

Method Statement

AQUAFIN®-WM12

PVC-based fresh concrete waterproofing membrane

Scope

This method statement covers a PVC-based fresh concrete waterproofing membrane.

Part 1 – General

This section covers materials, labour, tools and equipment for installation and application of fresh concrete waterproofing membranes.

1.1 Standards

1.2 Submittal

- A. Submit two copies of Technical Data Sheet containing all the instructions for use and installation (TDS) and Material Safety Data Sheet (MSDS).
- B. Submit a list of SCHOMBURG GmbH & Co. KG or your local SCHOMBURG/AQUAFIN approved applicators (Please ask for an applicator list).

1.3 Quality Assurance

- A. **Manufacturer Qualifications**
The manufacturer shall certify that the specified product is valid and suitable for use and application as mentioned in the TDS.
- B. **Applicator Qualifications**
Applicator shall be qualified in the field of concrete protection and repair with successful records. Applicator shall maintain qualified and certified personnel with good repute.
- C. Application and use of this product shall be in accordance with all instructions and precautions stated in the Technical Data Sheet. The MSDS and local regulations should be followed during handling, storage, applications and waste disposal.

1.4 Delivery, Storage and Handling

- A. All materials shall be delivered in unopened and original containers and fully identified with brand, type, grade, class, batch numbers and all other qualifying information.

- B. All the delivered materials shall be stored in its original packaging and elevated from the ground on pallets or shelves (avoid direct contact with the floor) according to the valid TDS.
- C. All the necessary precaution shall be taken to keep the product clean, dry and free from damage.
- D. Shelf life is 18 months when stored according to the above conditions and cool conditions above +5 °C.

1.5 Job Conditions

- A. Environmental conditions: the material shall not be applied during rain and protect from strong drafts. The application temperature must remain higher than +5 °C and lower than +50 °C.

Part 2 – Product

2.1 Manufacturer

AQUAFIN-WM12 as manufactured by SCHOMBURG GmbH & Co. KG conforms to all requirements of this method statement.

2.2 Materials

- A. 1.2 mm thick PVC-Membrane
- B. Special fleece

2.3 Performance Criteria

AQUAFIN-WM12 has the following properties:

Basis:	PVC
Colour:	transparent/white
Width:	approx. 1.0 m
Length:	approx 20 m
Thickness (membrane)	approx. 1.2 mm
Surface weight	approx. 1.8 kg/ m ²
Application temp	-5 °C to +50 °C
Watertightness in accordance with EN 1928, procedure B 60 kPa/24h):	watertight

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Water vapour resistance factor (EN 1931): approx. 29 m
Tensile strength (MD/CMD), in accordance with EN 12311-2: 1056/1056 N/ 50 mm
Tear resistance (MD/CMD), in accordance with EN 12310-1: 600/600 N
Elongation at break (MD/CMD), in accordance with EN 12311-2: 130/80 %
Shear resistance of the joint seams, in accordance with EN 12317-2: Failure outside the joint seam
Impact resistance in accordance with EN 12691 procedure A: 700 mm
Reaction to fire, in accordance with EN 13501-1: Class E

Part 3 – Execution

3.1 General

AQUAFIN-WM12 is used as an additional waterproofing of concrete structures. It is used to form a permanent bond with the fresh concrete. It is especially suitable to waterproof hard-to-access areas such as elevator shafts.

3.2 Surface preparation:

The substrate must have adequate load-bearing capability and must be largely flat and pressure-resistant in order to counterbalance the loads that arise during the application and concreting works. Larger surface irregularities or steps must be levelled out beforehand

by means of suitable mortar systems or suitable fillers, e.g. sand. In the case of applications underneath floor slabs on compacted, pressure-resistant, capillary-breaking layers, there must be no sharp-edged or pointed components on the surface. Formwork may not deform during the concreting works. In the case of vertical applications, the top finishing rail must be secured using suitable measures.

3.3 Application:

The substrate must be firm and load-bearing. Overlaps should be established with min. 5 cm, and bonded through hot air-welding or adhered with AQUAFIN-CA.

Application as waterproofing under floor slabs:

The fresh concrete composite film must be applied with the transparent side to the substrate, before the concreting. Apply AQUAFIN-WM12 to the appropriately compacted, pressure-resistant, capillary-breaking layer or blinding layer (concrete or thermal insulation) in overlapping linear sheets. The overlapping width is 5 cm. The joints are bonded by means of hot air welding or adhered with AQUAFIN-CA. Avoid damage during the subsequent work steps, e.g. laying reinforcement. Spacers used shall have a large surface area at the support points. The concreting of the floor slab must be professionally applied and in accordance with the applicable standards and regulations. It is particularly important to ensure that the concreting is implemented free of voids or that bonding is implemented covering the whole area of the fleece layer. In doing so, direct contact between the AQUAFIN-WM12 and the compacting machine should be avoided.

Application as waterproofing in formwork constructions:

The fresh concrete composite film must be applied with the transparent side to the formwork, before the concreting. AQUAFIN-WM12 is fitted to the top side of the formwork construction in linear sheets, overlapping and fastened by means of nail strips. The overlapping width is 5 cm. The joints are bonded by means of hot

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air welding or adhered with AQUAFIN-CA. Avoid damage during the subsequent work steps, e.g. laying reinforcement or spacing struts. The concreting must be professionally applied in accordance with the applicable standards and regulations. It is particularly important to ensure that the concreting is implemented free of voids (gravel pockets) or that bonding is implemented covering the whole area of the fleece layer. In doing so, direct contact between the AQUAFINWM12 and the compacting machine should be avoided.

Hot air welding:

Device parameters:

- 220V hot air blower with stepless temperature adjustment up to +600 °C and air flow regulator
- Heating power > 1400 Watt
- Width slotted nozzle 40 mm (perforated on the underside)

The welding of the AQUAFIN-WM12 is carried out with handheld welding devices (e.g. Leister Triac) with a temperature of +450 °C to +650 °C (approx. level 6.5). The sealing sheets are laid overlapping and tacked at a max. pitch of 50 cm, parallel with one another. Then the handheld welding device is guided slowly over the joint at an angle of approx. 30°. In doing so, the sheets are pressed together with a moderate force of >5-6 kp using a silicone roller, parallel with the sheet edge, until a weld seam is created at the joint edges. Welding is implemented over a width of approx. 4 cm. With professionally prepared welding, a weld bead running along the seam can be considered an indication of a perfect joint. The joint seams are immediately leak-proof and are fully cured after 24 hours. Carry out trial welding before the hot air welding work. In the case of applications on thermal insulation, suitable underlays, which will be slowly pulled along with the sheets during welding, should be used. The welding zones are to be cleaned of any adhesion inhibiting substances. In doing so, it is not permitted to use solvents or splice wash.

Adhered with AQUAFIN-CA:

Generously apply AQUAFIN-CA to the overlap area of the substrate and press the next sheet into the fresh adhesive. The concreting process can take place no sooner than 8 hours after adhesion.

Notes:

- The fresh concrete composite system should be stored dry as a matter of principle.
- Do not store sharp objects or pallets on the fresh concrete composite film.
- The current applicable regulations and datasheets are to be observed!

3.4 Cleaning:

During continued application, all tools must be regularly & thoroughly cleaned with water and/or solvent (ASO-R001) every 25 to 40 minutes (dependant on temperature) to prevent the product from setting on tool surfaces. Thorough cleaning must also be carried out immediately at the end of works or whenever work is suspended.