




# Planning and application consultant for fresh concrete waterproofing membranes AQUAFIN®-WM12.

If tensile cracks occur in water-tight concrete, expensive crack injection is often the only solution. This is where the fresh concrete waterproofing membrane system AQUAFIN-WM12 comes into play. We want to show our capability to fill tension cracks from the outset and seal them securely from behind.

## Problems Solved.





The background of the entire page is a photograph of several large rolls of blue waterproofing membrane. The rolls are stacked and arranged in rows, with the foreground rolls being in sharp focus and the background rolls becoming increasingly blurred. The membrane has a textured, woven appearance. In the far background, a blurred residential building and some greenery are visible under bright, natural light.

## Problems Solved. For your reinforced concrete building projects

High-quality buildings must be particularly protected against the ingress of water. Here, the guideline for water-impermeable concrete structures (WU-guideline) offers an excellent basis, with good planning and execution, assures a long useful life for the building. Unfortunately, very small tension cracks occur during construction, which allow the water to penetrate into the building. These must be repaired at great expense by means of crack injection. To avoid this, a fresh concrete waterproofing membrane is applied in advance.

The aim is to assure maximum success for the client in the use of his building. This will only succeed if, in addition to high-quality product systems, there is also smooth and coordinated planning, and professional and qualified execution. This handbook is based on our current building experience and the results of our tests.

Thank you for your trust and your interest in the complete AQUAFIN-WM12 system. We wish you lots of success in the implementation of your projects. If you have any questions, do not hesitate to contact us. Further information about SCHOMBURG and our product systems can be found at [www.schomburg.com](http://www.schomburg.com) and [www.betocrete.com](http://www.betocrete.com).

# **Planning and application consultant**

for the fresh concrete waterproofing membrane system  
AQUAFIN-WM12



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# Substrate / tools / jointing technology

Sustainably acting  
fresh concrete waterproofing membrane system

A sustainably functioning waterproofing membrane system requires thorough and careful pretreatment. This starts with preparing the substrate.

Application substrates:

- Floor slab
- Clean lean concrete layer smoothed or levelled
  - Perimeter insulation laid free of voids
  - Compressed, pressure-stable, capillary breaking layer

- Vertical surfaces
- Perimeter insulation
  - Cementitious surfaces
  - Formwork



Application substrate perimeter insulation

The substrate must meet the following requirements:

- The substrate must be sufficiently load-bearing, level, firm and pressure-resistant in order to compensate for the loads that occur during the laying and concreting work.
- Larger surface irregularities or projections are to be avoided or evened out in advance.
- In the case of applications underneath floor slabs on compacted, pressure-resistant, capillary-breaking layers, there must be no sharp-edged or pointed components.
- Blinding layers may have a maximum surface roughness of 10 mm.
- Clean and free from coarse and disruptive dirt.
- May be damp but should be free of standing water.
- Free from critical contaminants (oil, grease, dust, etc.).

## Tool

We recommend the following tools for optimum processing of the fresh concrete waterproofing membranes:

- Cartridge press for tubular bags
- Hot air welder (e.g. Leister)
- Pressure roller
- Impact stapler

Additional small tools:

- Cast iron shears
- Craft knife
- Set square
- Cutting mat
- Metre stick
- Marker
- Fixing strips

## Joint system



Overlapping area of fresh concrete waterproofing membrane

The overlapping width of the fresh concrete waterproofing membranes is 5cm.



Joining option with machine welder

Joining option with hot air welder - hot air welder joins the membrane overlaps to a width of 4 cm.



Joining option with assembly adhesive

System-tested universal sealant AQUAFIN-CA for full-surface bonding of the overlapping area and architectural features.





# Feature waterproofing

## Processing sequence

The sealing of transitions at architectural features requires precise planning and careful implementation. After preparing the substrate, the first step is to form the corners and create the edge upstand in the wall/floor transition. Then features, e.g. pipe penetrations, prepared and formed.



Creation of edge upstand

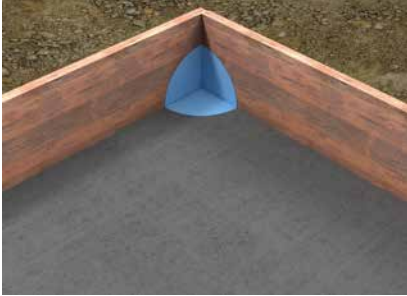


Fixing with a wooden strip



## Feature waterproofing

Sealing of edge upstands / inside and outside corners



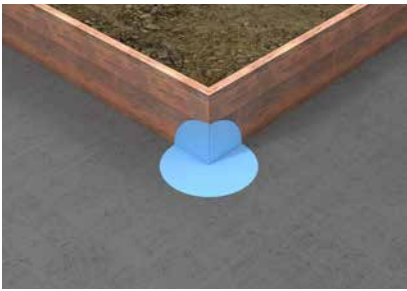
**1a.**  
Place AQUAFIN-WM12 inside corner in the corner and fix.



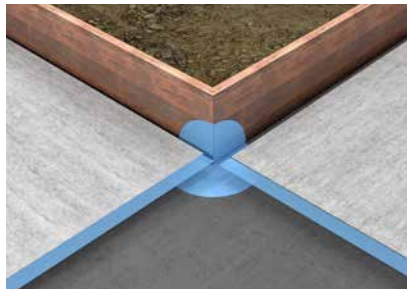
**2a.**  
Mark AQUAFIN-WM12 area membrane and cut out at the height of the formwork.



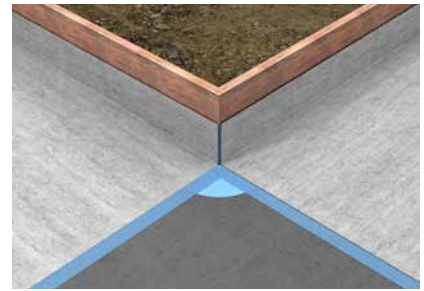
**3a.**  
Press the surface sheet into the corner, angle the sides and fix the upstand.



**1b.**  
Place AQUAFIN-WM12 outside corner in the corner and secure against slipping.



**2b.**  
Cut AQUAFIN-WM12 to size.



**3b.**  
Edge AQUAFIN-WM12 and weld or glue with AQUAFIN-CA.

### INFO CORNERS – FINISHED PART / OWN CREATION

The use of preformed corners speeds up laying and makes for more reliable seals. Alternatively, pre-formed pieces can be manufactured independently on site.

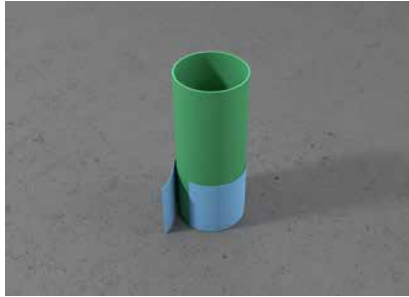


# Feature waterproofing

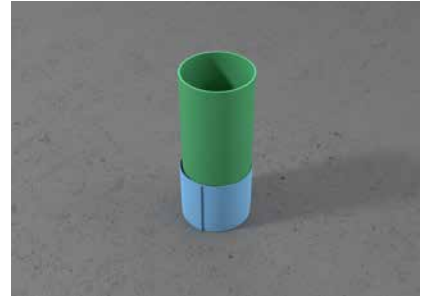
## Pipe breakthroughs



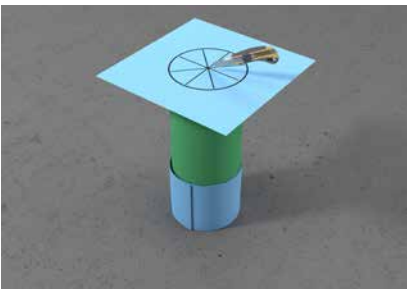
**1.**  
Determine the diameter of the pipe.



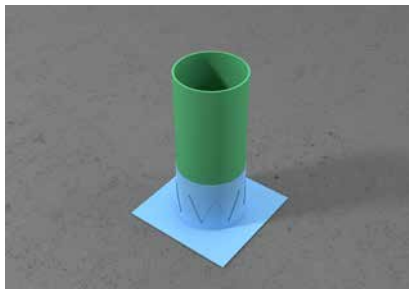
**2.**  
Apply AQUAFIN-CA to the PVC tape over a large area and wrap it around the pipe.



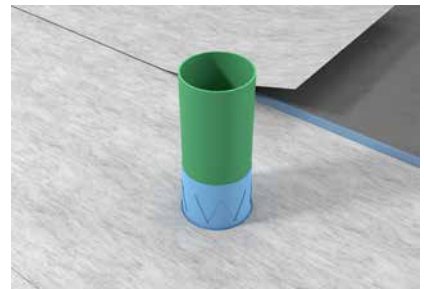
**3.**  
The overlapping area is to be glued with AQUAFIN-CA and secured against slipping.



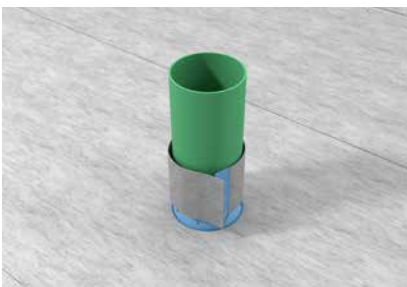
**4.**  
Cut the PVC sheet to the diameter.



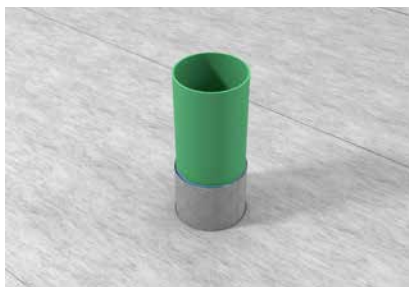
**5.**  
Put the PVC repair membrane over it and weld it together or glue it with AQUAFIN-CA.



**6.**  
Cut AQUAFIN-WM12 to size and put it on and weld or glue it to the PVC membrane on the substrate.



**7.**  
A precisely cut strip of AQUAFIN-WM12 is coated over its entire surface with AQUAFIN-CA and pressed onto the collar of the drilled foundation pile.

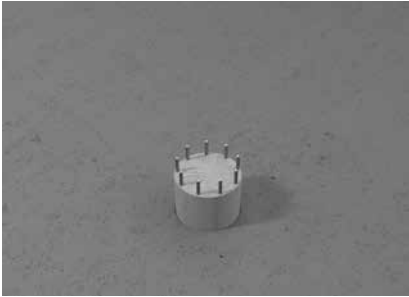


**8.**  
In the finished feature, it must be ensured that the adhesive and jointing compound AQUAFIN-CA is pressed out of the joint at the pipe flange and at the end of the sealing tape head.



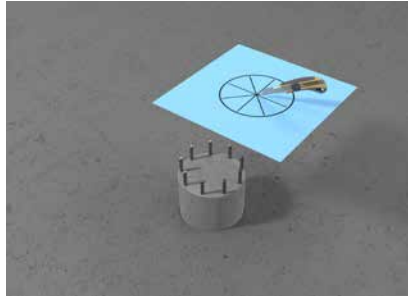
# Feature waterproofing

## Pile head



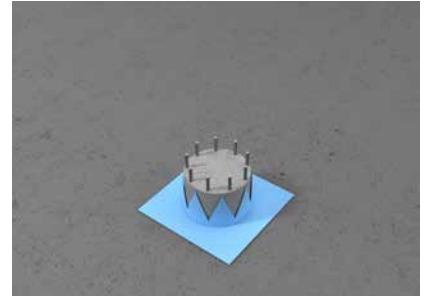
### 1. Sealing pile head with AQUAFIN-IC.

Application of AQUAFIN-CA to the lower edge of the protruding bored pile head.



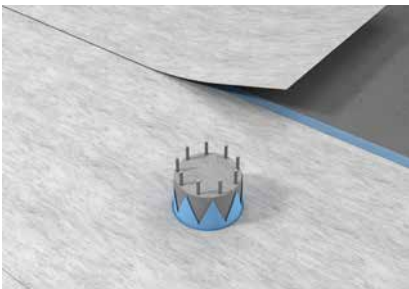
### 2a.

Place a prepared piece of PVC sheeting over the fresh adhesive.



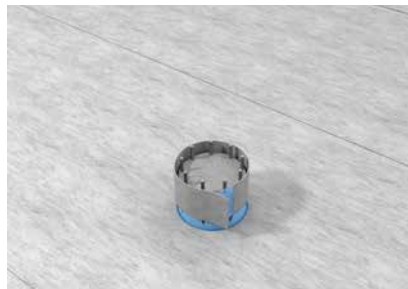
### 2b.

Place a prepared piece of PVC sheeting over the entire standing bored pile head.



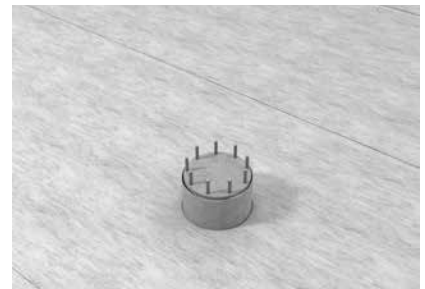
### 3.

AQUAFIN-WM12 rolled goods are cut out in the size of the bored pile. The PVC fitting is coated horizontally across the entire surface with AQUAFIN-CA or welded on with hot air. The rolled goods are then slipped over the bored pile and pressed firmly.



### 4.

A precisely cut strip of AQUAFIN-WM12 is coated over its entire surface with AQUAFIN-CA and pressed onto the collar of the drilled foundation pile.



### 5.

In the finished feature, care must be taken to ensure that AQUAFIN-CA adhesive and jointing compound is pressed out of the joint at the base of the collar and at the end of the pile head.



# Area waterproofing

## Processing sequencing

After producing the edge upstand and preparing the features, the surfaces are sealed with AQUAFIN-WM12 and the details are prepared. The waterproofing is laid up to the feature in the form of the fleece-free overlapping strips or by laying a PVC tape underneath. The transitions are either thermally joined or glued with the assembly adhesive AQUAFIN-CA.



Laid floor slab before the reinforcement was installed



Floor slab after installing the reinforcement



# Area waterproofing

## Floor slab



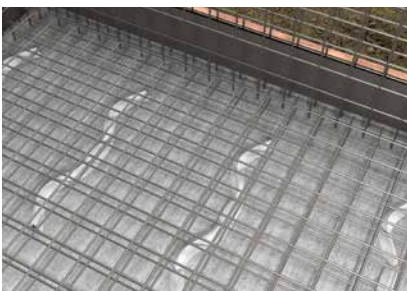
**1.**  
Lay the sheeting in the corner and weld or glue it to the features.



**2.**  
Weld strip by strip in the overlapping area with at least 4 cm or glue over the entire surface with AQUAFIN-CA.



**3.**  
Before laying the spacers and reinforcement, the area must be free of bond-reducing substances.



**4.**  
Spacers and reinforcement are laid directly on AQUAFIN-WM12.

### INFO – NOTES ON CONCRETING

Before concreting, standing water on the fresh concrete waterproofing membrane must be removed in order to ensure contact with the fresh concrete and to avoid concrete segregation.



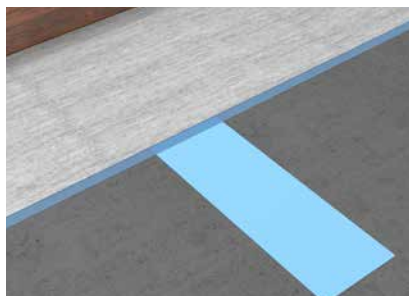


## Area waterproofing

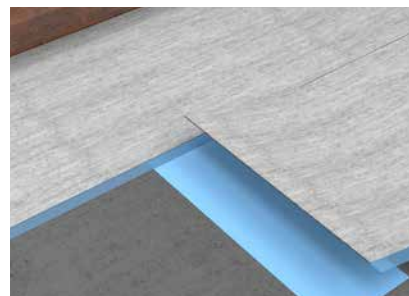
### T-joint



**1.**  
T-joint forming area must be clean and free of water.



**2.**  
Push, weld or glue the PVC membrane under AQUAFIN-WM12.



**3.**  
Align the new AQUAFIN-WM12 on the PVC strip flush with the side edge.



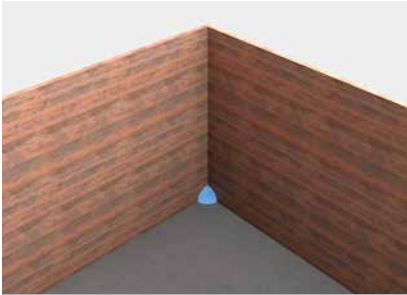
**4.**  
Weld AQUAFIN-WM12 to the PVC membrane or glue it with AQUAFIN-CA.



**5.**  
Lay the second AQUAFIN-WM12 membrane flush and weld or glue with AQUAFIN-CA.

# Area waterproofing

## Wall



**1.**  
Place on outside of the formwork.



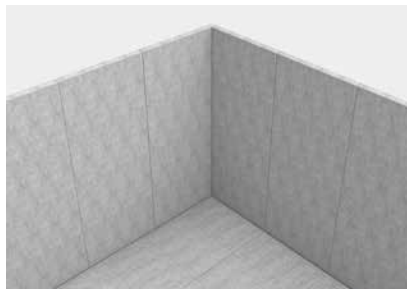
**2.**  
Continue the corner with PVC sheeting.



**3.**  
Tack AQUAFIN-WM12 on top and guide it down, starting with the corner.



**4.**  
Weld or glue web overlaps together.



**5.**  
Lay AQUAFIN-WM12 on the floor and weld or glue with AQUAFIN-CA. Defects are to be repaired with PVC tape.

### INFO – SEALING TIE POINTS

Openings for tie points are made in the AQUAFIN-WM12 by cutting. After the formwork has been stripped, the tie points are closed flush with the surface, e.g. with AQUAFIN-QM. It is then integrated into the area waterproofing. PVC repair tape or offcuts are glued over the tie opening or thermally joined. The overlap area is 5 cm.

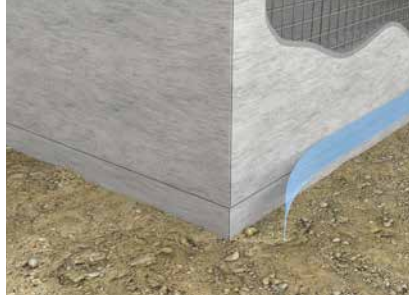


## Jointing of floor slab and surface

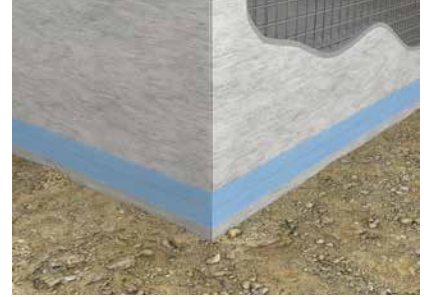
After stripping of formwork



**1.**  
If the wall formwork is placed after the floor slab has been concreted, the wall/base slab sealing levels must be connected to one another.



**2.**  
Weld or glue the PVC repair strips to the surface membrane in the wall/base slab transition.



**3.**  
Wall membrane welded or glued to PVC membrane.



# Products



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## **AQUAFIN-WM12**

PVC-based fresh concrete waterproofing membranes

For secure waterproofing of horizontal and/or vertical building components in direct ground, in above-ground and below-ground construction and in civil engineering.



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## **AQUAFIN-WM12** inside and outside corner

PVC inside and outside corner

Ready to form, quick and safe to assemble.



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## **AQUAFIN-CA**

assembly glue

Adhesive joining/sealing of AQUAFIN-WM12 overlaps.



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## **KSK connecting tape**

Connection to liquid waterproofing

Storage AQUAFIN-WM12 finish and transition to liquid area waterproofing.



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## **AQUAFIN-RB400**

Rapid cementitious waterproofing

Building waterproofing tested in transition to AQUAFIN-WM12.



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## **AQUAFIN-CJ5**

Crystalline joint plate for sealing construction joints

AQUAFIN-CJ5 is suitable for applications of usage class A, wear classes 1 and 2 in accordance with the water-impermeable concrete structures guideline, from the German committee for reinforced concrete ("DAfStb").

The SCHOMBURG Group develops, produces and distributes building product systems for the areas of:

- Waterproofing and repair of buildings
- Tiles/natural stone/screed application
- Ground protection/floor coating systems
- Concrete technology

For over 80 years SCHOMBURG's development competence has been a recognised feature in both the domestic and the worldwide marketplace. Building product systems that are produced in-house are highly prized around the world.

Experts value the quality and the efficiency of building product systems, the services and therefore the core competence of the group of companies.

To meet the demanding requirements of an ever-changing market, we continuously invest in the research and development of new and already existing products. This guarantees an ever increasing product quality to the satisfaction of our customers.

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