

AQUAMAT-FLEX

Two-component, flexible, waterproofing cement-based slurry

Description

AQUAMAT-FLEX is a two-component, flexible 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 surfaces, according to W-347.
- Protection of concrete from carbonation.
- No corrosive effect on the reinforcing steel in concrete.
- Resistance to aging.
- Bonding to wet surfaces without priming.
- Simple and low cost application.

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

Fields of application

It is used for waterproofing surfaces made of concrete, plaster, bricks, cement blocks, terrazzo, etc. that show or are expected to show hairline cracks. Ideal for application on terraces, rooftops, balconies and damp areas to be covered with tiles (bathrooms, kitchens), inverted roofs, underground reservoirs, flower stands, etc.

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

Technical data

	<u>Component A</u> cementitious powder	<u>Component B</u> acrylic polymer dispersion
Basis:		
Colors:	grey	white
Mixing ratio:	3.125 parts by weight	1 part by weight

Wet mix:

Mixing time:	3 min
Pot life*:	45-60 min
Bulk density of dry mortar:	1.36 ± 0.05 kg/l
Bulk density of fresh mortar:	1.90 ± 0.1 kg/l
Compressive strength after 28 days: (EN 12190)	17.50 ± 2.50 N/mm ²
Flexural strength after 28 days: (EN 12190)	8.50 ± 1.50 N/mm ²
Adhesion strength: (EN 1542)	≥ 1.0 N/mm ²
Permeability to CO ₂ : (EN 1062-6 Method A, requirement: S _d > 50m)	145 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.011 kg/m ² ·h ^{0.5}
Water vapor permeability: (EN ISO 7782-2, Class I: S _d < 5m)	S _d = 0.45m
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 h
- Walking: after approx. 1 day
- Tile fixing: after approx. 1 day
- Water under pressure: after approx. 7 days
- Backfill: after approx. 3 days

* At a temperature of 21±2°C and a relative humidity of 60±10%.

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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 wooden molds should be cut to a depth of about 3cm into the concrete and the holes should be sealed, 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, any existing plaster coat should be removed to a height of at least 50cm above the water level and then proceed 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 8kg 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 well dampened, but without ponding water.

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 layer is applied after the previous one has dried. The freshly coated surface should be protected from high temperatures, rain and frost.

In case AQUAMAT-FLEX needs to be locally reinforced (inside corners where forming fillets is not necessary, at junctions, etc.), the use of a 10cm wide strip of polyester fleece (30 g/m²) or fiberglass mesh (65 g/m²) is recommended.

Consumption

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

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

Packaging

- 33kg packaging (25kg cement-based powder mortar bag + 8kg emulsion plastic container).
- 18kg packaging (13.6kg cement-based powder mortar bag + 4.4kg emulsion resin plastic container).

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.

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Remarks

- In cases of water under pressure, care should be taken so that pumping, which keeps the water level low, does not stop before AQUAMAT-FLEX has sufficiently hardened. About 7 days are needed.
- In case of water under pressure, the structure that bears the waterproofing layer (wall, floor, etc.) should have been properly designed in order to be sufficiently static to withstand hydrostatic pressure.
- Temperature during application should be between +5°C and +35°C.
- Due to cement content, component A 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 140 g/l (2010) for the ready-to-use product.

The ready-to-use product AQUAMAT-FLEX contains a maximum of 140 g/l VOC.



2032

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EN 1504-2

Surface protection products

Coating

Permeability to CO₂: Sd > 50m

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

ISOMAT S.A.

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