

AQUAMAT-FLEX

Two-component, flexible, cement-based, brushable sealing slurry

Description

AQUAMAT-FLEX is a two-component, flexible, brushable sealing slurry. It consists 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 hydrostatic pressure up to 7 atm, according to DIN 1048.
- 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.

It is classified as a coating for surface protection of concrete, according to EN 1504-2. Certificate Nr. 2032-CPR-10.11.

Fields of application

It is used for waterproofing surfaces made of concrete, plaster, bricks, cement-blocks, mosaic etc. that show or are expected to show hair 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

	Component A	Component B
Basis:	cementitious powder	acrylic polymer dispersion
Colors:	grey	white

Mixing ratio: 3 parts by weight 1 part by weight
Combined product:

Mixing time:	3 min
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
Pot life:	60 min at +20°C
Bulk density:	1.90 kg/l

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.
- Pit filling material: 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.

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- 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 moistened.
- 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 to 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 sealing basements in old buildings, any existing wall plastering 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 into 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. The material is applied by brush in 2 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, junctions etc.), the use of a 10 cm wide polyester cloth tape (30 g/m²) or a fiberglass mesh tape (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 package (25 kg cement-based powder mortar bag + 8 kg emulsion resin plastic container).
- 18 kg package (13.6 kg cement-based powder mortar bag + 4.4 kg emulsion resin plastic container).

Shelf-life/Storage

Component A:

12 months from production date, if stored in original, unopened packaging, in places protected from moisture and frost.

Component B:

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

The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Department of Research and Development of our company and on results from long-term applications of the product in practice. The recommendations and suggestions referring to the use of the product are provided without guarantee, since site conditions during the applications are beyond the control of our company. Therefore the user is responsible for confirming that the chosen product is suitable for the envisaged application. The present edition of this technical datasheet automatically cancels any previous one concerning the same product.



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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 sealing layer (wall, floor etc.) should have been suitably designed in order to withstand hydrostatic pressure.
- Temperature during application should be between +5°C and +30°C.
- The A-component of AQUAMAT-FLEX contains cement that reacts with water, forming alkaline solutions, thus is classified as irritant.
- Consult the directions for safe use and precautions written on the package.

Volatile Organic Compounds (VOCs)

According to the 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 5.4

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