Waterproofing and Restoration

AQUAFIN®-IC
Crystalline waterproofing slurry

Capillary / crystalline waterproofing
for concrete structures

Problems solved.

SCHOMBURG

The perfect waterproofing material for large concrete structures.

Waterproofs concrete in depth.

AQUAFIN-IC is a unique one-component, penetrating waterproofing system. Based on cementitious materials, AQUAFIN-IC contains chemicals, that penetrate into the concrete surface making the concrete itself part of the waterproofing.
The waterproofing properties stay intact, even if the coating is partially removed or small cracks develop after the application.

Due to its high resistance to hydrostatic pressure (tested up to 130 m [200 psi] positive and negative side), AQUAFIN-IC is the perfect waterproofing material for large concrete structures such as water tanks, water catchment basins or wastewater treatment plants. Other typical applications are in parking structures, tunnels, elevator pits, manholes and waterproofing of below grade foundations and walls.

AQUAFIN®-IC

Crystalline waterproofing slurry

AQUAFIN-IC may be used on all new or old structurally sound concrete surfaces not subject to movement. It is also suitable for concrete blocks or as a dry shake on fresh concrete slabs incorporated by a helicopter.

Areas of application:

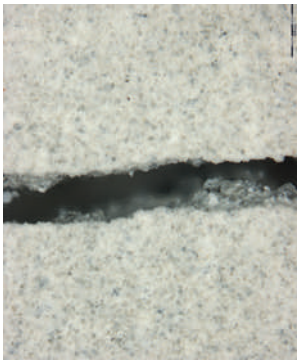
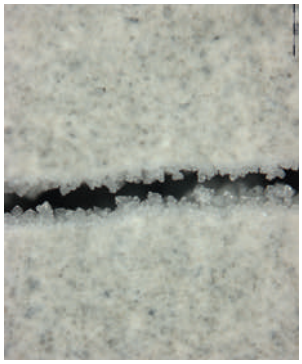
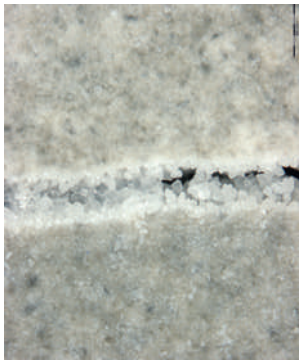
- Potable water tanks
- Waste water treatment plants
- Tunnels
- Elevator pits
- Manholes
- Foundations
- Below grade waterproofing
- Borehole pile
- Surface protection acc. EN 1504-2

Advantages for the user:

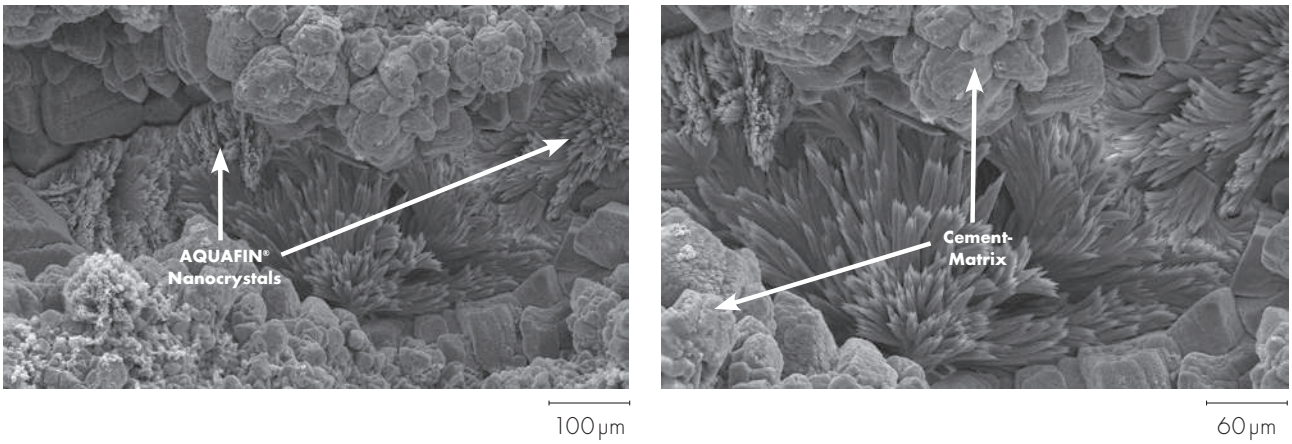
- Self-healing (static cracks up to 0.4 mm)
- Waterproofing properties stay intact, even if the coating gets damaged
- Easy to apply
- Low consumption / ecnomic
- Fast setting and hardening
- Minimal discoloration
- Permanent

„Self healing" concrete

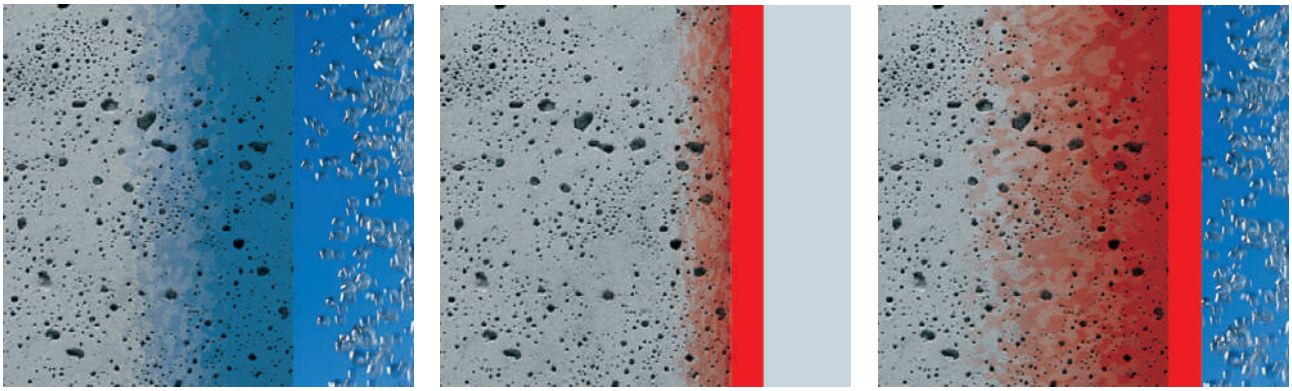
With each new contact with water, the active ingredients form new crystals – and still carry on after many years. Extensive tests show that products in the BETOCRETE-C series are capable of achieving an auto-reactive, crack-healing function with in case of outwardly spreading cracks up to 0.5 mm and continuous cracks up to 0.4 mm. This speeds up and improves the self-healing properties of concrete and lowers the maintenance costs of the building.


The Chemistry of **AQUAFIN**®-IC



Magnified AQUAFIN-IC nanocrystals. Treated concrete becomes watertight as crystalline fibers fill the capillary voids.



Untreated concrete is a porous system, which is prone to water penetration.

AQUAFIN-IC (red) is applied to the concrete surface. The active ingredients of AQUAFIN-IC start to penetrate into the capillary pores.

Inside the capillary pores the chemicals react with the free lime and moisture forming insoluble crystals. The mechanism moves further into the concrete, sealing the pores.

Result: AQUAFIN-IC is not only a coating, it becomes an integral part of the concrete!

Application

AQUAFIN-IC can be applied by brush or appropriate spray equipment.
It may also be applied as a dry shake on fresh concrete slabs.

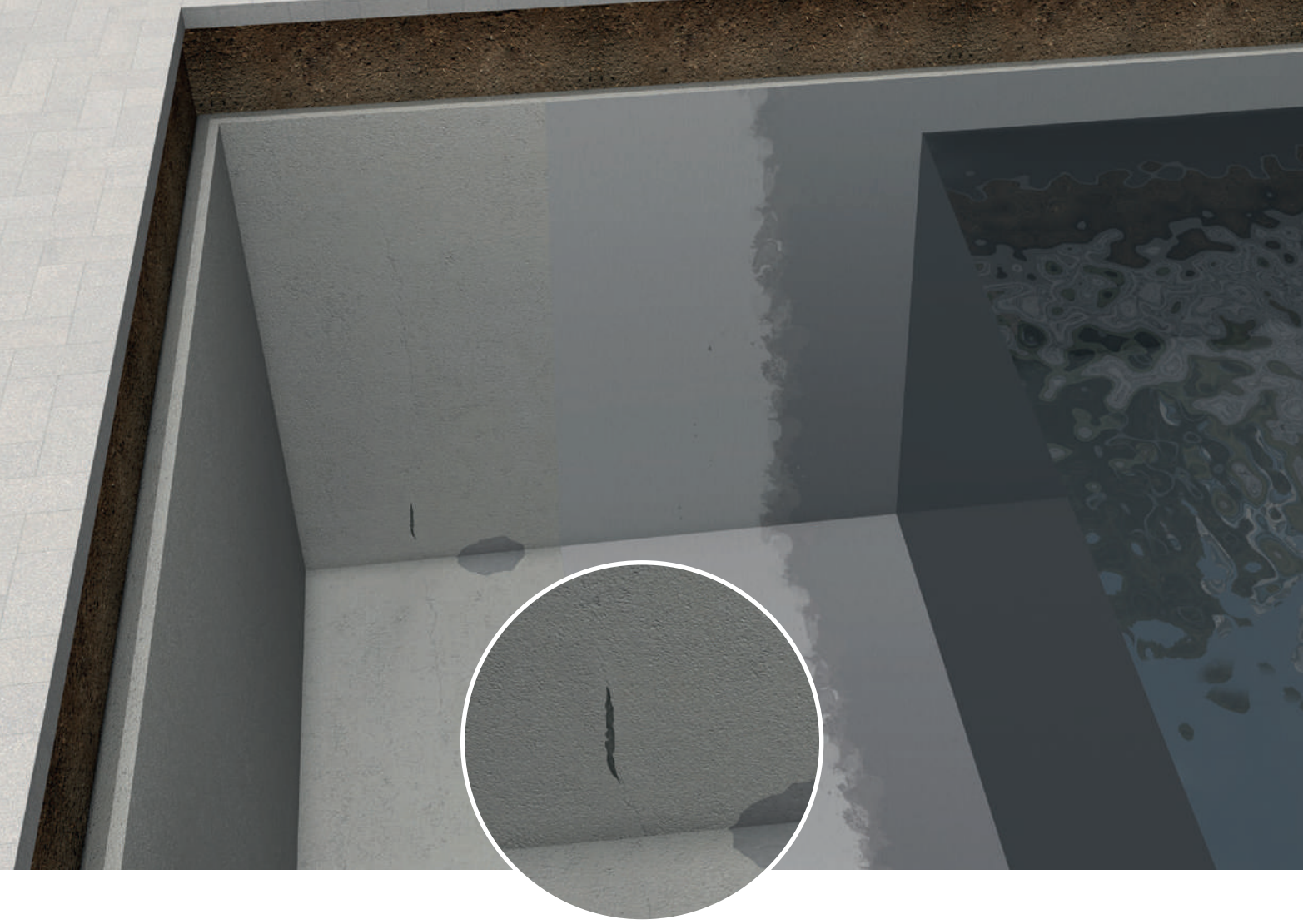
AQUAFIN-IC is simply mixed with water with a slow moving drill.
The working time is approximately 30 min. at +23°C.

Supplemental products:

- **FIX 10-S**
  30 sec. plug cement
- **FIX 20-T**
  Plug mortar
- **ASOCRET-IM**
  Crystalline sealing and repair mortar
- **ASOCRET-M30**
  Reparatur- und Nivelliermörtel
- **ASOCRET-BIS-5/40**
  Repair and levelling mortar

We recommend the use of AQUAFIN-RB400 in combination with our joint tapes for applications where static and dynamic crack bridging capabilities are required.

AQUAFIN-1K for negative side waterproofing of brick and CMU substrates.



Retrospective

Crystalline waterproofing

Crystalline waterproofing represents a fascinating waterproofing process. After application on the concrete surface, the active substances migrate out of the waterproofing material into the interior of the component, where it promotes crystal growth. The smallest pores and cracks are filled with crystals and are therefore impenetrable by capillary water! "An enemy becomes a friend": The water penetrating the building component acts as a means of transportation for active substances and carries them deep into the substrate. An additional advantage: AQUAFIN-IC waterproofing is suitable for drinking water containers!

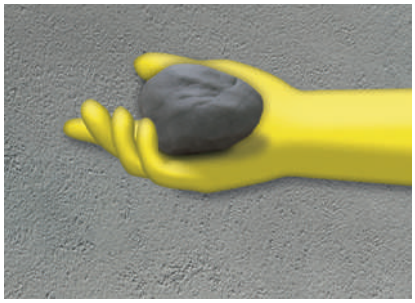
COMPONENTS

FIX-20-T
ASOCRET-IM
AQUAFIN-IC

Application

1. Open cracks and damaged areas
Remove all loose components from the cracked and damaged areas. Break open the static cracks up to a width of at least 20 mm and a depth of at least 25 mm.

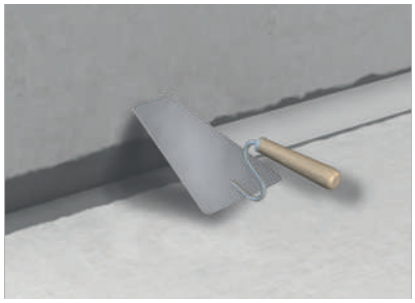
2. Immediate waterproofing for water breakthroughs
Water breakthroughs are sealed professionally with rapidly hardening cementitious FIX 20-T sealing mortar.



3. Mix the FIX 20-T
Mix a powder quantity corresponding with the water breakthrough together with approx. 25% water to produce a homogeneous consistency able to be kneaded. Form a suitable plug by hand. Work quickly: The pot life is only approx. 3 minutes!

4. Plug the areas penetrated by water
Press the formed plug into the leak position. Hold the plug in place by hand until it has hardened. Process the plugged position immediately afterwards with a trowel.

5. Improve voids
Flawed areas should be improved with FIX 20-T or with ASOCRET-IM.



6. Create the coved fillet
Produce the coved fillet with ASOCRET-IM featuring an edge height of approx. 4 cm in the area prepared with still wet AQUAFIN-IC slurry. After approx. 1–3 hours, rework ASOCRET-IM with AQUAFIN-IC.

7. Apply AQUAFIN-IC
Dampen all surfaces to be waterproofed with clean water. Apply two layers of AQUAFIN-IC in the required useful quantity with a roofer's brush, wide brush, or using spray techniques. Apply the second layer while the first layer is still sticky and has not yet dried out.

8. Curing
The fresh coating must be protected against weathering influences, e.g. sunlight, wind, rain, and frost, etc. The waterproofing layer must be kept damp for at least 3! Complete the first damping after approx. one day.

The SCHOMBURG group of companies develops, produces and distributes construction materials systems for the areas of:

- Waterproofing and Restoration
- Tiles/ Natural Stone / Screed installation
- Protective Flooring / Coating Systems
- Concrete Technology

SCHOMBURG is recognised for its development competency and is distinguished both nationally and internationally with over 80 years in the market. System based construction products from its own production plants are held it high esteem throughout the world.

Industry professionals value the level of service provided by the SCHOMBURG Group, along with our large range of high quality products.

In order to stay at the forefront of a continuously advancing market we are always investing in research and development of new and current products. This guarantees high quality products, which in turn leads to customer satisfaction.

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