

Two-component, flexible, cement-based waterproofing slurry

Description

AQUAMAT-FLEX is a two-component, flexible waterproofing slurry consisting of a cement-based powder mortar (component A) and a resin emulsion (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.
- Protection of concrete from carbonation.
- Vapor permeability.
- Suitability for potable water tanks, as well as food contact surfaces, according to W-347.
- 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>	<u>Component B</u>
Basis:	cementitious powder	acrylic polymer dispersion
Colors:	grey	white
Mixing ratio:	3 parts by weight	1 part by weight
Mixing time:		<u>Wet mix:</u> 3 min
Pot life:		60 min at +20°C
Bulk density (wet mix):		1.90 kg/l
Compressive strength: (EN 196-1):		17.50±2.50 N/mm ²
Flexural strength: (EN 196-1):		8.50±1.50 N/mm ²
Adhesion (EN 1542):		≥ 1.0 N/mm ²
Permeability to CO ₂ : (EN 1062-6 Method A, requirement: Sd > 50m)		145 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)		0.092 kg/m ² ·h ^{0.5}
Water vapor permeability: (EN ISO 7782-2, Class I < 5m)		Sd=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

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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

Directions for use

1. Substrate preparation

- The substrate must be clean, free of oily residues, loose material, dust, etc.
- Water leaks should be plugged with AQUAFIX rapid-setting cement.
- 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 3 cm 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 3 cm 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 (fillets having a triangular cross-sectional area with sides of 5-6 cm).
- 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 layer should be removed to a height of up to 50 cm 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 25 kg bag (component A) is added to the 8 kg 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 1 mm 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-FLEX needs to be locally reinforced (inside corners where forming fillets is not necessary, at junctions, etc.), the use of a 10 cm 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	Approx. 1.5 mm
Water without pressure	3.0 kg/m ²	Approx. 2.0 mm
Water under pressure	3.5-4.0 kg/m ²	Approx. 2.5 mm

Packaging

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



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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 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 suitably designed in order 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.
- Please consult the safety instructions 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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DoP No.: 21/EN 1504-2/01/01-07-2013

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

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