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SCHOMBURG

Technical Data Sheet

AQUAFIN®-RS300

Rapid hybrid waterproofing

Art.-No 2 04208

CE

SCHOMBURG GmbH & Co. KG
Aquafinstraße 2 – 8
D-32760 Detmold
14
2 04208

EN 14891
AQUAFIN-RS300
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 adhesion strength	
after water contact:	≥ 0.5 N/mm²
after heat aging:	≥ 0.5 N/mm²
after freeze/thaw cycles:	≥ 0.5 N/mm²
after contact with lime water:	≥ 0.5 N/mm²
Water impermability:	no water penetration
Crack bridging:	≥ 0.75 mm

FAST TECHNOLOGY

GEV-EMICODE EC 1 PLUS very low emission

SCHOMBURG GmbH & Co. KG Detmold
P 11140-2 / 17-492
P 11140-5 / 18-549
KIWA GmbH Polymer Institut

SCHOMBURG GmbH & Co. KG Detmold
P 1200/563/17 MPA-BS
MPA Braunschweig

SCHOMBURG GmbH & Co. KG Detmold
P-SAC 02/5.1/16.237-2
MFPA Leipzig

- Seamless and joint free construction waterproofing and waterproofing beneath tiles
- Multi-functional
- Highly flexible crack bridging
- Self cross-linking hydraulic cure
- Rapid reactive through drying
- After 3 hours resistant to rain and foot traffic and ready for overcoating
- Vapour permeable, resistant to frost, UV and ageing
- Sulphate resistant
- Resistant to de-icing salts
- Can be brushed, trowelled or sprayed with suitable equipment
- Bonds without priming to matt-damp substrates

- Very low emission EC1 plus in accordance with GEV-EMICODE
- Waterproofing in accordance with DIN 18533 and DIN 18535
- Bonded waterproofing in accordance with DIN 18531, DIN 18534, DIN 18535, DIN EN 14891
- CM O1 P in accordance with DIN EN 14891
- Proof of use against concrete-damaging water in accordance with DIN 4030
- Proof of use against negative pressure water
- Proof of use of transition to water-impermeable building components

Areas of application:

- Waterproofing in direct ground, plinth waterproofing and transverse waterproofing in and below walls in accordance with DIN 18533 for water impact classes W1-E, W1.2-E and W4-E.
- Subsequent waterproofing in accordance with WTA Leaflet 4-6 against soil moisture, non pressure water and pressure water (with suitable construction).
- Bonded waterproofing for water impact classes W0-I to W3-I, without chemical influence in accordance with DIN 18534.
- In exterior area as waterproofing on balconies, loggias, etc. in accordance with DIN 18531.
- Waterproofing of containers and tanks up to water impact class W2-B in accordance with DIN 18535, up to 6 m.
- AQUAFIN-RS300 is very low emission in accordance with GEVEMICODE, which normally results in positive evaluations within the scope of building certification systems in accordance with DGNB, LEED, BREEAM, HQE. Maximum quality level 4, lines 7 and 8 in accordance with DGNB criteria "ENV 1.2 Risks to the local environment".

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Structural waterproofing:

- For the waterproofing in direct ground of walls and substrates of new buildings and existing buildings on building components made of concrete or masonry work
- Waterproofing against internal pressure water from container constructions (e.g. swimming pools, service water tanks, waste water tanks)
- Horizontal waterproofing in and under walls against capillary rising water
- Waterproofing of transitions to floor slabs and concrete elements with high water penetration resistance (waterproof concrete) and plinth waterproofing.
- Suitable for the bonding of protective or perimeter insulation
- Suitable for application on old, firmly adhering bitumen substrates

When applied in containers or exposed to soft water with a hardness of < 30 mg CaO/l, an analysis of the water is a fundamental requirement. Assessment of the degree of attack is carried out to DIN 4030.
AQUAFIN-RS300 is resistant up to the degree of attack "strong attack" (exposure class XA2).

Bonded waterproof membrane with tiles:
For the safe and economical waterproofing beneath tiles, where water impermeability to longer term exposure or constant exposure is required, e.g. in bathrooms and kitchens in living areas, private and public washrooms as well as on balconies and terraces, swimming pools and pool surrounds.
At the wall/floor junction, reinforce the surface applied membrane by incorporating ASO-Joint-Tape-2000 or ASO-Joint-Tape-2000-S, dependent on the wet duty exposure class. AQUAFIN-RS300 is suitable for use in wet duty exposure classes A and B in accordance with DIN 18195, part 7 and wet duty exposure classes A0 and B0 in accordance with the ZDB data sheet (*1). The waterproof performance as installed on site has been tested including ASO-Joint-Tape systems in accordance with the test principles for mineral based waterproofing slurries (MDS) as well as waterproofing together with tile and slab finishes (AIV) up to a 15 m column of water.

Technical Data:

	Liquid component	Powder component
Basis:	polymer dispersion	special cement, functional fillers
Mixing ratio:	1 part by weight	1 part by weight
Packaging:	36 kg unit	
	18 kg bucket (mixing bucket not supplied)	18 kg bag
	20 kg combined product	
	10 kg bucket	2 x 5 kg bag
	10 kg combined product	
	5 kg bucket	5 kg bag
Colour:	white	grey

Storage:	Liquid component: frost free, 9 months in the original unopened container. Use opened containers promptly
	Powder component: cool and dry, 9 months
	Combined product
Density:	approx. 1.3 kg/dm³
Grain size:	< 1.0 mm
Pot life *):	approx. 45 minutes
Overcoat after*:	approx. 2–4 hrs
Substrate / application temp:	+5° C to +30° C
Tensile adhesion strength to DIN EN 1542:	> 1.0 N/mm²
Crack-bridging, to DIN 28052-6 (PG MDS , AIV):	> 0.4 mm

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Crack bridging ability in accordance with DIN EN 14891 at normal and low temperatures:	≥ 0.75 mm
Water-tightness when installed in accordance with PG MDS and AIV:	1.5 bar
Impermeability to negative hydrostatic pressure:	1.5 bar
Permissible tank depth in accordance with DIN 18535:	6 m
Water vapour resistance factor μ:	approx. 1100
Sd value at 2 mm dry film thickness:	approx. 2.2 m

Material consumption:
Full service conditions*):

- Rainproof on inclined surfaces after approx. 3 hours, standing water must be avoided
- Watertight, (1 bar) after approx. 24 h
- Can be tiled after approx. 3 hours

*) at + 23° C and 50 % rel. humidity. The stated data may be extended or shortened as a consequence of weather conditions. Higher temperatures and lower humidity shorten the drying time, lower temperatures and higher humidity extend the drying time.

Cleaning: Clean tools in their fresh state with water, dissolve dried material with ASO-R001 and wash off.

Exposure	Dry film thickness, mm	Wet film thickness, mm	Consumption, kg/m²
Basement walls and floor slabs	> 2.0	approx. 2.2	3.0
Plinth waterproofing	> 2.0	approx. 2.2	3.0
Transverse waterproofing	> 2.0	approx. 2.2	3.0

In accordance with WTA Leaflet 4-6 "Subsequent waterproofing of building components in direct ground"			
Soil moisture/non-accumulating seepage water	> 2.0	approx. 2.2	3.0
Non pressure water	> 2.0	approx. 2.2	3.0
Standing seepage water/pressure water	> 3.0	approx. 3.3	4.5

Waterproofing of containers and tanks	> 2.0	approx. 2.2	3.0
Bonded with tiles/boards	> 2.0	approx. 2.2	3.0
Levelling layers	1 mm	1.1 mm	1.5
Possible additional consumption in case of uneven substrates and artisanal variations must be considered.			

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System component	Wear classes in accordance with testing principles		
	In accordance with PG-AIV-F		In accordance with PG-MDS
	A, A0, B0	B	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
ADF-Rohrmanschette (ADF-Pipe-Gasket)	-	-	x
ADF-Dehnfugenband (Expansion-Joint-Tape)	-	-	x
UNIFIX-S3	x	x	–
MONOFLEX-white	x	x	–
MONOFLEX-white 3:1 with UNIFLEX-F	x	x	–
LIGHTFLEX	x	x	–
MONOFLEX	x	x	–
MONOFLEX-XL	x	x	–
MONOFLEX-fast	x	–	–
MONOFLEX-FB	x	x	–
ASODUR-EK98-Floor/Wall	x	x	–
ASODUR-DESIGN	x	x	–
SOLOFLEX	x	x	–
AK7P	x	x	–
CRISTALLIT-FLEX	x	–	–
CRISTALLIT-MULTI-FLEX	x	x	–
UNIFIX-S3-fast	x	–	–

Substrate preparation:

The substrate must be load-bearing, largely flat and fully pointed, open pored and with a compact surface. It must be free from gravel pockets, cavities, gaping cracks and ridges, dust and be free from adhesion inhibiting substances such as oil, paint, laitance and loose parts. When using in combination with tiled finishes, DIN 18157, part 1 is decisive regarding substrate assessment.

Suitable substrates are concrete with a dense microstructure, renders P II and III, fully pointed masonry work, cement-based screed, poured asphalt of hardness class IC10, moisture resistant plasterboard and gypsum fibre boards, heated and unheated constructions.

AQUAFIN-RS300 can be used for restoring old, well bonded bitumen containing substrates. Waterproofing is to be performed with a scratch coat and after complete drying, overcoated with two layers at a thickness commensurate with the exposure conditions. In accordance with the WTA data sheets 4–6, the foot of the perpendicular as well as the transition to the splash zone is to firstly be taken back to the mineral-based substrate.
Corners and edges, e.g. on base slabs etc., are to be broken or chamfered. Firstly even up depressions > 5 mm as well as mortar pockets, open masonry joints, voids, substrates with large pores or uneven masonry work with a suitable cement-based mortar e.g. ASOCRET-M30 or SOLOCRET-15.
Alternatively evening up or filling can be carried out with a mixture of AQUAFIN- RS300/0.1 – 0.35 mm quartz sand (approx. 5 kg per 20 kg AQUAFIN-RS300).

Pre-wet substrates so that they are matt damp at the time of application. Prime very absorbent substrates as well as aerated concrete or gypsum containing substrates with ASO-Unigrund-GE or ASO-Unigrund-K to improve adhesion.

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Penetrations should be supplied with a thin-bed flange at a minimum continuous width of 5 cm and consist of a suitable material to receive a bond e.g. stainless steel, red brass, PVC-U. When the flange width is too small (> 30 mm < 50 mm), we recommend bonding the ASO-Joint-Sleeve – in the transition zone of the flange – with ASOFLEX-AKB-Wall.

Exclude rear moisture penetration and point loading of water from the negative side. When waterproofing where there is rear moisture penetration, we recommend a preliminary waterproofing with AQUAFIN-1K in order to prevent pressure. Dependent on the water forces exerted, carry out one or several layers of preliminary waterproofing. The consumption for ground moisture exposure conditions is min. 1.75 kg/m^2 and for standing seepage water min. 3.5 kg/m2 of AQUAFIN-1K. For concrete structures, moisture stresses from the negative side can also be excluded with ASODUR-SG2/-SG2-thix. When using ASODUR-SG2/-SG2-thix a consumption of 600 – 1,000 g/m^2 is required.

Product application:
Place approx. 50 – 60 % of the liquid component into a clean mixing bucket and blend with the powder component to an homogenous lump free mass. Then add the remaining liquid component and adequately blend. A mix time of approx. 2 – 3 minutes is required using a mechanical mixer (approx. 500 – 700 rpm). After a waiting time of approx. 5 minutes, thoroughly homogenize the mix once again.

AQUAFIN-RS300 is mixed in the following mix ratio, acc. to parts by weight:
1 part powder component: 1 part dispersion component

Due to project or application conditions, e.g. application in the screen or spray technique, water addition of up to a maximum of 1.5 % (0.15 l/10 kg) AQUAFIN-RS300/M-PLUS is permitted. Water is added after mixing the powder and liquid component.
Apply AQUAFIN-RS300 by brush or trowel in a minimum of two pinhole free coats. The second and further coats can only be applied when the first coat will not become damaged by trafficking or further coating (approx. 2 – 4 hrs dependent on ambient conditions). An even thickness, dependent on the exposure conditions, is achieved e.g. by using a thickness depth trowel or a 4 – 6 mm notched trowel and subsequently smoothing. Enough material must be processed so that the required dry film thickness corresponds to the desired water impact class. An application thickness of more than 2 kg/m^2 in one application step can lead to cracking and must be avoided.

For application in the spray technique with suitable spray equipment, e.g. HighPump M8 (peristaltic pump), HighPump Small or HighPump Pictor (screw pump), we recommend a nozzle size of 4.5 to 6.0 mm. For more information, contact Dittmann Sanierungstechnik GmbH, Hohen Neuendorf, www.saniertechnik.de.

For forming water impermeable movement and connecting joints, use the ASO-Joint-Tape system components appropriate to the particular exposure classes (see table of system components on page 4).

Bond ASO joint tape 2000/-S or ASO joint tape 2000/-S (internal/external corners) in the corner areas, AQUAFIN-RS300 in the transition between wall and floor, as well as over connecting joints. AQUAFIN-RS300 is applied with a 4-6 mm notched trowel to both sides of the joints to be bridged at least 2 cm wider than the joint tape to be used. The joint tape is placed in the fresh layer and then meticulously pressed in without voids or wrinkles. Bonding must be carried out in such a way that water cannot migrate around the back. The joint tape to be used should be inserted in a loop over movement joints. Joint tape edges must be bonded overlapping by at least 5-10 cm with AQUAFIN-RS300, free of wrinkles and covering the whole area. Finally, the bonded joint

tapes must be coated over with AQUAFIN-RS300 and seamlessly integrated into the waterproofing. Proceed in the same way when inserting ASO joint tape pre-formed pieces.

Waterproofing bonded with tiles and boards (AIV-F):
Floor drains and intersections in the tank area must be provided with suitable flange elements.
Apply AQUAFIN-RS300 fully to the thin-bed flange and overlap area. Embed the ASO sealing sleeve base into the fresh layer without voids or wrinkles and finally integrate it into the waterproofing by complete overcoating. Alternatively, in wear class A (PG-AIV-F), sealing can be made to the pipe penetration without flange. Depending on the nominal diameter, ASO sealing sleeve bottom or ASO sealing sleeve wall can be used for sealing pipe penetrations
in wear class A wall areas. Roughen, clean and degrease the pipe penetration with a suitable cleaner, prime if necessary.
Apply a full coat of AQUAFIN-RS300 and then insert the ASO sealing sleeve. The hole diameter of the sealing sleeve must be significantly smaller than the pipe diameter so that the "memory effect" of the ASO sealing sleeve causes it to be pressed against the pipe penetration.
The joint tape technology must always be connected as overlapping to the waterproofing. Joints are always applied with an overlap of 5 cm to 10 cm.
Tiles or boards are laid with one of the tile adhesives listed in the system components section. The waterproofing layer must be totally hardened at the time of the laying work.

The following points must also be observed when waterproofing structures in accordance with DIN 18533 and the WTA leaflet "Subsequent waterproofing of building components in direct ground":
Pre-coat in the base slab/wall transition with ASOCRET-M30 in a consistency that is able to screen and, while still wet, install a sealing groove of ASOCRET-M30 with an edge height of at least approx. 4 cm. Alternatively, AQUAFIN-1K can also be applied as a bond coat depending on the specific object. After drying, carry out the waterproofing with AQUAFIN-RS300.

Pipe penetrations:
Depending on the nominal diameter, the ASO sealing sleeve bottom or ADF sealing sleeve wall or ADF pipe sleeve are used for waterproofing pipe penetrations in water wear class W1.1-E and W1.2-E, and the waterproofing
is carried out at least 5 cm onto the pipe penetration.
When using suitable flange elements, apply AQUAFIN-RS300 fully to the thin-bed flange and overlap area. Embed the ASO sealing sleeve base into the fresh layer without voids or wrinkles and finally integrate it into the waterproofing by complete overcoating. In water wear class W 2.1-E, suitable loose fixed flange constructions or tested house entry systems must be used.

Transitions in water impermeable concrete structures to a submersion depth of 3 m (max. opening width 1.0 mm):
Waterproofing is carried out on the surface, cleaned free of unevenness and cement slurries, to a minimum width of 15 cm either side of the joint. Carry out the waterproofing to the wall/floor junction approx. 15 cm down the face of the water impermeable foundation slab.
Always apply 2 coats. Insert an ASO-Verstärkungseinlage (reinforcing-fleece) into the first coat. Subsequently achieve an even thickness by using a 4 to 6 mm notched trowel and then smoothing.
Consumption is approx. 6 kg/m² for a dry film thickness of approx. 4.0 mm.

Drainage and protection boards with structures in the ground:
Protect waterproofing from weathering and mechanical damage through suitable protective measures in accordance with DIN 18195 part 10. Only install protective layers once the coating is fully dry. Suitable protection and drainage boards can be fixed on battens

of COMBIDIC-1K and perimeter insulation is to be butt jointed and fully bonded with COMBIDIC-2K-CLASSIC or COMBIDIC-2K-PREMIUM.

Alternatively the protective layers can be fully bonded with a blend of AQUAFIN-RS300/0.1 – 0.35 mm quartz sand (approx. 5 kg per 20 kg AQUAFIN-RS300) and a suitable notched trowel and the buttering-floating method. Incorporate drainage in accordance with DIN 4095 specifications.

Advice:

- Protect areas not being treated during the application of AQUAFIN-RS300.
- During the curing process the waterproof membrane cannot come into contact with water. Water penetrating from the rear can lead to delamination in frost.
- When there is strong sunshine, work against the direction of the sun working in the shaded areas.
- In rooms with high humidity and/or inadequate ventilation (e.g. water containers) it may drop below the dew point on the surface (condensation formation). This is to be prevented with suitable measures such as e.g. dehumidifiers. Direct heating or uncontrolled blown warm air is not permitted.
- As a surface protection AQUAFIN-RS300 may not be subjected to point or linear loading.
- Renders/plasters may be applied over AQUAFIN-RS300 as can be paints, which must be vapour permeable, solvent free dispersions or silicate dispersion paints (not pure silicate paints).
- Direct contact with metals such as copper, zinc and aluminium is to be prevented by a pore sealing primer. A pore sealing primer can be produced using two coats of ASODUR-GBM. Liberally apply the first coat to the degreased and cleaned substrate.
  Once this coat has reacted sufficiently so that it can no longer be disturbed (approx. 3-6 hours), brush 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 waterproof PVC, red brass and stainless steel flanges, abrade the flange, clean, degrease, apply AQUAFIN-RS300 and the ASO-Joint-Gasket or alternatively bed in the ASO-Pipe-Gasket without voids or folds and seamlessly connect with the surface applied membrane.
- Observe the relevant current regulations!

Please observe the current valid EU Safety date sheet!
GISCODE: ZP1 (component A)
D1 (component B)