AQUAFIN®-2K/M-PLUS
2-comp., flexible, polymer-modified, cementitious waterproofing

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 DIN 4030. 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

<table>
<thead>
<tr>
<th>UNIFLEX-M-PLUS</th>
<th>Powder component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basis: Polymer dispersion</td>
<td>Sand, cement, additives</td>
</tr>
<tr>
<td>Mixing ratio: 1 part by weight</td>
<td>2.5 parts by weight</td>
</tr>
<tr>
<td>Packaging: 10 kg</td>
<td>25 kg</td>
</tr>
<tr>
<td>6 kg</td>
<td>15 kg</td>
</tr>
<tr>
<td>2 kg</td>
<td>5 kg</td>
</tr>
<tr>
<td>Colour: white</td>
<td>grey</td>
</tr>
</tbody>
</table>

• 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
**AQUAFIN®-2K/M-PLUS**

Density: approx. 1.6 g/cm³
Pot life*: approx. 60 minutes
Overcoat after*: approx. 3–6 hrs.

Substrate/application temp.: +5°C to +35°C
Crack-bridging to DIN EN 1542
Tensile adhesion strength
> 1.0 N/mm²

Crack-bridging to DIN 28052-6 (PG MDS/AIV):
0.4 mm
Crack-bridging to DIN EN 14891
≥ 0.75 mm

Watertightness when installed:
2.5 bar
Water vapour transmission coefficient μ:
approx. 1,200
Sd value at 2 mm
dry film thickness:
approx. 2.4 m
Transmission coefficient, Co₂μ:
> 100000
Sd value, CO₂ at 2.0 mm
dry film thickness:
> 200 m
Reaction to fire
DIN EN 13501-1:
E

Combined product

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.

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 fibreboards 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.

Pre-wet 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.

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.
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 localised 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/m² and water pressure min. 3.5 kg/m² 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/m² is required.

### Material consumption:

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Dry film thickness, mm</th>
<th>Wet film thickness, mm</th>
<th>Consumption kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement walls and floor slabs</td>
<td>&gt; 2.0</td>
<td>approx. 2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Plinth waterproofing</td>
<td>&gt; 2.0</td>
<td>ca. 2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Waterproofing of tanks and pools</td>
<td>&gt; 2.0</td>
<td>ca. 2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>In combination with tiles/slabs</td>
<td>&gt; 2.0</td>
<td>ca. 2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Waterproofing beneath walls</td>
<td>&gt; 2.0</td>
<td>ca. 2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Levelling layers</td>
<td>1</td>
<td>1.1</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Possible greater material consumption due to uneven substrates as well as variations in manual application are to be taken into account.

### Product preparation:

Place approx. 50–60% of the liquid component into a clean mixing bucket and pre-mix with 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 approx. 2–3 mins 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.

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 can not become damaged by foot traffic or by further coating applications (approx. 3–6 hrs, depending on ambient conditions). A consistent 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 2.2 kg/m² 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.

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

**Pipe penetrations:**
To seal pipe penetrations, use ASO-Dichtmanschette-Boden, ASO-Dichtmanschette-Wand or ADF-Rohrmanschette appropriate for the nominal

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**System components** | **Exposure classes**
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| **Waterproofing in combination with tiles and slabs** | **Structural waterproofing** |
| ASO-Joint-Tape 2000 | × | - |
| ASO-Joint-Tape 2000 S | × | × |
| ASO-Joint-Tape-2000-S-Corners, (90°, internal/external) | × | × |
| ASO-Joint-Tape-2000-T-piece, Crass | × | × |
| ASO-Dichtmanschette-Boden/Wand (Joint-Gasket-floor/wall) | × | × |
| ADF-Rohrmanschette (Pipe-Gasket) | - | × |
| ADF-Dehnfugenband | - | × |
| UNIFIX-S3 | × | - |
| LIGHTFLEX | × | - |
| MONOFLEX-XL | × | - |
| MONOFLEX | × | - |
| MONOFLEX-FB | × | - |
| ASODUR-EK98-Wall/Floor | × | - |
| ASODUR-DESIGN | × | - |
| SOLOFLEX | × | - |
| AK7P | × | - |
| CRISTALLIT-FLEX | × | - |
| CRISTALLIT-MULTI-FLEX | × | - |
| UNIFIX-S3-fast | × | - |
| SOLOFLEX-fast | × | - |
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 wet coat without folds or voids and then fully integrate into the surrounding waterproofing by overcoating.

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 delamination.
- 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 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 facade or silicate paints (do not use pure silicate paints). Silicone resin or acrylate-based paints can also be used.
- Direct contact with metals such as copper, zinc and aluminium 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/m² 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 the ADF-Rohrmanschette bedded without voids or folds and seamlessly connect with the surrounding waterproof membrane.

Follow the pertinent current regulatory works. Please observe the valid EU safety data sheet.