AQUAFIN®-2K/M

2-COMP., FLEXIBLE, POLYMER-MODIFIED, CEMENTITIOUS WATERPROOFING COATING

Product Description:

AQUAFIN®-2K/M is a flexible elastomeric, 2-comp. polymer modified coating that waterproofs and protects concrete, masonry, brick and some natural stone substrates with crack-bridging properties. AQUAFIN®-2K/M has excellent adhesion characteristics and provides a seamless system which can be left as the finished surface, or can be top-coated with tiles, pavers, paint or other coatings.

Primary Uses:

For waterproofing water structures, sewage treatment plants, exteriors basements walls, retaining walls, swimming pools, fountains, aquarium & zoo tanks, spillways, wet areas, under tiled applications, exposed and decoupled roofs and sealing of expansion and construction joints with ASO®-Joint-Tapes.

General waterproofing:

- External waterproofing of old and new buildings against ground moisture, humidity, and pressure water.
- Horizontal waterproofing beneath masonry.
- Internal waterproofing against humidity from outside.
- For waterproofing of underground car parks, prefabricated garages, containers, service water tanks, liquid manure containers, canalisation, areas of high humidity, terraces, balconies and swimming pools.
- For the fixing of ASO®-Joint-Tape-2000, ASO®-Joint-Tape-2000-S and ASO®-Joint-Sleeve.

Waterproofing beneath tiles:

- Safe and economic waterproofing beneath tiles in wet rooms, where water impermeability against long term and permanent water table is demanded, i.e., in bath rooms, kitchens, shower rooms, on balconies and terraces.
- For waterproofing inside swimming pools.

NOTE: for applications where negative side hydrostatic water pressure can be anticipated use AQUAFIN®-1K as a base coat.

Advantages:

- Crack bridging up to 2.59 mm.
- Easy to use – can be brush, spray, roller or trowel applied.
- Vapour permeable.
- Waterproof- resistant to 7 bars (positive side water pressure).
- Can be tiled or left uncoated.
- UV, weather and freeze-thaw resistant.
- Bonds well to damp substrates without priming
- Environmentally friendly.
- Resistant to concrete aggressive water according to DIN 4030.
- Potable water approval according to DVGWW347.

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- Root resistance acc. To Swiss Society of Engineers & Architects: SIA V 280 no. 11.

Typical Properties:

Basis	: 2-comp., cement /sand powder and liquid polymer disp.
Mixing ratio	: 5:2 powder: liquid by Weight.
Mixing time	: 2 -3 min. (drilling machine min. 300 – 500 r/min)1.5 g/cm^3
Density	: g/cm^3
Pot life	: approx. 60 min. at +23°C, 60% RH Approx. 20 min. at +35°C, 65% RH
Substrate/ Application Temperature	: min. approx. +5°Cto max. approx. +35°C. Lower temperatures extend, and higher temperatures reduce curing times.
Time between recoat	: approx.1.5 to 4 hrs. Depending on climate conditions.

Exposure to **]:

- rain after approx. 3 hours.
- pedestrian traffic after approx. 1 day.
- pressure water after approx. 7 days.
- setting of tiles after approx. 1 day.

Service temperature :

- traffic - 15°C to +50°C.
- non-traffic- 20°C to +60°C.

**] at ambient temperature of +20°C and 60% RH for higher temperatures and RH consult the method statement for tropical climates.

Technical Properties:

Adhesion strength	: approx. 1.5 n/mm^2 at 28 d.
Tensile strength	: 4.2 N/mm^2. (ATSM D 412-98a).
Elongation	: 115% (ATSM D 412-98a).
Crack bridging	: 2.59 mm (ATSM C 836:95).
Water permeability	: Nil at 5 bars (BS EN 12390).
Abrasion resistance	:109 mg (ATSM D 4060:01).
Shore 'A'	: approx. 8.5
Initial surface absorption	: Nil (BS 1881 Part 208:96).
Rapid chloride permeability	: 86% reduction (ATSM-C 1202.97).
Vapor diffusion Resistance number	: approx. 1,000 p.
Sd-value	: approx. 2 m.
Sd-value, CO2	: approx. 211 m.
Flammability class	: B2 (DIN 4102 Part 1)

Application Procedures:

Surface preparation:
The surface must be clean, sound and fine pored. It must be free from grease, dust, pockets, cracks and ridges. AQUAFIN®-2K/M is suitable for smooth concrete, screed, mastic asphalt, plaster, gypsum board and masonry. Coarsely pored surfaces like gutter blocks or precast concrete blocks must be grouted with cement mortar, ASOCRET FS or AQUAFIN®-1K. Prime highly absorbent surfaces like light weight concrete or gypsum boards with ASO®-Unigrund to improve adhesion. Use suitable methods to prepare the substrate-dependent on its condition such as e.g., brushing, vacuuming, grinding, milling, shot blasting and water jetting.

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Details:

- Concave molding, ledging corner: Form between masonry and foundation a concave molding of 4 cm length with pre-blended mortar ASOCRET®-RN additive.
- Existing cracks can be sealed with AQUAFIN®-2K/M by embedding the ASO®-Joint-Tape-2000 into the first layer.
- For moving cracks and construction joints use ASO®-Joint-Tape-2000-S.

Mixing:
Pour approx. 2/3 of the liquid component UNIFLEX®-M into a clean container and add AQUAFIN powder component whilst stirring until a lump-free mass is achieved. A mixing time of 2-3 minutes is required. After that, add the remaining UNIFLEX-M and stir until a uniform consistency is achieved.

NOTE: Depending on the application, max 1.5% (approx. 0.5 l / 35 kg) water can be added during mixing in order to adjust application consistency.

Method Of Application:

The substrate must be damp during the application. AQUAFIN®-2K/M can be applied by brush, trowel, roller or appropriate spray equipment. At least two coats of AQUAFIN®-2K/M are necessary. The applied thickness of the waterproofing must correspond with the required minimum thickness for the expected wet-duty conditions. Only apply the second layer when the first coat will n 4 hours at the earliest. Due to the possibility of crack formations avoid applied thickness greater than 2 kg/m^2 (-1 mm fry film thickness) in one application to prevent the formation of cracks. For protection of the AQUAFIN®-2K/M waterproofing the ASO®-Systemvlies-02 may be embedded into the last layer.

Cleaning & Equipment Maintenance:

In wet state with water. Cured material is etched with AQUAFIN-cleanser.

Estimating & Supply:

Packaging:
AQUAFIN®-2K/M is available in 35 kg (25 kg powder/ 10 kg liquid) and 7 kg (5 kg powder/2 kg liquid) units. Powder supplied in bags, liquid in oils.

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Loading case/consumption/ dry layer Thickness: Positive waterproofing:

Type of application	Water head	Total recommended consumption (kg/sq.m)	Min. dry thickness (mm)*
Roofs, decoupled	Below 1m traffic	2.0 - 2.25 2.5 - 3.0*)	1.0 1.3
Roofs, composite waterproofing	Below 1m traffic	2.5 - 3.0 3.0 - 4.0*)	1.3 1.5
Balconies/ Terraces	Non tiled Tiled	3.0 - 4.0 4.0	1.5 2.0
Plaza decks		3.0 - 4.0*)	1.5
Swimming pools	Small to medium Olympic non-tiled Olympic, Tiled normal adhesive Olympic, tiled adhesive UNIFIX®-2K/6	3.0 3.0 - 4.0 4.0 - 4.5 3.0	1.5 1.5 2.0 1.5
Fountains	Up to 1.0 m up to 1.5 m	2.0 - 2.5 3.0 - 3.5	1.0 1.5
Water tanks	Normal water tanks potable water tanks	3.0 - 4.5 4.0 - 4.5	1.5 2.0
Below grade	Below 2 m below 2-4 m below 4-7 m below 7-10 m above 10 m	2.0 - 2.5 3.0 3.5 4.0 4.5	1.0 1.5 1.8 2.0 2.3

Negative waterproofing below grade & direct water contact (on AQUAFIN-1K substrate):

Type of application	Water head	Total recommended consumption (kg/m2)	Min. dry thickness (mm)**
Below grade	below 2m below 2-4m below 4-7m below 7-10m above 10m	2.0-2.5 3.0 3.5 4.0 4.5	1.0 1.5 1.8 2.0 2.3

*) Depends of the amount of traffic.
**) Min. thickness of cured film on any point of the coating. These are technical limits of the product and do not reflect legal requirements for your application. Please review local building codes for conforming min. film thickness.
These may be higher than the technical possible min. values stated.
Uneven surfaces may demand more material to reach the specified thickness.

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Storage & Shelf Life:

When stored dry, and kept from freezing:

Powder component : approx. 12 months
Liquid component : approx. 24 months

In original unopened packaging. Consume open packs immediately.

Important Advice:

- In hot and humid climates coating may become slightly tacky/sticky during the curing process. If this occurs, mist coating with water 24 hours after application to ensure complete hydration of material.
- Negative water pressure can lead to delamination during frost conditions.
- AQUAFIN®-2K/M can be over plastered and also be painted with diffusion permeable and solvent-free paints (no silicate paints).
- In areas with high humidity and inadequate ventilation (i.e., in water tanks) allow for extended drying times.
- Protect areas not be treated from AQUAFIN®-2K/M.
- Eliminate direct contact with metals such as copper, zinc and aluminum with pore-tight, priming agent. A pore-tight primer can be produced with two applications of ASODUR®-GBM. Apply the first coat thoroughly to the cleaned substrate and carefully brush in. as soon as this coat has dried sufficiently, so that it can no longer be brushed through (within approx. 3 to 6 hrs.) then brush on the second coat of ASODUR®-GBM and broadcast with quartz sand (grain size: 0.2 to 0.7 mm). consumption approx. 800 to 1000 g/m^2 of ASODUR®-GBM.
- For sealing of PVC and stainless-steel flagging, abrade the flanges and degrease with isopropanol or acetone. Apply AQUAFIN®-2K/M and bed in the ASO®-Joint sleeve or alternatively as ADF-pipe seal and fix without voids and folds.
- To increase pot life/working time at higher temperatures store material in a cool environment above +5ºC and only expose to warm temperatures.
- Shortly before mixing, additionally use of cold water can also increase pot life/working time if water addition is necessary.
- The powder component of AQUAFIN®-2K/M is classified as an “irritant” in accordance with hazardous goods (GefStoffV).
- Please observe a valid European Materials Safety Data Sheet (MSDS).
- Low chromate level according to TRGS 613 (Technical Regulation for Hazardous Materials, European standard).

GISCODE: ZP1 (Powder Comp.)
GISCODE: D1 (UNIFIX-M Liquid Comp.)

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