Technical Leaflet

AQUAMAT-ELASTIC

Two-component, elastic, cement-based, brushable waterproofing slurry

Description

AQUAMAT-ELASTIC is a two-component, elastic, brushable waterproofing 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 1048-5. It may also receive 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 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.

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

AQUAMAT-ELASTIC is 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, as well as balconies and flat roofs.
Certification numbers: P-SAC 02/5.1/11-147 as waterproofing system under plates and tiles, P-SAC 02/5.1/11- 305 as waterproofing systems for buildings.

It also complies 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 tested and approved by the German Institute TÜV Rheinland LGA Bautechnick 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.
AQUAMAT-ELASTIC is 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, mosaic, gypsum boards, wood, metal, etc. Ideal in cases where high elasticity and good adhesion of the waterproofing layer are required. Suitable for waterproofing substrates that are subject to contraction-expansion or vibration and show or are expected to show hair 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

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

AQUAMAT-ELASTIC

Combined product:

Mixing time:	3 min
Pot life:	60 min at +20^{0}C
Bulk density:	1.80 kg/l
Compressive strength: (EN 196-1):	10.00 ± 2.00 N/mm^2
Flexural strength: (EN 196-1):	6.00 ±1.00 N/mm^2
Adhesion (EN 1542):	≥ 1.0 N/mm^2
Crack bridging (DIN 18195-2):	0.4 mm

AQUAMAT-ELASTIC Grey

Permeability to CO_2: (EN 1062-6 Method A, requirement: Sd > 50m)	140 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.0594 kg/m^2·h$^{0.5}$
Water vapor permeability: (EN ISO 7783-2, Class I: Sd < 5m)	Sd = 0.61m

AQUAMAT-ELASTIC White

Permeability to CO_2: (EN 1062-6 Method A, requirement: Sd > 50m)	129 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.009 kg/m^2·h$^{0.5}$
Water vapor permeability: (EN ISO 7783-2, Class I: Sd < 5 m)	Sd = 0.21m

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 residue, 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 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 waterproofing basements in old buildings, any existing wall plastering should be removed to a height of up to 50 cm 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.

AQUAMAT-ELASTIC

2. Application

The whole content of the 25 kg bag (component A) is added into the 10 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 dampened well, 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-ELASTIC 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/m^2) or a fiberglass mesh tape (65 g/m^2) 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

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

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^{O}C and +35^{O}C. Protect from direct sun exposure 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 that bears the waterproofing layer (wall, floor etc.) should have been suitably designed in order to withstand hydrostatic pressure.
- In case of operational walkable floors, the floor surface sealed with AQUAMAT-ELASTIC should be protected with a cement mortar layer.
- Temperature during application should be between +5^{0}C and +30^{0}C.
- Component A of AQUAMAT-ELASTIC contains cement that reacts with water forming alkaline solutions, so it 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.

AQUAMAT-ELASTIC

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

CE

2032

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2032-CPR-10.11

DoP No.: AQUAMAT-ELASTIC GREY/1623-01

EN 1504-2

Surface protection products

Coating

Permeability to CO_2: Sd > 50m

Water vapor permeability: Class I (permeable)

Capillary absorption: w < 0.1 kg/m^2·h$^{0.5}$

Adhesion: ≥ 1.0 N/mm^2

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

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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 > 50m

Water vapor permeability: Class I (permeable)

Capillary absorption: w < 0.1 kg/m^2·h$^{0.5}$

Adhesion: ≥ 1.0 N/mm^2

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

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