tensile adhesion strength after freeze thaw cycles: (requirement: ≥ 0.5 N/mm ²)	≥ 0.6	Adhesion strength: (EN 1542)
Tensile adhesion strength after contact with lime water: (requirement: ≥ 0.5 N/mm ²)	≥ 0.5	Crack bridging: (DIN 18195-2)
Tensile adhesion strength after contact with chlorinated water: (requirement: ≥ 0.5 N/mm ²)	≥ 0.6	Water penetration under positive hydrostatic pressure: (EN 12390-8, 3 days at 5 bar)
Crack-bridging ability at +23°C: (requirement: ≥ 0.75mm)	≥ 1.13	Water penetration under negative hydrostatic pressure: (at 1.5 bar)
Crack-bridging ability at -20°C: (requirement: ≥ 0.75mm)	≥ 0.90	
Waterproofing (7 days at 1.5 bar, requirement: impermeable to water and ≤ 20 g mass increase):	no penetration	
<u>Final properties acc. EN 13687-1 & EN 13687-2</u>		
Adhesion strength after thermal compatibility		<u>AQUAMAT-ELASTIC White</u>
For outside application with de-icing salt influence:		Permeability to CO ₂ : 129 m (EN 1062-6 Method A, requirement: S _d > 50m)
Freeze-thaw cycling with de-icing salt immersion (50 cycles) and Thunder-shower cycling (thermal shock) (10 cycles): (Requirement: ≥ 0.8 N/mm ²)	1.2 N/mm ²	Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)
		Water vapor permeability: (EN ISO 7783-2, Class I: S _d < 5 m)

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Compressive strength after 28 days: (EN 12190)	10.00 ± 2.00 N/mm ²
Flexural strength after 28 days: (EN 12190)	6.00 ± 1.00 N/mm ²
Adhesion strength (EN 1542):	≥ 1.0 N/mm ²
Crack bridging (DIN 18195-2):	0.4 mm
Water penetration under positive hydrostatic pressure: (EN 12390-8, 3 days at 5 bar)	no penetration
Water penetration under negative hydrostatic pressure: (at 1.5 bar)	no penetration
Durability against:	
• Rain:	after approx. 4 hours
• Walking:	after approx. 1 day
• Tile fixing:	after approx. 1 day
• Water under pressure:	after approx. 7 days
• Backfill:	after approx. 3 days

Directions for use

1. Substrate preparation

- The substrate must be clean, free of oil or grease, loose material, dust, etc.
- Water leaks should be plugged with AQUAFIX ultra rapid-setting, cementitious leak-plugging mortar.
- Any cavities on concrete surface should be filled and smoothed out with DUROCRET, RAPICRET or a cement mortar improved with ADIPLAST, after all loose aggregate has been removed and the surface has been well dampened.

- Starter bars and spacers should be cut to a depth of about 3cm into concrete and holes should be filled, as described above.
- Existing construction joints are opened longwise in a V shape to a depth of about 3cm and are subsequently filled, as above.
- Corners, like wall-floor junctions, should be filled and smoothly rounded with DUROCRET or a cement mortar improved with ADIPLAST (formation of a fillet, triangular in cross section, with sides of 5-6cm).
- In case of masonry walls, joints should be first filled carefully, otherwise it is recommended to apply a cement mortar layer first improved with ADIPLAST.
- For waterproofing basements in old buildings, the existing plaster should be removed to a height of at least 50cm above water level, before proceeding as above.
- Wherever flat surface formation is required (smoothing, slope creation, etc.) the use of DUROCRET, RAPICRET or a mortar improved with ADIPLAST is recommended.

2. Application

The whole content of the 25kg bag (component A) is added to the 10kg of the liquid component B under continuous stirring, until a uniform, viscous mixture is formed, suitable for brush application.

The entire surface of the substrate should be dampened well, but without ponding. The material is applied by brush in two or more layers, depending on the water load. Layers thicker than 1mm should be avoided, because the material may crack. Each new coating is applied after the previous one has dried.

The freshly coated surface should be protected from high temperatures, rain and frost. In case AQUAMAT-ELASTIC needs to be locally reinforced (inside corners where forming fillets is not necessary, at junctions, etc.), the use of a 10cm wide polyester fleece (30 g/m²) or fiberglass mesh (65g/m²) is recommended.

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Consumption

Depending on the water load, minimum consumption and relevant thickness should be as follows:

Water load	Minimum consumption	Minimum thickness
Moisture	2.0kg/m ²	~ 1.5mm
Water without pressure	3.0kg/m ²	~ 2.0mm
Water under pressure	3.5-4.0kg/m ²	~ 2.5mm

Packaging

- 35kg packaging (25kg cement-based powder mortar + 10kg emulsion resin), in grey and white.
- 18kg packaging (12.9kg cement-based powder mortar + 5.1kg emulsion resin), in white.
- 7kg packaging (5kg cement-based powder mortar + 2kg emulsion resin), in white.

Shelf life – Storage

Component A:

12 months from production date if stored in original, unopened packaging in a frost-free and dry place.

Component B:

12 months from production date if stored in original, unopened packaging, at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.


Remarks


- In case of water under pressure, care should be taken so that pumping, which keeps the water level low, does not stop before AQUAMAT-ELASTIC has sufficiently hardened. About 7 days are needed.
- In case of water under pressure, the structure bearing the waterproofing layer (wall, floor, etc.) should be properly designed in order to be sufficiently static to withstand hydrostatic pressure.
- In case of operational walkable floors, the floor surface waterproofed with AQUAMAT-ELASTIC should be protected with a cement mortar layer.
- Temperature during application should be between +5°C and +35°C.
- Due to cement content, the component A of AQUAMAT-ELASTIC reacts with water forming alkaline solutions, thus is classified as irritant.
- Consult the directions for safe use and precautions written on the packaging before use.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory j, type WB is 140g/l (2010) for the ready-to-use product. The ready-to-use product AQUAMAT-ELASTIC contains a maximum of 140g/l VOC.

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 2032
ISOMAT S.A. 17 th km Thessaloniki – Ag. Athanasios P.O. BOX 1043, 570 03 Ag. Athanasios, Greece 10
2032-CPR-10.11 DoP No.: AQUAMAT-ELASTIC GREY/1623-01 EN 1504-2 Surface protection products Coating Permeability to CO ₂ : Sd > 50 m Water vapor permeability: Class I (permeable) Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$ Adhesion: $\geq 1.0 \text{ N/mm}^2$ Reaction to fire: Euroclass F Dangerous substances comply with 5.3

 2032
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2032-CPR-10.11 DoP No.: AQUAMAT-ELASTIC WHITE/1624-01 EN 1504-2 Surface protection products Coating Permeability to CO ₂ : Sd > 50 m Water vapor permeability: Class I (permeable) Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$ Adhesion: $\geq 1.0 \text{ N/mm}^2$ Reaction to fire: Euroclass F Dangerous substances comply with 5.3

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EN 14891:2012

Liquid applied, two component, water impermeable product CM O2P for external installations and swimming pools on walls and floors beneath ceramic tiling (bonded with C2 adhesive in accordance with **EN 12004**)

DoP No.: AQUAMAT ELASTIC / 1614-01

Initial tensile adhesion strength: $\geq 0.5 \text{ N/mm}^2$

Tensile adhesion strength
after water contact: $\geq 0.5 \text{ N/mm}^2$

Tensile adhesion strength
after heat ageing: $\geq 0.5 \text{ N/mm}^2$

Tensile adhesion strength
after contact with lime water: $\geq 0.5 \text{ N/mm}^2$

Waterproofing: No penetration

Crack bridging ability under standard conditions:
 $\geq 0.75 \text{ mm}$

Crack bridging ability at very low temperature
(-20°C): $\geq 0.75 \text{ mm}$

Tensile adhesion strength
after freeze-thaw cycles: $\geq 0.5 \text{ N/mm}^2$

Tensile adhesion strength
after contact with chlorinated water: $\geq 0.5 \text{ N/mm}^2$

ISOMAT S.A.

BUILDING CHEMICALS AND MORTARS

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