Technical Datasheet

AQUAMAT-SUPERELASTIC

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

Description

AQUAMAT-SUPERELASTIC is a two-component, ultra-flexible waterproofing slurry offering the following advantages:

- Easy application with a brush, roller, or spray at a thickness of up to 2 mm/layer.
- Total waterproofing against positive hydrostatic pressure up to 5 atm according to EN 12390-8. It can also withstand negative pressure.
- Crack-bridging ability even at low temperatures.
- Resistance to UV radiation.
- After hardening, it forms a seamless and jointless membrane.
- Excellent adhesion to surfaces such as concrete, plaster, bricks, etc.
- High vapor permeability and resistance to frost.
- Resistance to aging caused by temperature fluctuations.
- Resistance to chemicals, such as de-icing salts, sulfates, chlorides, etc.
- Protection of concrete from carbonation.
- No corrosive effect on the reinforcing steel in concrete.
- Suitable for green roofs, flower beds, etc., as it is root-resistant.

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. Test report No.: 19/1906-460, APPLUS Laboratories. CE marked.
Also certified as material suitable for contact with potable water, according to the requirements of RD140/2003 (Spanish Regulation that establishes sanitary criteria for water intended for human consumption, in accordance with 80/778/EEC). Water tanks must be thoroughly washed prior to filling with potable water.
Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. CE marked. Certificate No.: 2032-CPR-10.11.
AQUAMAT-SUPERELASTIC has been successfully tested by a third-party laboratory for resistance to root penetration, according to CEN/TS 14416:2014.

Fields of application

It is used for waterproofing surfaces made of concrete, plaster, bricks, cement blocks, terrazzo, gypsum boards, wood, etc. Ideal in cases where ultra flexibility and excellent adhesion of the waterproofing layer are required.
Suitable for waterproofing substrates that are 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 moisture or water under pressure.
It is used for waterproofing elements subject to salt water or de-icing salts and under ceramic tiles, in bathrooms, kitchens, balconies, flat roofs, swimming pools, swimming pool surrounds, etc.
Tiles should be fixed with a high-performance, polymer-modified tile adhesive, such as ISOMAT AK-22, ISOMAT AK-24 CRYSTAL GEL, ISOMAT AK-25, ISOMAT AK-ELASTIC, ISOMAT AK-MEGARAPID.

Technical data

	Component A	Component B
Base:	cementitious powder	acrylic polymer dispersion
Colors:	white	white
Mixing ratio:	2 parts by weight	1 part by weight

Wet mix:

Mixing time:	3 min
Pot life:	60 min at +20°C
Bulk density of dry mortar:	1.51 ± 0.05 kg/l
Bulk density of fresh mortar:	1.65 ± 0.10 kg/l
Application temperature:	+5°C and +35°C

Final properties according to EN 1504-2 (Thickness layer ≥ 2.0 mm)

Adhesion strength: (EN 1542, requirement with no traffic: ≥ 0.8)	≥ 1.3 N/mm^2

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Adhesion to concrete after 7 days at 20°C and 50% RH and 21 days in water: (EN 1542)	≥ 1.00 N/mm²
Capillary absorption and permeability to water: (EN 1062-3, requirement: w < 0.1 kg/m²·h$^{0.5}$)	0.0056 kg/m²·h$^{0.5}$
Water vapor permeability: (EN ISO 7783-1, requirement: S_d < 5 m, water vapor-permeable)	Sd = 3.28 m
Permeability to CO_2: (EN 1062-6, S_d > 50 m)	Sd = 135 m
Tensile properties (EN ISO 527-1 & -2)	
Tear force max:	0.71 N/mm²
Elongation at break: (DIN 53504, DIN EN ISO 527-1 & -2)	≥ 120%
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
Final properties acc. EN 14891	
Initial tensile adhesion strength: (requirement: ≥ 0.5 N/mm²)	≥ 0.65 N/mm²
Tensile adhesion strength after water contact: (requirement: ≥ 0.5 N/mm²)	≥ 0.60 N/mm²
Tensile adhesion strength after heat aging: (requirement: ≥ 0.5 N/mm²)	≥ 0.65 N/mm²
Tensile adhesion strength after freeze thaw cycles: (requirement: ≥ 0.5 N/mm²)	≥ 0.55 N/mm²
Tensile adhesion strength after contact with lime water: (requirement: ≥ 0.5 N/mm²)	≥ 0.55 N/mm²
Tensile adhesion strength after contact with chlorinated water: (requirement: ≥ 0.5 N/mm²)	≥ 0.60 N/mm²
Crack-bridging ability at -20°C: (requirement: ≥ 0.75mm)	≥ 1.21 mm
Crack-bridging ability at -5°C: (requirement: ≥ 0.75mm)	≥ 2.73 mm
Crack-bridging ability at 23°C: (requirement: ≥ 0.75mm)	≥ 2.63 mm
Waterproofing (7 days at 1.5 bar, requirement: impermeable to water and ≤ 20 g mass increase):	no penetration
Crack bridging (EN 1062-7)	
at +20°C:	1.70 mm (A4> 1.25 mm)
at -10°C:	1.50 mm (A4> 1.25 mm)
Durability against:	
• Rain:	after ~ 4-6 h
• Walking:	after ~ 8 h
• Tile fixing:	after ~ 1 day
• Water under pressure:	after ~ 7 days
• Backfill:	after ~ 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 with DUROCRET, DUROCRET-PLUS, 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 off with DUROCRET, DUROCRET-PLUS or a cement mortar improved with ADIPLAST (formation of a fillet, triangular in cross section, with sides of 5-6 cm).

The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Research and Development Department 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. | Edition: 29.07.2025

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- 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 50 cm above water level, before proceeding as above.
- Where flat surface formation is required (smoothing, slope creation, etc.) the use of DUROCRET, DUROCRET-PLUS or a cement mortar improved with ADIPLAST is recommended.

2. Application

The entire contents of the 20 kg bag (component A) is added to 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 water. The material is applied with a brush in two or more layers, depending on the water load. Layers thicker than 2 mm 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-SUPERELASTIC needs to be locally reinforced (inside corners where forming fillets is not necessary, at junctions, etc.), the use of a 10 cm wide fiberglass mesh strip (65 g/m^2) or the 12 cm wide JOINT SEALING TAPE AR 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	~1.3 mm
Water without pressure	3.0 kg/m^2	~1.85 mm
Water under pressure	3.5-4.0 kg/m^2	~2.5 mm

Packaging

30 kg packaging (20 kg cementitious powder + 10 kg emulsion resin).

Shelf life – Storage

Component A:

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

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-SUPERELASTIC 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.
- In case of operational walkable floors, the floor surface sealed with AQUAMAT-SUPERELASTIC should be protected with a cement mortar layer.
- 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.

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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-SUPERELASTIC contains a maximum of 140 g/l VOC.

CE

2032

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2032-CPR-10.11

DoP No.: AQUAMAT-SUPERELASTIC WHITE / 1645-01

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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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 SUPERELASTIC/1616-02

- Initial tensile adhesion strength: ≥ 0.5 N/mm²
- Tensile adhesion strength after water contact: ≥ 0.5 N/mm²
- Tensile adhesion strength after heat ageing: ≥ 0.5 N/mm²
- Tensile adhesion strength after contact with lime water: ≥ 0.5 N/mm²
- Waterproofing: No penetration
- Crack bridging ability under standard conditions ≥ 0.75 mm
- Crack bridging ability at very low temperature (-20°C) ≥ 0.75 mm
- Crack bridging ability at low temperature (-5°C) ≥ 0.75 mm
- Tensile adhesion strength after freeze-thaw cycles: ≥ 0.5 N/mm²
- Tensile adhesion strength after contact with chlorinated water: ≥ 0.5 N/mm²

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