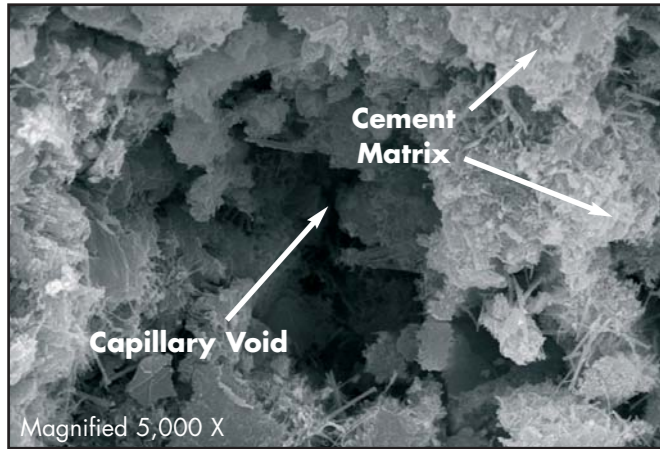


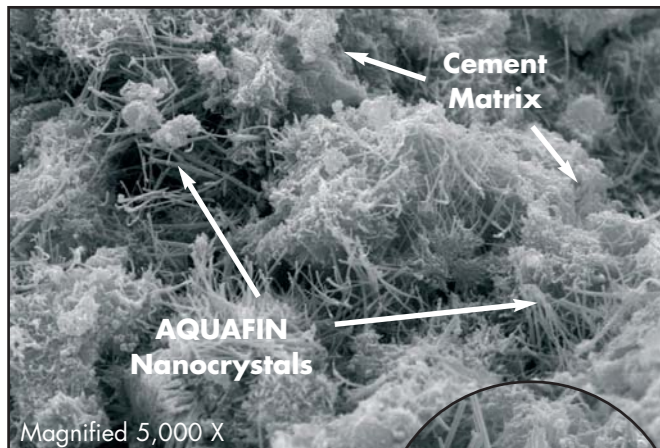
## The Chemistry of **AQUAFIN®-IC ADMIX** and **ADMIX PRO**

The innovative chemistry of **AQUAFIN®-IC ADMIX** and **ADMIX PRO** reacts with moisture and free lime to form millions of crystalline fibers (nanocrystals) within the capillary pores. These fibers reduce the pore diameter, permanently blocking the flow of water through capillaries and voids (up to 0.4 mm), yet allowing the concrete to breathe.

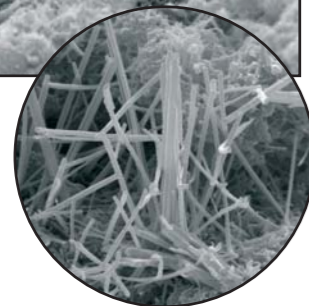
The pictures below illustrate the basic behavior of **AQUAFIN®-IC ADMIX** within the concrete.



Without **AQUAFIN®-IC ADMIX**. Untreated concrete is a porous system, prone to water infiltration.



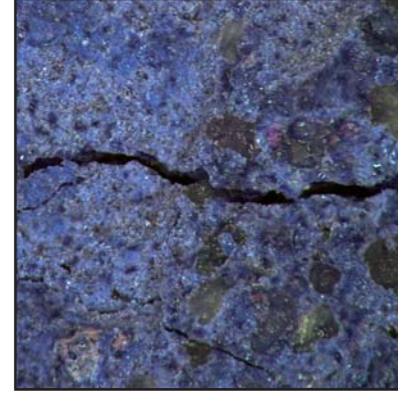
Treated concrete becomes watertight as crystalline fibers fill the capillary voids.



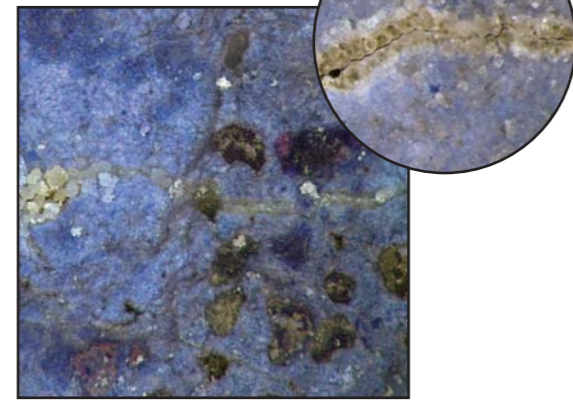
Magnified picture (10,000 X) of AQUAFIN®-IC ADMIX nanocrystals

Result: **AQUAFIN®-IC ADMIX** or **ADMIX PRO** become an integral and permanent part of the concrete matrix.

The following photos illustrate the crack-sealing capabilities of **AQUAFIN®-IC ADMIX** and **ADMIX PRO**.



Example of a naturally occurring shrinkage crack in red pigmented concrete. (Magnified approx. 32 X)



Shrinkage typically produces static hairline cracks. With static cracks up to 1/64" - 0.4 mm, **AQUAFIN®-IC ADMIX** and **ADMIX PRO** will produce nanocrystals in the crack, sealing it and preventing further flow of water.

**AQUAFIN®-IC ADMIX**  
**AQUAFIN®-IC ADMIX PRO**



SCHOMBURG GmbH & Co. KG, with its two divisions, is an international firm supplying the construction sector with high quality, innovative building materials. With a state of the art production facility, internal R&D team and excellent technical expertise SCHOMBURG is a dominant market force.

SCHOMBURG GmbH Detmold reaches the German market through a network of distributors specializing in materials for:

- Waterproofing and restoration
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- Products for gardening and landscaping construction and other construction materials

SCHOMBURG is a partner for specialised distributors in both the national and international market.

The INDUTECH RETHMEIER GmbH aims its focuses at two branches:

The core competency of the RETHMEIER sales division lies in the concrete construction industry. With a focus on concrete block, pre-cast concrete and ready-mix concrete, they deliver a range of products encompassing:

- Concrete additives
- Form release agents and accessory products
- Concrete Pigments

The INDUTECH sales division services and consults Architects, Engineers and Contractors about products and systems for:

- Industrial flooring
- Parking garage construction
- Roadway and track construction
- Water tank construction, and
- Concrete restoration

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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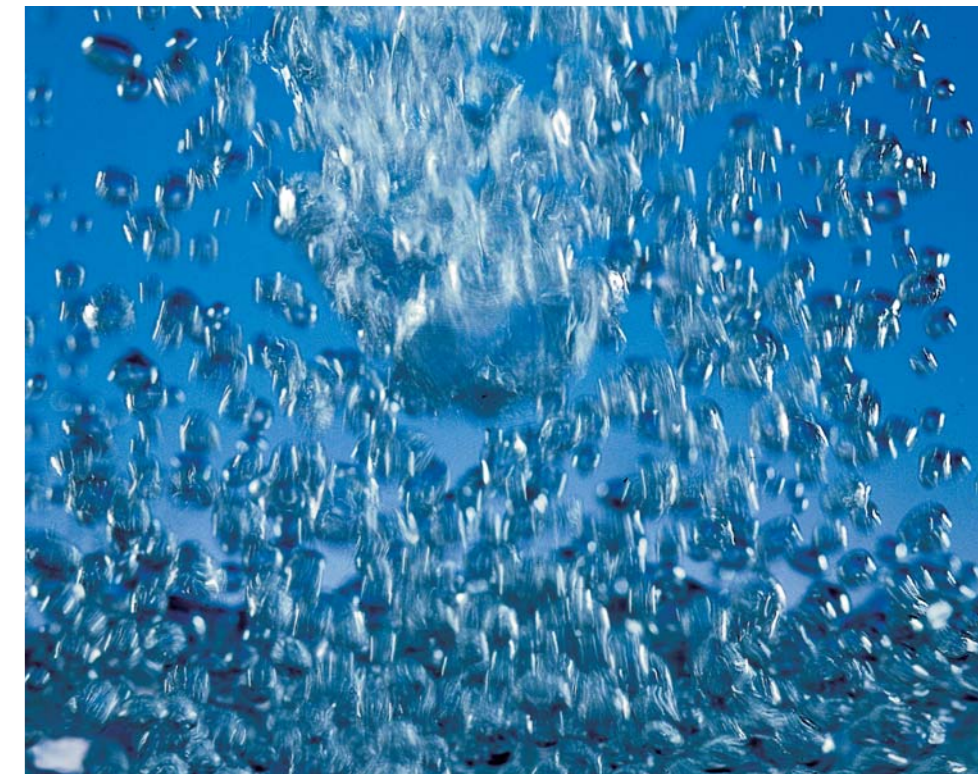
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**AQUAFIN®-IC ADMIX**  
**AQUAFIN®-IC ADMIX PRO**

## Liquid Crystalline Waterproofing Admixtures

for concrete structures



...permanent waterproofing of concrete from within

## AQUAFIN®-IC ADMIX - AQUAFIN®-IC ADMIX PRO

**AQUAFIN®-IC ADMIX** is the world's first liquid crystalline waterproofing concrete admixture. **AQUAFIN®-IC ADMIX PRO** is our latest development, based on the same technology, it also provides the added advantage of plasticising/water reduction properties. **AQUAFIN®-IC ADMIX PRO** complies with EN 934-2.

The innovative active ingredient in **AQUAFIN®-IC ADMIX** and **ADMIX PRO** reacts with moisture and free lime, creating millions of nanocrystals throughout the concrete matrix. This reaction continues any time the chemicals come into contact with water. The **AQUAFIN®-IC ADMIX** or **ADMIX PRO** treated concrete achieves the capability to self heal shrinkage cracks.

Unlike powder admixtures, **AQUAFIN®-IC ADMIX** and **ADMIX PRO** completely eliminate the risk of lumping, and ensure homogeneous distribution of the waterproofing admixture throughout the concrete structure. They both can be added to concrete during the batching process at the concrete plant or on the construction site to the ready-mix truck, equipped with suitable mixing capabilities.

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** form a permanent and integral part of the concrete which is extremely resistant to high hydrostatic pressures. **AQUAFIN®-IC ADMIX** and **ADMIX PRO** will permanently block the flow of water in the concrete, thus reducing chloride ion diffusion and hence protecting reinforcement steel. However this does not effect the absorptive properties in the top few millimeters of the concrete surface. **AQUAFIN®-IC ADMIX** and **ADMIX PRO** concrete exhibit improved freeze-thaw resistance due to the pore blocking properties.

Whilst **AQUAFIN®-IC ADMIX** will not affect compressive strength, **ADMIX PRO** will increase compressive strengths by up to 25% compared to a control mix.

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** substantially reduce the amount of time and labour associated with applying traditional waterproof coatings, making a perfect waterproofing solution for large concrete structures. Typical applications include water tanks, water catchment basins, wastewater treatment facilities, parking structures, tunnels, dams and waterproofing of foundation walls and slabs.



### Typical Applications:

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** are simply added to any concrete mix requiring waterproofing properties. They have negligible air entraining effects and are compatible with most concrete plasticisers. Pre-testing is required.

We recommend the use of **AQUAFIN®-IC ADMIX** or **ADMIX PRO** in a wide variety of new concrete projects.

Typical areas of application include:

- **Precast structures**
- **Foundations**
- **Concrete slabs**
- **Dams**
- **Parking structures**
- **Water tanks & wastewater treatment facilities**
- **Shotcrete**
- **Mass concrete**



Milton Keynes, UK.

### Method of application:

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** are added directly to the concrete, either during the batching process or on site in a ready-mix truck, equipped with suitable mixing capabilities.

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** are added at a rate of 2 - 3 % by weight of cement based on the w/c ratio, which should not exceed 0.55. Concrete should be placed within 45 minutes of admixture addition.

**AQUAFIN®-IC ADMIX** and **ADMIX PRO** significantly reduce labour and time costs associated with the application of standard waterproof coatings. Application is as easy as adding any concrete admixture, allowing it to mix for 3 - 5 minutes, and then placing the concrete. This is a very cost effective and simple solution for waterproofing new concrete structures.

For complete application instructions and product information consult the technical data sheet.



### Advantages:

- Easy to use
- Extremely cost effective
- Significantly reduces labour and time costs
- Self healing of static cracks up to 1/64" - 0.4 mm
- Increases concrete strength and freeze/thaw resistance
- No lumps during batching
- Protects reinforcement from corrosion due to reduced chloride ion diffusion
- Negligible air entrainment
- Compatible with most plasticizers and water reducers
- Forms a permanent and integral part of the concrete matrix
- Additional waterproof coatings generally not needed
- Environmentally safe; Zero VOCs
- Treated concrete withstands high hydrostatic pressures
- AQUAFIN®-IC ADMIX is permeability tested to Army Corps of Engineers CRD-C 48-92 up to 200 psi (14 bar) = 460 ft (140 m) head pressure. Result: drastic reduction of permeability compared to untreated concrete
- AQUAFIN®-IC ADMIX PRO complies with DIN EN 934-2

