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SCHOMBURG

Technical Data Sheet

AQUAFIN®-2K

Art.-No. 2 04250

Two-component, flexible waterproofing slurry

CE

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Aquafinstrasse 2–8
D-32760 Detmold
14
2 04250

EN 14891
AQUAFIN-2K
Liquid-applied water impermeable cement-based product for use beneath ceramic tiling in external areas

EN 14891: CM

Initial tensile adhesion strength	≥ 0.5 N/mm²
Tensile strength	
after contact with water	≥ 0.5 N/mm²
after heat ageing	≥ 0.5 N/mm²
after freeze/ thaw cycles	≥ 0.5 N/mm²
after contact with lime water	≥ 0.5 N/mm²
Water impermeability	no water penetration
Crack bridging	≥ 0.75 mm

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EN 1504-2
AQUAFIN-2K

Surface protection product – Coating
Principle 1.3(C)

Capillary water absorption and water permeability	w < 0.1 kg/m² × h$^{0.5}$
Water vapour permeability	Class I
CO_2 permeability	SD value > 50 m
Tensile adhesion strength by pull-off test	≥ 0.8 N/mm²
Reaction to fire	Class E

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P-2005-4-1391
P-2002-4-1023/02B

KIWA MPA Bautest GmbH

Properties:

- Seamless and jointless, flexible, crack-bridging waterproof membrane
- Suitable for all sound, load-bearing conventional substrates used in construction
- Hydraulic cure
- Simple effective application
- Can be applied by brush, trowel or with suitable spray equipment
- Bonds to damp substrates without priming
- Vapour permeable. Resistant to frost, UV and ageing
- Water impermeable
- Resistant against liquid manure
- Resistant to de-icing salts

Areas of application:

For the effective and assured waterproofing of ground covered building sections e.g. concrete, masonry work etc. against ground moisture, water not under hydrostatic pressure and water under hydrostatic pressure (with suitable construction) as well as for horizontal waterproofing within and beneath masonry work. It is furthermore suited for waterproofing planted concrete cold roofs above underground garages, pre-fabricated garages, containers, service water containers, effluent containers and pipework as well as effluent sludge containers.

When using in containers or when exposed to soft water with a hardness < 30 mg/l then it is imperative that the water is analysed.

Waterproofing combined with tiled finishes:

For the effective and assured waterproofing in combination with tiled finishes when longer term or frequent impermeability to water is required e.g. in private bathrooms and kitchens, private and public sanitary areas as well as balconies and terraces, swimming pools and pool surrounds. Reinforce the elastic surface membrane at wall/floor junctions by incorporating ASO-Joint-Tape-2000 or ASO-Joint-Tape-2000-S, dependent on the type of wet duty exposure.

Technical Data:

	AQUAFIN-1K	UNIFLEX- B
Basis:	Sand/cement	Polymer dispersion
Mixing ratio:	3 parts by weight	1 part by weight
Packaging:	25 kg bag	8.33 kg bucket
	6 kg bag	2 kg bucket
Colour:	grey	white

Combined product

Density of mixed mortar:	approx. 1.6 g/cm³
Pot life *):	approx. 60 min.
Substrate / application temp:	+5° C to +35° C
Tensile adhesion strength:	> 0.5 N/mm² after 28 days to DIN EN 1542
Tensile strength:	> 0.4 N/mm² at +23° C to DIN EN 53504
Elongation at break:	> 8% at +23° C to DIN EN 53504
Crack-bridging, 0.4 mm crack maintained 24 hrs:	passed to DIN 28052-6
Impermeability to water:	7 bar following DIN 1048
Water vapour resistance factor μ with a 2 mm dry film thickness:	approx. 1,000
Sd value with a 2 mm dry film thickness:	approx. 2 m
Sd value, CO_2:	approx. 211 m

AQUAFIN®-2K

Loading condition/material consumption/dry film thickness:

- Ground moisture/non standing seepage water: min. 3.5 kg/m² (approx. 2.0 mm)
- Water not under hydrostatic pressure: min. 3.5 kg/m² (approx. 2.0 mm)
- Standing seepage water / water under hydrostatic pressure: min. 4.5 kg/m² (approx. 2.5 mm)

It is necessary to apply 1.1 mm as a wet coat for every mm dry film.
Greater material consumption on uneven substrates has not been taken into account.

Exposure *):	Rainproof on surfaces to falls after approx. 6 hrs, avoid exposure to standing water Foot traffic after approx. 1 day Against hydrostatic pressure after approx. 7 days Ready to receive tiled finishes after approx. 1 day
Storage:	powder component – approx. 12 months when kept dry Liquid component – approx. 12 months when stored away from frost Store in the original unopened packaging and use opened packaging promptly.
Cleaning:	Clean tools with water whilst material is still wet. Dissolve dried on material with AQUAFIN-Cleanser.

*) at +23° C and 50% relative humidity.

System component	Wet duty classification		
	A, A0	B (incl. classes A, A0)	Construction waterproofing
ASO-Joint-Tape-2000	x	–	–
ASO-Joint-Tape-2000-S	x	x	x
ASO-Joint-Tape-2000-corners, (90°, internal/external)	x	–	–
ASO-Joint-Tape-2000-S-corners, (90°, internal/external)	x	x	x
ASO-Joint-Tape-2000-T-pieces, cross pieces	x	x	x
ASO-Joint-Sleeve-Floor/Wall	x	x	x
UNIFIX-S3	x	x	–
UNIFIX-2K	x	x	–
UNIFIX-2K/6	x	x	–
LIGHFLEX	x	x	–
MONOFLEX-XL	x	x	–
ASODUR-EK98-Floor/Wall	x	x	–
ASODUR-Design	x	x	–
SOLOFLEX	x	x	–
AK7P	x	x	–
CRISTALLIT-flex	x	–	–
SOLOFLEX-white modified with UNIFLEX-B	x	x	–
CRISTALLIT-MULTI-flex	x	x	–
UNIFIX-S3-FAST	x	–	–
SOLOFLEX-FAST	x	–	–

Substrate preparation:
The substrate must be load bearing, largely flat with an open pored texture and a closed surface finish. It must be free from gravel pockets, cavities, gaping cracks and ridges, dust and free from adhesion inhibiting substances such as e.g. oil, paint, laitance and loose areas.

AQUAFIN®-2K

Substrates which are suitable are tight jointed concrete, render PII and PIII, moisture resistant plasterboard, gypsum-fibre boards, cement-fibre boards, flush pointed masonry work, cement-based screeds, poured asphalt of hardness class IC 10. The building material used must be suitable for and resistant to the service conditions. Smooth out open textured substrates such as pre-cast concrete blocks and dense concrete blocks and uneven masonry work, with a cement-based mortar.
Penetrations should be planned with thin-bed flanges of a minimum 5 cm circumferential width and composed of a material which can be bonded such as e.g. stainless steel, gun metal, PVC-U. With narrow flange widths (> 30 mm < 50 mm) we recommend bonding a waterproof gasket at the flange transition with ASODUR-EK98 wall.
AQUAFIN-2K can be used as an adhesion promoter over old, well bonded bitumen-based waterproof membranes. The waterproof membrane should be treated with a scratch coat and once fully dried, overcoated with two layers of a high build bitumen waterproof membrane at a thickness appropriate to the wet duty exposure demands.
Eliminate moisture penetration from the rear or localised moisture penetration. We recommend in all cases where there is moisture penetration from the rear that a pre-waterproof coating of AQUAFIN-1K is applied to prevent pressure from the substrate. Dependent on the wet duty exposure it may be necessary to apply one or more coats beforehand. Consumption where there is ground moisture would be a minimum of 1.75 kg/m² and where there is standing seepage water it would be a minimum 3.5 kg/m² of AQUAFIN-1K. With concrete areas, negative moisture exposure can be eliminated with INDUFLOOR-IB1240 or INDUFLOOR-IB1245. In this case a consumption of 600 – 1,000 g/m² will be necessary.

Product application:
Prepare the substrate appropriate to its requirements and the particular wet duty service conditions. As necessary, roughen edge detailing, thin-bed flanges and degrease with acetone.
Place the liquid component, UNIFLEX-B, into a clean mixing bucket and stir in the powder until a homogenous, lump free mix is achieved. A mixing time of approx. 2-3 minutes is necessary when mixing with power tools (approx. 500-700 rpm). In order to achieve a workable consistency up to a maximum of 5% clean water (=1.67 litres / 33.3 kg) can be added, dependent on the weather, method of application and substrate absorption.
Pre-wet the substrate so that it is matt damp at the time the AQUAFIN-2K is applied. Prime very porous and slighty sanded substrates with ASO-Unigrund-GE or ASO-Unigrund-K. Allow the primer to dry before successive work steps.
Apply a minimum of two coats of AQUAFIN-2K by brush or trowel. Only apply the second and successive coats once the one beneath will not be damaged by foot traffic or during application (approx. 4-6 hours at +23° C/50% RH). An even thickness is achieved by using a 4 to 6 mm notched trowel followed by smoothing flat. Avoid applying thicknesses greater than 2 kg/m² as a single coat as there is a risk of cracks appearing in the waterproof layer due to the high binder content.
Alternatively AQUAFIN-2K can be spray applied with suitable equipment such as e.g. HighPump M8 (Peristaltic pump), HighPump Small or HighPump Pictor (screw feed pump). Information on the above can be obtained from HTG HIGH TECH Germany, GmbH, Berlin – www.hightechspray.de.
To form waterproof movement and connecting joints, incorporate the appropriate waterproof tape as described in the system components section. Use the pre-formed pieces for corners, penetrations, cross over points – ASO-Joint-Tape-2000-S corners (90° internal/external), ASO-Joint-Tape-2000-S T pieces, ASO-Joint-Tape-2000-crosses and ASO-Waterproof gaskets. Using a 4-6 mm notched trowel apply AQUAFIN-2K to both sides of the joint to be abridged to a width 2 cm wider than the waterproof tape. Lay the ASO-Joint-Tape-2000/-S into the wet coating and then carefully press into the waterproof membrane with a steel trowel or pressure roller ensuring there are no voids or folds. Ensure that as far as possible there is full coverage and a solid bed. Affix the ASO-Joint-Tape-2000/-S in such a way as to avoid water getting behind. Lay ASO-Joint-Tape-2000/-S in a 'U' shape

over movement joints. Overlap waterproof tape joints by a minimum of 5 to 10 cm and bond, fully bedded and without folds, with AQUAFIN-2K, overcoat and seamlessly blend in with the surface waterproofing. When using pre-formed pieces follow the same installation methods.
When installing tiles, use an appropriate tile adhesive, e. g. MONOFLEX-XL, ASODUR-EK-98-floor/wall or one of UNIFIX series. At the time the tiles are to be installed, the waterproof membrane must be fully hardened.
As an alternative to waterproof tapes (production of a coved fillet): pre-slurry the base slab/wall transition with AQUAFIN-1K. Construct a coved fillet, of min. side length of approx. 4 cm, onto the wet slurry coat with ASOCRET-M30. Once fully cured proceed to waterproof with AQUAFIN-2K.

Drainage and protection boards in building sections covered with earth:
Protect waterproof membranes from weathering and mechanical damage through suitable protective measures. Only install protective layers once the membrane has fully dried, suitable protective and drainage boards can be fixed on dabs with COMBIDIC-1K with perimeter insulation being fully bedded with tight joints using COMBIDIC-2K.

Important advice:
- Protect areas not being treated from AQUAFIN-2K. Avoid the surface of AQUAFIN-2K from dropping below the dew point (condensation formation).
- With high temperatures, there is the possibility of a slightly tacky surface due to the high polymer content. If this occurs, we recommend post treating with water in order to ensure full hydration.
- Avoid any point or linear loading to the surface of AQUAFIN-2K.
- In rooms with high humidity and/or inadequate ventilation (e.g. in water containers), an extended drying time is to be expected. Where there is risk of dropping below the dew point (condensation) install a dehumidifier until the mortar has cured. Direct heat sources or uncontrolled blown warm air is not permitted.
- In strong sunshine, work in the shade against the direction of the sun
- During the curing phase, do not expose to water. Water penetrating from the rear may be lead to delamination in frost,
- AQUAFIN-2K may be rendered over (splatterdash coat modified with ASOPLAST-MZ) and also painted with vapour permeable, solvent-free dispersions or dispersion-silicate paints (not pure silicate paints).
- Exclude direct contact with metals such as copper, zinc and aluminium by sealing with a primer. This can be achieved with two coats of INDUFLOOR-IB1225. Clean the metal with acetone and then thoroughly coat with the primer. Once this coat has sufficiently reacted so that it can longer be moved (approx. 3-6 hours), brush on a second coat and broadcast with quartz sand of grain size 0.2–0.7 mm. Consumption approx. 800–1,000 g/m² INDUFLOOR-IB1225.
- To waterproof PVC, gun metal or stainless steel flanges, abrade the flange, degrease with acetone, apply AQUAFIN-2K and bed in the ASO-waterproof gasket or, where necessary the ASO-pipe gasket, and incorporate seamlessly into the surface waterproof coating.
- Where there are increased chlorine or ozone concentrations in the water, there is a possibility of fading. For optical reasons it may be necessary to apply a coloured coating.
- Do not apply solvent based products to AQUAFIN-2K.
- Observe current relevant regulatory works.

Please observe a valid EU Health & Safety data sheet.
GISCODE: ZP1 (AQUAFIN-1K)
GISCODE: D1 (UNIFLEX-B)