AQUAFIN®-RB400

Rapid cementitious waterproofing

Material number	Package type	Colour	Units / pallet	Pc/package
204218006	32.5 kg, set (2 component)	Grey	48,000	1,000
	A-component: 19.5 kg, bag		48,000	1,000
	B-component: 13 kg, tub		24,000	1,000
204218007	24 kg, combination container	Grey	18,000	1,000

Fields of application / waterproofing

- For waterproofing building components in direct ground contact with ground moisture and non pressure water (W1.1-E, W1.2-E in accordance with DIN 18533)
- for waterproofing splash water and ground moisture at the wall base and capillary water in and under walls (W4-E in accordance with DIN 18533)
- for waterproofing pressing water (W2.1-E in accordance with DIN 18533)
- As retroactive building waterproofing in accordance with WTA datasheet 4-6
- for waterproofing containers and basins (W1-B, W2-B in accordance with DIN18535)
- For waterproofing window and door elements to floor level
- Suitable for old, firmly adhering bituminous coatings

Product features

- Flexible polymer modified thick layer coating (FPD)
- Cementitious waterproofing slurry (MDS)
- Bitumen-free
- Rapid reactive drying
- Improved crack bridging even at low temperatures (-5 °C)
- Very low emission - EMICODE® EC 1^{PLUS}

Advantages

- Sulphate resistant
- Frost, de-icing salt, UV and age resistant
- Radon tight
- Good crack bridging

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Technical Data

Material properties

Product components	2 component system
Base material	Polymer-mortar combination
Consistency	Filler consistency
Density, ready to use product (ISO 1183-1)	approx. 1.1 kg/dm³
Crack bridging PG MDS / FPD	to 2 mm
Crack bridging in accordance with ASTM C836	> 3 mm
Crack bridging ability DIN EN 14891 (at normal and low temperatures)	> 0.75 mm
Watertightness (PG MDS/FPD)	up to 5.0 bar with a dry film thickness of 3.0 mm
Watertightness against negative pressing water (WTA-datasheet 4-6)	to 0,75 bar
Watertightness (PG FBB)	1.0 mm (joint width)
Tensile adhesion strength DIN EN 1542	≥ 0.5 N/mm²
Water vapour diffusion coefficient µ	< 670
CO2 diffusion coefficient, µ	> 100000
CO2 Sd value (3.5 mm dry film thickness)	> 200 m
Rainproof	On inclined surfaces after approx. 3 hours; standing water must be avoided
Sealing against pressing water after (1 bar)	approx. 16 hours
Exposure classes (DIN EN 1992-1-1)	XA2
Classification of the reaction to fire in accordance with DIN EN 13501-1	E

Mixing

Mix ratio, component A	1.5 weight fractions (powder)
Mix ratio, component B	1 weight fraction (fluid)
Mixing time	approx. 3 minutes
Maturing time	approx. 5 minutes
Water addition, maximum	Max. 0.24 l per 24 kg

Application

Substrate/application temperature	approx. 5 - 30 °C
Pot life	approx. 45 minutes
Foot traffic after	approx. 24 hours
Overcoat after	approx. 3 hours
Withstands pressurised water after	≥ 1 days

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Material rate

Material consumption rate according to the area of application

Water exposure class		Dry film thickness, mm	Wet film thickness, mm	Consumption, kg/m²
W1.1-E/W1.2-E	Ground moisture and non-pressurised water (concrete components)	≥ 2,0	≥ 2,2	≥ 2,4
W1.1-E/W1.2-E*	Ground moisture and non-pressurised water (masonry work)	≥ 3,0	≥ 3,3	≥ 3,6
W2.1-E*	Moderate influence from pressure water <3 m	≥ 4,0	≥ 4,4	≥ 4,8
W3-E*	Floor slabs covered with soil	≥ 3,0	≥ 3,3	≥ 3,6
W 4-E	Splash water at the wall base and capillary water in and under walls	≥ 2,0	≥ 2,2	≥ 2,4
Container waterproofing				
W2-B	Water container fill level <10 m, crack width <0,2 mm	≥ 2,0	≥ 2,2	≥ 2,4
W2-B*	Water container fill level <10 m, crack width <1,0 mm	≥ 4,0	≥ 4,4	≥ 4,8
Application in accordance with WTA Leaflet 4-6 "Subsequent waterproofing of building components in direct ground" (renovation):**				
Ground moisture / non-accumulated seepage water		≥ 2,0	≥ 2,2	≥ 2,4
non-pressurised water on slab surfaces, moderate exposure		≥ 3,0	≥ 3,3	≥ 3,6
Standing seepage water / pressure water		≥ 3,0	≥ 3,3	≥ 3,6
Joint waterproofing on transitions of concrete components ***:				
without		≥ 4,0	≥ 4,4	≥ 4,8
ASO-Dichtband-2000-S		≥ 2,5	≥ 2,8	≥ 3,0
ADF-Dehnfugenband		≥ 2,5	≥ 2,8	≥ 3,0

Remarks:* Special agreement necessary. The specifications in the relevant general building authority test certificates for MDS (cementitious waterproofing slurry) and FPD (flexible polymer-modified test certificates) must be observed.** The WTA leaflet is currently being revised in regards to the water exposure classes of DIN 18533.*** The application applies to construction joints (horizontal and vertical) as well as intersections for waterproof and other concrete components.

Processing equipment

Aids/tools

- Stirrer (approx. 500-700 rpm)
- Suitable mixing paddle
- Trowel
- Serrated or layer-thickness trowel
- Flat trowel
- Brush
- Spray equipment

Manual processing

- Can be trowelled off
- Applicable with a brush

Machine application

AQUAFIN®-RB400 can be mechanically applied. For precise information, see the additional Technical Information No. 43.

Suitable substrate

- All substrates in accordance with DIN 18535, DIN 18531, DIN 18533
- Old, firmly adhering bituminous substrates
- Concrete
- Masonry work
- Plasters P II and P III
- Cement-based screed (CT)

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Preparing the substrate

Requirement for substrate

1. Even
2. Free of adhesion inhibiting substances
3. Sealed in the surface
4. Pore open
5. Load-bearing
6. Extensively fully grouted

Preparing the details

1. Before any subsequent application, remove all loose or poorly bonded layers from the wall footing and the transition to the splash water plinth down to the cementitious substrate.
2. Edges are to be chamfered and corners are to be rounded.
3. Level indentations < 5 mm with ASOCRET-M30 / AQUAFIN-1K or a mixture of AQUAFIN-RB400 and quartz sand (Ø 0.1-0.35 mm) approx. 6 kg to 24 kg AQUAFIN-RB400.
4. Depressions > 5 mm and mortar pockets, plaster grooves in brickwork, open butt or bed joints, damaged areas, large pored substrates or uneven masonry work must be levelled in advance with ASOCRET-M30 (cement-based mortar).

Preparing the surface

1. Old, firmly adhering bituminous substrates must be covered with a scratch coat and overcoated after drying out completely.
2. In the case of substrates damaged by de-icing salt, the substrate must be removed down to the neutral area, e.g. by means of milling, etc.
3. On uneven substrates, pre-sealing can also take place with ASOCRET-M30.
4. Pre-moisten the dry substrate so that it is matt damp at the time of application.
5. Extremely absorbent and slightly sandy substrates must be primed with AQUAFIN-Primer.
6. Moisture penetration from the rear and intermittent moisture loading from the negative side must be avoided.
7. For waterproofing with moisture penetration from the rear, we recommend pre-sealing with AQUAFIN-1K or ASODUR-SG3-thix.

Base slab-wall transition

1. Pre-screen with AQUAFIN®-1K or ASOCRET-M30 in a consistency that is able to screen.
2. While still wet, install a sealing cove with an edge height of at least 4 cm made of ASOCRET-M30.
3. After drying, carry out the waterproofing with AQUAFIN®-RB400.

Pipe penetrations

1. In water wear class W 2.1-E, suitable loose fixed flange constructions or tested house entry systems must be used.
2. For the watertight formation of pipe penetrations, the system components of the ASO-Dichtmanschetten (Joint sealing tape sleeves) are to be used in accordance with their technical data sheets.

Application

Mixing

1. Put the liquid component into a clean mixing bucket and mix with the powder component to produce a homogeneous, lump-free mass.
2. The mixing time is ca. 3 minutes.
3. After a settling period of ca. 5 minutes, thoroughly homogenise the compound again.
4. Depending on the application technique (e.g. application by screen or spray technique), do not add more water than specified under “Technical Data > Mix > Water addition, maximum”. Water is added after mixing.

Waterproofing

1. The material rate is dependent on the required dry film thickness corresponding to the water impact class (see Material rate table).
2. Apply AQUAFIN®-RB400 in a minimum of two application steps ensuring it is free of pores.
3. An even layer thickness is achieved using a coating thickness trowel or notched trowel and then smoothing.
4. The second application (and following) step can take place when the first application step can no longer be damaged by reworking. (see “Technical Data > Processing > Second application step after waiting time”)

Movement and connecting joints

For watertight formation of moving and connecting joints, use ASO-Dichtband system components in accordance with their technical data sheets.

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Transitions of watertight concrete building components with an immersion depth of up to 3 m (max. opening width 1.0 mm)

1. Apply the waterproofing to the prepared substrate to a minimum of 15 cm on both sides of the joint.
2. Guide the waterproofing down approx. 15 cm onto the front surface of the watertight floor slab in the wall/floor transition.
3. Processing takes place in 2 application steps. Total dry film thickness: 4 mm.
4. An even layer thickness is achieved using a 6 to 8 mm notched trowel and then smoothing.
5. Alternatively, the transitions can also be sealed using the ASO-Dichtband system.
6. Install the selected joint sealing tape in accordance with the technical data sheet.
7. Finally, overcoat the bonded joint sealing tapes with the waterproofing at least 15 cm on both sides of the joint. Minimum dry film thickness: 2.5 mm.

Integration of floor-depth elements or window elements

1. Wooden substrates must be sanded if necessary.
2. Plastic elements must be degreased.
3. The adjacent substrates must be cleaned of ridges and dirt beforehand.
4. Fix the ASO-Anschlussdichtband to the element to be installed using self-adhesive strips.
5. Fold over the joint sealing tape.
6. Apply AQUAFIN-RB400 on the window element, substrate and masonry work.
7. Press on the joint sealing tape with no wrinkles and no voids.
8. Protect the corner areas using ASO-Dichtband-2000-S-Ecken.
9. Then fully overcoat the entire area with two layers of AQUAFIN-RB400.

Curing and protection

The material cures very well in areas with high humidity. In relatively dry areas, keep the coating damp for at least 3 days. In poorly ventilated rooms and deep pits, adequate ventilation should be provided for 24 hours.

Cleaning tools

Clean tools immediately after use with suitable solvent.

Drainage and protection boards for building components in direct contact with the ground

- The waterproofing must be protected against weathering influences and mechanical damage using suitable protective measures in accordance with DIN 18533.
- For the bonding of suitable protection/drainage boards and perimeter insulation boards, AQUAFIN-RB400 is mixed with quartz sand 0.1-0.35 mm (approx. 6 kg per 24 kg AQUAFIN-RB400) and applied with a suitable notched trowel using the buttering-floating method. Depending on the water impact class, bonding is either spot-application or covering the whole area. Alternatively, bonding can be carried out with 2-component bituminous thick layer coating (PMBC) COMBIDIC-2K-CLASSIC or COMBIDIC-2K-PREMIUM.
- Drainage is carried out in accordance with the specifications of DIN 4095.

Storage conditions

Storage

Store in a frost-free, cool and dry place. At min. 5 - 40 °C for 12 months in the original canister. Promptly use opened container.

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Notes

- Protect surfaces that are not to be treated from the effects of AQUAFIN®-RB400!
- AQUAFIN®-RB400 as a surface coating must not be exposed to point or linear loads.
- AQUAFIN®-RB400 may be plastered and coated with vapour permeable, solvent-free dispersion facade paints or dispersion silicate paints (not pure silicate paints). Silicon resin paints and acrylate-based paints may also be used.
- On PVC, gunmetal, and stainless steel flanges, ASO®-Dichtmanschetten or alternatively ADF®-Pipe-Gasket must be installed without voids or wrinkles and integrated seamlessly into the waterproofing.
- In case of strong sunlight, work against the movement of the sun in shaded areas.
- Direct contact with metals such as copper, zinc, and aluminium must be avoided by means of a pore sealed primer. A pore-sealed primer is produced via 2 application steps using ASODUR®-GBM (see technical data sheet).
- In rooms with high humidity and/or insufficient ventilation (e.g. water containers), dropping below the dew point (condensation formation) may occur on the surface. This must be avoided by taking suitable measures such as by using condensation dryers. Direct heating or uncontrolled blowing warm air is not permitted.
- The waterproofing must not be affected by water during binding. The effect of water from behind can lead to spalling in case of frost.
- If applied in containers or in case of water loading with aggressive or soft water featuring hardness < 30mg CaO per l, a water analysis is always required. The degree of attack is evaluated in accordance with EN 1992-1-1 (Euro Code 2).

Relevant regulations

The recognised standards of construction engineering, the relevant guidelines and current regulations must be observed.

Extract of essential regulations

- DIN 18533
- DIN 18535

Observe applicable safety data sheet!

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Explanations

Conformity / Declaration / Verification

CE

SCHOMBURG GmbH & Co. KG
Aquafinstrasse 2 – 8
D-32760 Detmold
19
2 04218

DIN EN 14891
AQUAFIN-RB400
Liquid applied cement based waterproofing product for use under ceramic tiles in exterior areas
DIN 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
Release of dangerous substances	NPD

NPD = „No Performance Determined"

CE

0761

SCHOMBURG GmbH & Co. KG
Aquafinstrasse 2 – 8
D-32760 Detmold
25
204218-2

EN 1504-2
204218
Oberflächenschutzprodukt - Beschichtung
Prinzip 1.3/2.2 (C)

Kapillare Wasseraufnahme und Wasserdurchlässigkeit	$w < 0,1\ kg/m^2 \times h^{0,5}$
Wasserdampfdurchlässigkeit	Klasse I
CO_2-Durchlässigkeit	SD-Wert > 200 m
Abreißversuch zur Beurteilung der Haftfestigkeit	≥ 0,8 N/mm²
Frost-Tau-Wechselbeanspruchung mit Tausalzangriff	Bestanden
Künstliche Bewitterung	2000 h
Brandverhalten	Klasse E