

# AQUAFIN®-2K/M-PLUS

Two component flexible, polymer-modified cementitious waterproofing

June 2024

## PROPERTIES:

- Seamless and jointless, flexible, crack bridging waterproofing
- Suitable for all load-bearing substrates, conventionally used in construction
- Bonds to damp substrates without priming
- Vapour permeable, resistant to frost, UV and ageing
- Resistant to de-icing salts
- Structural waterproofing in accordance with DIN 18533, DIN 18535 and DIN EN 1504-2
- Waterproofing in combination with tiles in accordance with DIN 18531, DIN 18534, DIN 18535 and DIN EN 14891
- Resistant against aggressive water up to XA2 in accordance with DIN 4030

## AREAS OF APPLICATION:

### Structural waterproofing:

- Structural waterproofing of concrete and masonry work, wall and floor areas in contact soil for new build and restoration
- Waterproofing against water pressure from inside in container construction (e.g. service water tanks, waste water tanks)
- Horizontal waterproofing beneath walls, against capillary rising moisture

When using in containers or exposed to soft water with a hardness of < 30 mg CaO per l, an analysis of the water is a fundamental requirement. Assessment of the aggressiveness to concrete is in accordance with DIN4030. AQUAFIN-2K/M-PLUS is resistant up to attack level "strong attack" (exposure class XA2).

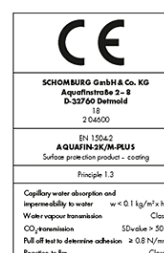
### Waterproofing in combination with tiles:

For safe and economical waterproofing in combination with tile or slab finishes, e.g. in bathrooms, shower rooms, and kitchens as well as balconies and terraces, swimming pools, and swimming pool borders. At the wall/floor junction, reinforce the waterproofing with ASO-Joint-Tape-2000 or ASO-Joint-Tape-2000-S, dependent on the exposure class.

## TECHNICAL DATA:

	UNIFIX-M-PLUS	Powder component AQUAFIN
Basis	Polymer dispersion	Sand, cement, additives
Mixing ratio	1 part by weight	2.5 parts by weight
Packaging	10 kg	25 kg
	6 kg	15 kg
	2 kg	5 kg
Colour	White	Grey
		Combined product
Density		approx. 1.6 g/cm <sup>3</sup>
Pot life *)		approx. 60 minutes
Overcoat after *)		approx. 3-6 hours
Substrate/application temperature		+5°C to +35°C
Tensile adhesion strength to DIN EN 1542		> 1.0 N/mm <sup>2</sup>

\*) For temperature over +40°C: Have a look at the description



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## TECHNICAL DATA (Continued):

	Combined product
Crack-bridging to DIN 28052-6 (PG MDS/AIV)	0.4 mm
Crack-bridging to DIN EN 14891 at normal and low temperatures	≥ 0.75 mm
Watertightness when installed	2.5 bar
Water vapour transmission coefficient $\mu$	approx. 1,200
Sd value at 2mm dry film thickness	approx. 2.4 m
Transmission coefficient, CO <sub>2</sub> , $\mu$	> 100000
Sd value, CO <sub>2</sub> at 2.0 mm dry film thickness	> 200 m
Reaction to fire DIN EN 13501-1	E

## READY FOR EXPOSURE \*):

- Rainproof on sloped surfaces after approx. 6 hours, prevent standing water
- By foot traffic after approx. 1 day
- By pressure water after approx. 7 days
- Setting of tiles after approx. 1 day

\*) at +23°C and 50% relative humidity. Due to project and weather conditions, the given data may extend or shorten. High temperatures and low humidity decrease whereas low temperatures and high humidity increase the drying time.

## SUBSTRATE:

The substrate must be load-bearing, clean, sound and fine pored. It must be free from gravel clusters, blowholes, gaping cracks and ridges, dust and adhesion reducing substances such as e.g. oil, paint, laitance layers and loose components.

Suitable substrates are close textured concrete, renders P II and P III, fully pointed masonry work, cement-based screeds, poured asphalt of hardness class IC10, gypsum boards and gypsum fibre boards as well as heated and unheated screed constructions.

Break out or chamfer corners and edges such as e.g. at the base slab. Beforehand and using a suitable cement-based mortar e.g. ASOCRET-M30, make leveling to deviations in depth >5 mm as well as mortar pockets, open masonry joints, damaged areas, substrates with large pores or uneven masonry work.

At the base/wall transition apply a slurry coat of AQUAFIN-1K or ASOCRET-M30 and whilst still wet, form a fillet with ASOCRET-M30 with a minimum side length of 4 cm. Once dried, waterproof with AQUAFIN-2KM-PLUS.

Prewet the substrate so that it is matt-damp at the time the AQUAFIN-2K/M-PLUS is applied. Prime highly absorbent and lightly sanded substrates with ASO-Unigrund-GE or ASO-Unigrund-K. The primer must be fully dry before continuing with other work steps.

Prepare penetrations with a thin-bed flange to a minimum width of 5 cm circumference around the flange composed of a suitable material for bonding such as e.g. stainless steel, red brass, PVC-U. Clean and degrease the flange. With narrower flange widths (>30 mm, <50 mm), we recommend bonding the waterproof gasket - at the flange transition - with ASOFLEX-AKB-Wall.

Eliminate moisture penetration from the rear and localized moisture from the negative side. In all cases where there is rear moisture penetration, we recommend pre-waterproofing with AQUAFIN-1K, to prevent negative pressure from the substrate. Dependent on the water pressure, carry out single or multiple coatings beforehand. For ground moisture the consumption is min. 1.75 kg/m<sup>2</sup> and water pressure min. 3.5 kg/m<sup>2</sup> AQUAFIN-1K. In concrete constructions, moisture pressure from the negative side can also be eliminated with ASODUR-SG2 / SG2-thix. When using ASODUR-SG2 / SG2 thix, a consumption of 600-1.000 g/m<sup>2</sup> is required.

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## PRODUCT PREPARATION:

Place approx. 50-60% of the liquid component into a clean mixing bucket and pre-mix the powder component to create a homogenous, lump-free mass. Then, add the remaining liquid component and adequately blend. With a mechanical mixer (approx. 500-700 rpm), a mix time of 2-3 minutes is required. Allow to stand for approx. 5 minutes, thoroughly homogenize by mixing once again.

Mixing AQUAFIN-2K/M-PLUS is carried out with the following mix ratio, parts by weight.  
2.5 parts powder component : 1 part dispersion component.

## APPLICATION:

AQUAFIN-2K/M-PLUS is applied, free from pores, by brush or trowel in at least two coats. The second, as well as subsequent coats may only be applied on the first coat and cannot become damaged by foot traffic or by further coating applications (approx. 3-6 hrs, depending on ambient conditions). A constant thickness, dependent on exposure conditions, is achieved e.g. by a 4 to 6 mm notched trowel and subsequently smoothing. Use as much material as required to achieve the dry film thickness necessary for the water exposure class. An application thickness of more than 2.3kg/m<sup>2</sup> in a single coat can lead to crack formation and is to be avoided.

Alternatively, AQUAFIN-2K/M-PLUS can also be spray applied with suitable spraying equipment such as e.g. HighPump M8 (Peristaltic pump), HighPump Small or HighPump Pictor (screw feed pump). Information can be obtained from HTG HIGH TECH Germany GmbH, Berlin, [www.hightechspray.de](http://www.hightechspray.de).

When spray applying, adding a max. of 1.5% water (0.5 l / 35 kg) AQUAFIN-2K/M-PLUS is permissible, depending on equipment.

To form water resistant expansions and construction joints, incorporate the ASO-Joint-Tape technology system components appropriate to the particular water exposure class.

Using AQUAFIN-2K/M-PLUS, bond ASO-Joint-Tape-2000/S or ASO-Joint-Tape-2000/-S-Corners (internal and external corner pieces) in the corner areas, at the transition between wall and floor as well as over connection joints. Using a 4-6 mm notched trowel, apply AQUAFIN-2K/M-PLUS to both sides of the joint that is to be bridged. AQUAFIN-2K/M-PLUS had to be at least 2 cm wider than the joint tape to be used. Lay the joint tape into the wet layer and then carefully press in without folds or voids. Bonding must be carried out in such a way as to eliminate the possibility of water migration around the back. The joint tape should be laid in a loop over expansion joints. Waterproof tape joints should be overlapped by a minimum of 5 to 10 cm and bonded with AQUAFIN-2K/M-PLUS without folds or voids. Subsequently overcoat the bonded joint tapes with AQUAFIN-2K/M-PLUS and seamlessly integrate into the main waterproofed areas. Follow the same procedure when installing ASO-Joint-Tape preformed pieces.

## Pipe penetrations:

To seal pipe penetrations, use ASO-Dichtmanschette-Boden, ASO-Dichtmanschette-Wand or ADF-Rohrmanschette appropriate for the nominal diameter and waterproof to a minimum of 5 cm at the pipe penetration. When using suitable flange units, apply AQUAFIN-2K/M-PLUS to saturation on the thin-bed flange and the overlap area. Bed the ASO-Dichtmanschette into the surrounding waterproof by overcoating.

## Drainage and protective boards with building elements in contact with the soil:

Waterproofing are protected against weathering and mechanical damage using suitable protective measures. Only install protective layers once the waterproofing has fully dried.

Protective and drainage boards can be fixed on dabs of COMBIDIC-1K but insulation boards is to be fully bonded with COMBIDIC-2K-CLASSIC or COMBIDIC-2K-PREMIUM and tightly butt jointed.

## Waterproofing in combination with tiles and slabs:

Floor drains and penetrations in pool areas must be provided with suitable flange elements. Apply AQUAFIN-2K/M-PLUS to saturation on the thin-bed flange and overlap area. Bed the ASO-Dichtmanschette-Boden into the wet waterproofing without voids or folds so that a watertight connection is produced with the surrounding waterproofing. To seal pipe penetrations in walls, ASO-Dichtmanschette-Boden or ASO-Dichtmanschette-Wand appropriate for the nominal diameter can be used. Roughen the pipe penetration, clean and degrease with a suitable material and prime as necessary. Apply on AQUAFIN-2K/M-PLUS to saturation and install the ASO-Dichtmanschette. Always overlap the joint tapes on to the surrounding waterproof membrane. Jining is always carried out with a 5 cm to 10 cm overlap. Installation of tiles or slabs is carried out with one of the tile adhesive named under system components. At the time of tile installation, the waterproofing coat must be fully hardened.

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System components	Exposure classes	
	Waterproofing in combination with tiles and slabs	Structural waterproofing
ASO-Joint-Tape-2000	x	-
ASO Joint-Tape-2000-S	x	x
ASO-Joint-Tape-2000-S-Corners	x	x
(90°, internal/external)	x	x
ASO-Joint-Tape-2000-T piece, Cross	x	x
ADF-Rohrmanschette (Pipe Gasket)	-	x
ADF-Dshnfugenband	-	x
UNIFIX-S3	x	-
LIGHTFLEX	x	-
MONOFLEX-XL	x	-
MONOFLEX	x	-
MONOFLEX-FB	x	-
ASODUR-EK98-Wall/Floor	x	-
ASODUR-DESIGN	x	-
SOLOFLEX	x	-
AK7P	x	-
CRISTALLIT-FLEX	x	-
CRISTALLIT-MULTIFLEX	x	-
UNIFIX-S3-fast	x	-
SOLOFLEX-fast	x	-

## STORAGE:

Powder component	Cool and dry, 12 months
Liquid component	Frost free, 12 months in the original unopened containers. Use opened containers promptly.
Cleaning	Whilst still fresh, clean tools with water, dissolve and wash off dried material with ASO-R001.

## ADVICE:

- Protect areas that are not to be treated with AQUAFIN-2K/M-PLUS.
- During the curing process, do not expose the waterproofing to water. Water penetrating from the rear can lead to de-bonding in frost.
- In case of strong sunshine, work against the direction of the sun in the shade.
- In rooms with high humidity and / or inadequate ventilation (e.g. water containers), the surface may drop below the dew point (condensation). This can be prevented by using suitable measures such as e.g. dehumidifiers. Direct heat or uncontrolled blown warm air is not reliable.
- As a surface waterproofing, AQUAFIN-2K/M-PLUS may not be subjected to point or linear loading.
- AQUAFIN-2K/M-PLUS can be rendered and also coated with vapour permeable, solvent free dispersion based façade or silicate points (do not use pure silicate paints). Silicone resin or acrylate-based paints can also be used.

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## ADVICE (Continued):

- Direct contact with metals such as copper. Zinc and aluminum is to be prevented by a porous-free priming coat, produced with two coats of ASODUR-GBM. Apply the first coat to saturation to the degreased and cleaned substrate. Once this coat has reacted to a point where it will no longer accept a broadcasting sand (approx. 3-6 hrs), apply a second coat of ASODUR-GBM and broadcast with 0.2-0.7 mm quartz sand. Consumption approx. 800-1000 g/m<sup>2</sup> ASODUR-GBM
- To seal PVC, red brass and stainless steel flanges, abrade the flange, clean degrease, apply AQUAFIN-2K/M-PLUS and ASO-Dichtmanschette or alternatively by the ADF-Rohrmanschette bedded without voids or folds and seamlessly connect with the surrounding waterproof membrane.

## HEALTH AND SAFETY:

Health and Safety information can be found on the Safety Data Sheet (SDS).

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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## MANUFACTURERS CONTACT DETAILS:

Manufacture location	Germany
Legal and trading name of manufacturer	SCHOMBURG GmbH & Co. KG
Manufacturer address for service	Aquafinstr. 2-8 D-32760 Detmold (Germany)
Manufacturer website	Schomburg.com
Manufacturer email	
Manufacturer phone number	+49 5231 953 00
Manufacturer NZBN	