

AQUAMAT

Cement-based, brushable waterproofing slurry

Description

AQUAMAT is a cement-based, brushable waterproofing slurry offering:

- 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.
- Perfect bonding to substrates like concrete, masonry, plaster, even under negative pressure conditions.
- Suitability for potable water tanks, as well as food contact surfaces, according to W-347.
- Simple and low cost application.
- No corrosive effects on the steel of reinforced concrete.

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 concrete elements, masonry or plaster surfaces, in cases ranging from simple moisture to water under pressure. Also suitable for waterproofing basements, water tanks, swimming pools, sewage tanks, etc. It enables the internal waterproofing of underground areas, since it can withstand negative pressure (water from the substrate side), due to its absolute bonding to the substrate. In case the surface to be sealed shows or is expected to show hairline cracks, like terraces, balconies, etc., the two-component brushable waterproofing slurries, AQUAMAT-FLEX and AQUAMAT-ELASTIC, are recommended instead.

Technical data

Form:	cementitious powder
Colors:	grey, white, light blue
Water demand:	8.25 l/25 kg bag

AQUAMAT Grey

Bulk density of dry mortar:	1.39 ± 0.05 kg/l
Bulk density of fresh mortar:	1.91 ± 0.07 kg/l
Compressive strength: (EN 196-1):	25.00 ± 3.00 N/mm ²
Flexural strength: (EN 196-1):	6.50 ± 1.00 N/mm ²
Adhesion (EN 1542):	≥ 1.0 N/mm ²
Permeability to CO ₂ : (EN 1062-6 Method A, requirement: Sd > 50m)	177 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.093 kg/m ² ·h ^{0.5}
Water vapor permeability: (EN ISO 7783-2, Class I < 5m)	Sd = 0.12m
Pot life:	1 h at +20°C
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

AQUAMAT White

Bulk density of dry mortar:	1.39 ± 0.05 kg/l
Bulk density of fresh mortar:	1.89 ± 0.07 kg/l
Compressive strength: (EN 196-1):	29.00 ± 3.00 N/mm ²
Flexural strength: (EN 196-1):	7.50 ± 1.00 N/mm ²

Adhesion (EN 1542):	$\geq 1.0 \text{ N/mm}^2$
Permeability to CO ₂ : (EN 1062-6 Method A, requirement: Sd > 50m)	153 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	$0.093 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
Water vapor permeability: (EN ISO 7782-2, Class I: Sd < 5 m)	Sd = 0.80m
Pot life:	1 h at +20°C
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
<u>AQUAMAT Light blue</u>	
Bulk density of dry mortar:	$1.39 \pm 0.05 \text{ kg/l}$
Bulk density of fresh mortar:	$1.89 \pm 0.07 \text{ kg/l}$
Compressive strength: (EN 196-1):	$19.50 \pm 3.00 \text{ N/mm}^2$
Flexural strength: (EN 196-1):	$5.10 \pm 1.00 \text{ N/mm}^2$
Adhesion (EN 1542):	$\geq 1.0 \text{ N/mm}^2$
Permeability to CO ₂ : (EN 1062-6 Method A, requirement: Sd >50m)	193 m
Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	$0.093 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Water vapor permeability: (EN ISO 7782-2, Class I: Sd < 5 m)	Sd = 1.80m
Pot life:	1 h at +20°C
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
- 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 in concrete surface should be filled and smoothed out with DUROCRET or 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 above.
- Existing construction joints are opened longwise in a V shape to a depth of about 3 cm and are subsequently filled, as described above.
- Corners, like wall-floor junctions, should be filled and smoothly rounded with DUROCRET or a cement mortar, improved with ADIPLAST (a fillet 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 water level, before proceeding as above.
- Wherever flat surface formation is required (smoothing etc.) the use of DUOCRET, RAPICRET or a mortar improved with ADIPLAST is recommended.

2. Application

AQUAMAT is gradually added to water 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 in two or more layers, depending on the water load and the consumption required. 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 direct sunlight, rain, frost, quick drying.

Elastification

For waterproofing unstable substrates subject to vibration or expansion-contraction, such as gypsum boards, chipboards, heated floors, terraces, balconies, etc., it is necessary to add 5-10 kg of ADIFLEX-B to 25 kg of AQUAMAT, plus a quantity of water that depends on the desired workability, to improve its flexibility.

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

- 25 kg paper bags in grey, white and light blue.
- 5 kg plastic bags in grey and white.

Shelf life – Storage

- 25 kg paper bags:
12 months from production date.
- 5 kg plastic bags:
18 months from production date.

The above data is valid, provided that the product is stored in its original, unopened packaging in frost-free and dry conditions.


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 has sufficiently hardened. About 7 days are needed.
- In case of water under pressure, the structure which bears the waterproofing layer (wall, floor, etc.) should be suitably designed in order to have the static sufficiency to withstand hydrostatic pressure.
- In case of walkable floors, the floor surface sealed with AQUAMAT should be protected with a cement mortar layer.
- Temperature during application should be at least +5°C.

AQUAMAT



- Due to cement content, AQUAMAT reacts with water forming alkaline solutions, thus is classified as irritant.
- Please consult the safety instructions written on the packaging before use.

 2032
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2032-CPR-10.11 DoP No.: AQUAMAT GREY/1618-01 EN 1504-2 Surface protection products Coating Permeability to CO ₂ : Sd > 50m Water vapor permeability: Class I (permeable) Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$ Adhesion: $\geq 1.0 \text{ N/mm}^2$ Reaction to fire: Euroclass A1 Dangerous substances comply with 5.3

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.



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2032-CPR-10.11

DoP No.: AQUAMAT WHITE/1619-01

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 A1

Dangerous substances comply with 5.4



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2032-CPR-10.11

DoP No.: AQUAMAT LIGHT BLUE/1620-01

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 A1

Dangerous substances comply with 5.4

ISOMAT S.A.

BUILDING CHEMICALS AND MORTARS

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