



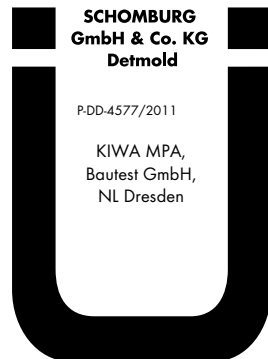
Technical Data Sheet

COMBIFLEX®-EL

Art.-No. 2 05035

Two component polymer modified bituminous coating (PMBC)

CE	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2 - 8 D-32760 Detmold 13 2 05035	
EN 15814 COMBIFLEX-EL Polymer modified bituminous coating for waterproofing structures below ground	
Waterproof performance	W2B
Crack-bridging ability	CB2
Resistance to water	passed
Flexibility at low temperatures	passed
Dimensional stability at high temperatures	passed
Reaction to fire	B2
Compressive strength	C2A
Permanence of waterproof properties and reaction to fire	fulfilled



- Cationic
- Radon barrier
- Quickly rainproof
- Cross-links through chemical reaction
- Good adhesion to matt damp and dry substrates
- Can be used without primer
- Seamless, jointless, flexible crack-bridging waterproof membrane
- Suitable for all conventional substrates
- Simple and efficient application
- Can be trowel applied
- Low consumption
- Waterproofing material to DIN 18195-2 - part 2 / DIN EN 15814
- Test certificate for "Externally situated joint waterproofing" according to building regulations list A part 2 sequential number 1.4.

Areas of application:

COMBIFLEX-EL is suitable for waterproofing ground covered building components such as e.g. cellar walls and foundations according to exposure conditions:

- Ground moisture and non-standing seepage water in accordance with DIN 18195 - part 4
- Water not under pressure - moderate exposure in accordance with DIN 18195 - part 5
- Standing seepage water in accordance with DIN 18195 - part 6

- Pressure water in accordance with DIN 18195-6 **
- Additionally suitable for applications in strip form, externally located joint waterproofing (so called zebra waterproofing).

Technical Data:

Basis:	2- component, cationic bituminous coating
Density:	approx. 0.9 kg/dm ³
Application/substrate temperature:	+5° C to +35° C
Pot life:	approx. 45 - 60 mins.
Crack-bridging capacity to DIN EN 15812:	> 2 mm (CB2)
Resistance to rain to DIN EN 15816:	< 4 hours (R2)
Watertightness (Slotted disc pressure 1 mm) to DIN EN 15820:	> 0.75 bar (W2A)
Compressive strength, 0.3 MN/m ² , to DIN EN 15815PG:	C2A
Reaction to fire to DIN EN 13501-1:	Class E

The figures are based on +23°C and 50% relative humidity. Site and weather conditions can extend or shorten the given data.

Material consumption/ dry film thickness:

- Ground moisture, non-standing seepage water: (DIN 18195-4): 3.75 l/m² = approx. 3 mm dry film thickness
- Water not under pressure - moderate exposure (DIN 18195-5): 3.75 l/m² = approx. 3 mm dry film thickness
- Standing seepage water/water under pressure ** (DIN 18195-6): 5.0 l/m² = approx. 4 mm dry film thickness

Greater material consumption due to uneven substrates has not been taken into consideration.

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Packaging: 11 and 22 l pails
Storage: frost-free, 6 months when stored in the original unopened containers. Use opened containers promptly.
Cleaning materials: Clean tools immediately with water or ASO-R001. Dried on material can only be removed with difficulty.

Substrate preparation:

The substrate must be frost free, load bearing, flat with an open-pored texture and have a closed surface. It must be free from gravel pockets, cavities, gaping cracks, ridges and be free from adhesion inhibiting substances such as dust, laitance and loose parts. Variations > 5 mm as well as mortar pockets, render grooves in brickwork, open vertical and horizontal masonry joints, voids, large pored substrates or uneven masonry is to be pre-levelled with ASOCRET-M30. Alternatively the levelling can be carried out with a scratch coat/filling coat. Edges and corners are to be rounded or with concrete components, chamfered post installation. Laitance layers at the wall/floor transition are to be removed mechanically.

Wall/floor junction, internal corners and joints:

Apply a coat of AQUAFIN-1K or ASOCRET-M30 in a slurry consistency to the properly prepared substrate and whilst still wet, build a coved fillet from ASOCRET-M30 with a min. edge length of 4 cm. To protect against moisture from the rear, overcoat the area above the base slab to a min. of 20 cm high with AQUAFIN-1K and, dependent on the exposure condition, take down over the front face by a min. of 10-15 cm. At structural movement joints the waterproof membrane is reinforced with ADF-Dehnfugenband or ASO-Joint-Tape-2000/2000-S and incorporated into the surface applied waterproof membrane.

Penetrations:

In the exposure condition of ground moisture and non-standing seepage water, penetrations are to be provided with a mineral-based coved fillet and, once dried, incorporated within the surface applied waterproof membrane. In the exposure condition standing seepage water not under pressure/water under pressure use adhesive bonded or loose/integral flanges at penetrations and incorporate within the surface applied waterproof membrane.

Splash zone / plinth area transition:

In the water splash zone, bring the waterproof membrane to a minimum of 30 cm above the ground. Once adjusted to the ground, the waterproof membrane must reach at least 15 cm above ground level. As a rule, this junction is treated with flexible waterproofing slurries, e.g. AQUAFIN-RS300, in order to achieve a substrate with bonding abilities for e.g. building skirt renders. Overlap the bituminous coating min. 10 cm over the waterproofing slurry.

Product preparation:

Thoroughly stir component A of COMBIFLEX-EL with a slowly rotating drill mixer (approx. 500-700 rpm). Then add all of component A to the powder component and blend intensely until a homogenous, lump free material is achieved. Mixing of part quantities is not possible.

Exposure conditions to DIN 18195 – part 4:

Apply COMBIFLEX-EL with a flat trowel in a minimum of 2 coats. To achieve an even thickness, ideally comb out with an appropriate sized notched trowel and then form a tight surface with the flat edge of the trowel. Always apply wet in wet. The dry film thickness must be a minimum of 3 mm. Lay the ASO-Systemvlies-02 on the fresh layer of COMBIFLEX-EL without overlapping and smooth flat with a flat trowel or roofers broom.

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Exposure conditions to DIN 18195 – part 5 (moderate exposure):

Apply COMBIDIC-EL with a flat trowel in a minimum of 2 coats. Incorporate ASO-reinforcing fabric into the wet first coat of the waterproof membrane at coves and edges. Allow to dry sufficiently before applying the next coat to avoid damaging the first coat. The dry film thickness must be a minimum of 3 mm. Lay the ASO-Systemvlies-02 on the fresh layer of COMBIFLEX-EL without overlapping and smooth flat with a flat trowel or roofers broom.

Exposure conditions to DIN 18195 – part 6:

Apply COMBIDIC-EL with a flat trowel in a minimum of 2 coats. Incorporate ASO-reinforcing fabric into the wet first coat of the waterproof membrane at coves and edges. Allow to dry sufficiently before applying the next coat to avoid damaging the first coat. The dry film thickness must be a minimum of 4 mm. Lay the ASO-Systemvlies-02 on the fresh layer of COMBIFLEX-EL without overlapping and smooth flat with a flat trowel or roofers broom.

Externally located strip form joint waterproofing of concrete elements:

When waterproofing impermeable concrete structures at construction joints and butt joints e.g. of prefabricated walls or concrete sections, follow waterproof concrete regulations. The strip form waterproofing is carried out on the cleaned surface to a minimum width of 15 cm to both sides of the joint. Application of the waterproofing membrane is carried out in two coats with a material consumption of 5.0 l/m².

Incorporate the ASO-Reinforcing-Fabric into the first coat. The second coat can follow once the first coat will no longer become damaged through overcoating. Install the ASO-Systemvlies-02 over the completed but still wet waterproofing layer. At the wall/base slab area take the waterproof membrane a minimum of 10-15 cm over the front edge of the base slab, dependent on the exposure conditions.

Assessing the waterproof membrane:

Always carry out a thickness check and document results. In exposure conditions to DIN 18195, parts 5 and 6, it is mandatory to measure and log the wet film thickness and drying. The film thickness is checked whilst wet by measuring the wet film thickness (at least 20 measurements per building project or at least 20 measurements per 100 m). Spread the measuring points out diagonally. Dependent on their presence within the structure, the frequency of measurements should be increased e.g. in areas of intersections, transitions and junctions. When installing to DIN 18195, part 6 both film thicknesses are to be checked separately. Evaluation of drying as well as the dry film thickness is carried out with a destructive reference sample using the wedge cut method. The reference sample consists of the material from the project substrate (e.g. masonry work, concrete paving slab), which will be embedded in the building pit.

Drainage and protection boards:

Waterproof membranes are to be protected from weathering and mechanical damage using suitable protective measures or layers in accordance with DIN 18195, part 10. Protective layers may not exert any point or linear loading on the waterproof membrane. Dimpled sheets without a protective layer or corrugated protective boards are therefore not suitable.

Only place protective layers once the waterproofing coat has fully dried through. Suitable protection and drainage boards can be fixed on dabs with perimeter insulation being bonded butt jointed in a full bed of COMBIDIC-2K-CLASSIC or COMBIDIC-2K-PREMIUM. Install drainage to DIN 4095.

Back-filling the building pit:

Back-filling the building pit is only carried out once the bituminous coating is fully dry and must be carried out following relevant guidelines. Place and compact the back-filling material in layers, ensuring that damage and slippage within the protective layers is prevented.

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Important Advice:

- Protect areas not being treated with COMBIFLEX-EL.
- Do not install when it is raining, where there is impending rain or where the air and substrate temperature is below +5 °C.
- Bitumen coatings cannot stand negative hydrostatic pressure. In areas where this is expected, a protective coating of AQUAFIN-1K must first be applied.
- Protect masonry work capping and open window parapets from penetrating water.
- The minimum film thickness may never fall below the prescribed value at any point!
- The required wet film thickness may not be exceeded by 100% and may not fall below the required minimum at any point.
- In accordance with recognised technical regulations undertake waterproofing measures with AQUAFIN-RS300 or AQUAFIN-2K/M beneath rising walls and on the base slab.
- Ausführungsbeispiele Rohrdurchführung, Fundament und Sockelbereich beachten.
- Protect COMBIFLEX-EL from weathering e.g. rain, frost, strong sunshine etc., until fully dried out.

** Bituminous coatings may only be used for applications in accordance with DIN 18195, which have been approved in the relevant section of the standard. At this time, applications according to DIN 18195, part 6, - water under pressure - is not permitted. Therefore such applications are to be contractually agreed between client and applicator and, in accordance with VOB part C, DIN 18336, clearly and separately entered into the technical specification. Please refer to the information in the "Guidelines for planning and implementation of waterproofing measures with polymer modified bituminous coatings", Deutsche Bauchemie e.V.

Please observe a current valid EU Safety Data Sheet.

GISCODE: BBP 10