

BETOCRETE® C-Series

Integral waterproofing for concrete



BETOCRETE® C-Series



Introduction

The **BETOCRETE® C-Series** becomes an integral part of the concrete matrix with mechanical damage to the microstructure of the exposed surface being seamlessly replaced by the layers beneath without the need for extensive restoration measures. Following their addition to the fresh concrete, the **BETOCRETE® C-Series** systems are active until the building reaches the end of its useful life. The **BETOCRETE® C-Series** can be tailored to the type of application and is compatible with usual construction methods in areas in contact with the ground and with water and the known systems:

- „Bituminous tanking – black tank“
- „Waterproof concrete tanking – “white tank“
- „Bentonite waterproof tanking – “brown tank“

Products in the **BETOCRETE® C-Series** are approved concrete additives and validated to EN 934-2, EN 206 (as well as DIN 1045).

Areas of Application:

- Tunnel constructions
- dam constructions
- Car parks.
- Precast units.
- Underground structures
- Everywhere, where waterproof concrete is needed.

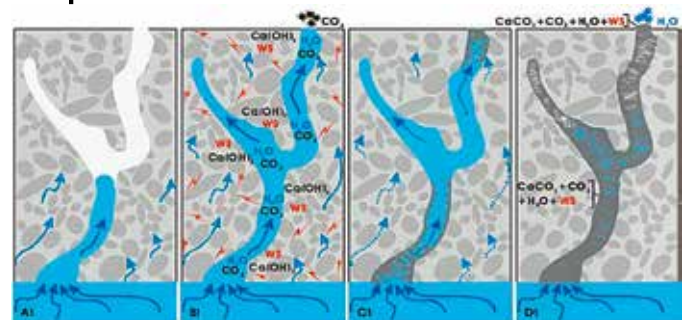
Active Crack healing

The components of the **BETOCRETE® C-Series** are specifically designed for the promotion, boosting and improvement of the crack healing ability of the concrete matrix. In a series of intricate tests defined surface cracks were induced in the test pieces and these were then subjected to continuous water pressure. In a clear time frame, which depends on the mixed design all variants in the **BETOCRETE® C-Series** achieved an auto-reactive crack healing function with cracks up to 0.4 mm in width, whilst the non-modified reference sample showed no reduction in the water flow rate.



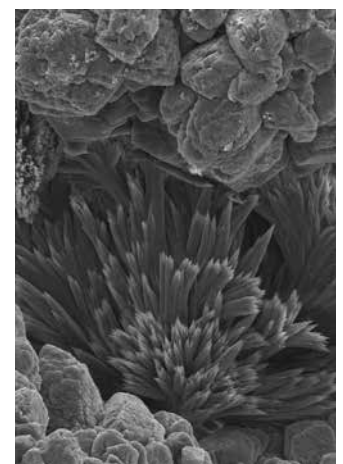
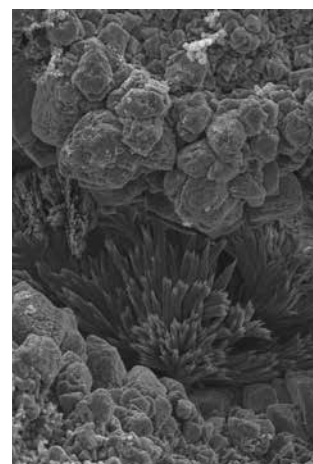
Reduction in water penetration

Test reports from independent test laboratories from renowned concrete manufacturers showed that their water impermeable concrete formulations with a mean penetration of 10 mm was reduced to 2 mm (80% improvement) through the use of the **BETOCRETE® C-Series**. When using the **BETOCRETE® C-Series** the permeability to water can be reduced by up to 10 times.



Extending the lifetime

The crystalline waterproofing function of the **BETOCRETE® C-Series** allows a clear increase in the life expectancy of concrete reinforcing steel. According to the method of forced chloride penetration as defined by the Federal Institute for Civil Engineering (Hydraulic), the **BETOCRETE® C-Series** can delay the time of depassivation of the reinforcing steel by up to 30 years. Suitable for all applications in accordance with EN 206/ DIN 1045 (German Standards for plain, reinforced and prestressed concrete structures).



BETOCRETE® C-Series

BETOCRETE® C-21 (DM)

Third generation liquid, crystalline waterproofing admixture is suitable for all applications in accordance with EN 206/ DIN 1045 (German Standards for plain, reinforced and prestressed concrete structures). Approved as a concrete waterproofer according to EN 934-2, table 9. Works exceptionally well with CEM I, CEM II and CEM III/A cements. Has a slight plasticizing effect. Crystalline waterproofing that integrally seals the concrete matrix with an added hydrophobic effect for "immediate waterproofing". Self-sealing of static cracks up to 0.4 mm possible. Active integral building envelope waterproofing is made possible with the **BETOCRETE® C-Series** products. Projects completed using the **BETOCRETE® C-Series** system components can be backed by a warranty.

Characteristics:

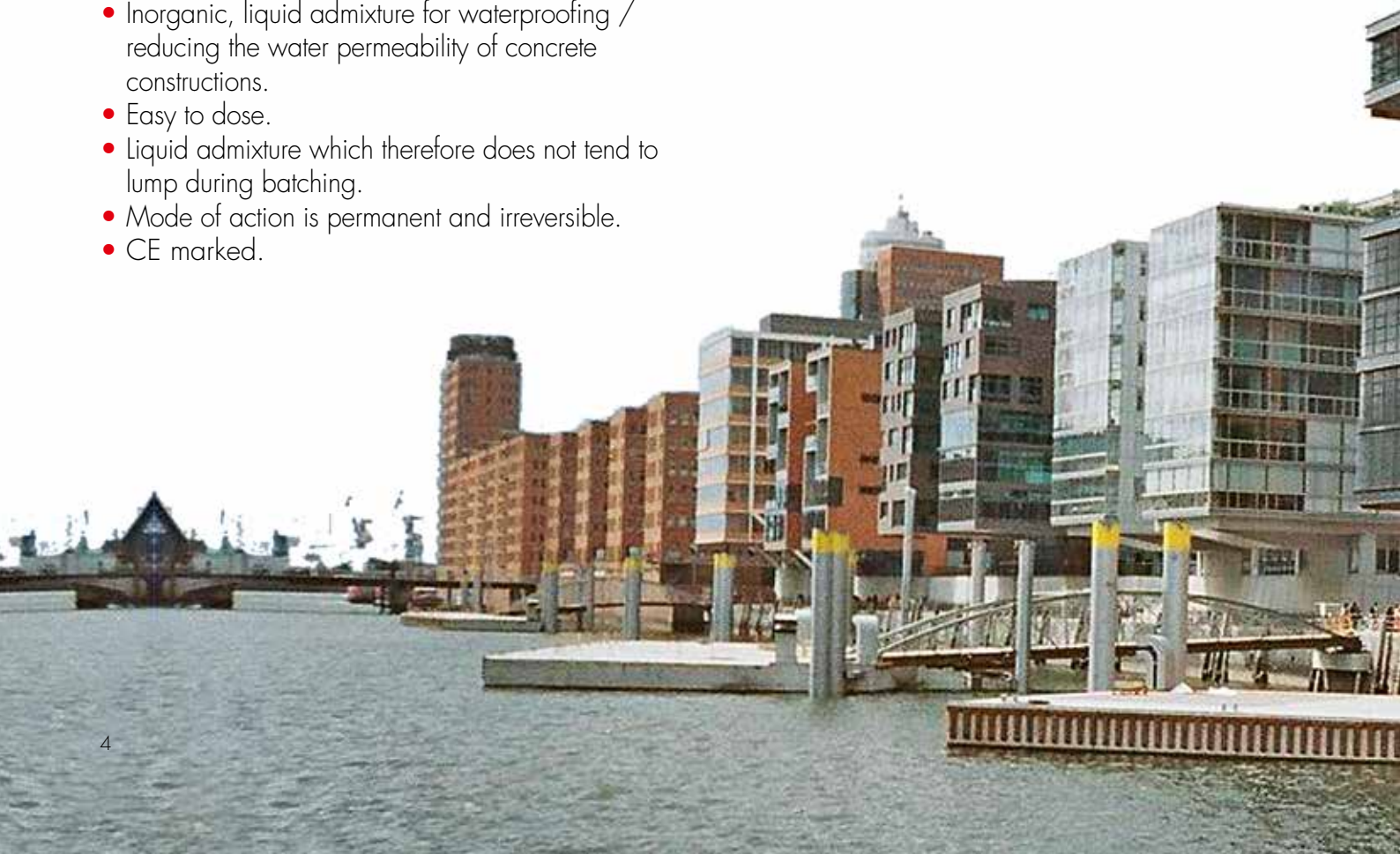
- Inorganic, liquid admixture for waterproofing / reducing the water permeability of concrete constructions.
- Easy to dose.
- Liquid admixture which therefore does not tend to lump during batching.
- Mode of action is permanent and irreversible.
- CE marked.

BETOCRETE® C-17 (BV)

Approved as a concrete plasticizer according to EN 934-2, table 2. Works exceptionally well with CEM I, CEM II and CEM III/A cements. Crystalline waterproofing which seals the concrete matrix from within. Self-sealing of static cracks up to 0.4 mm possible.

Characteristics:

- Liquid, easy to dose.
- No clogging.
- Permanently active.
- CE marked.
- Concrete produced with **BETOCRETE-C17** conforms to the requirements according to the DVGW work sheets W270 and W347 for use in contact with potable water.



BETOCRETE® C-36 (DM)

Third generation powder, crystalline waterproofing admixture is suitable for all applications in accordance with EN 206/DIN 1045 (German Standards for plain, reinforced and prestressed concrete. Approved as a concrete waterproofer acc. to EN 934-2, table 9. Works exceptionally well with CEM I, CEM II and CEM III/A cements.

Characteristics:

- Concrete admixture in powder form.
- Acts chemically and physically.
- Reduces the migration of chlorides
- Permanently active.
- CE marked.

BETOCRETE® C-35

Powder, crystalline waterproofing admixture. Suitable for all types of concrete.

Characteristics:

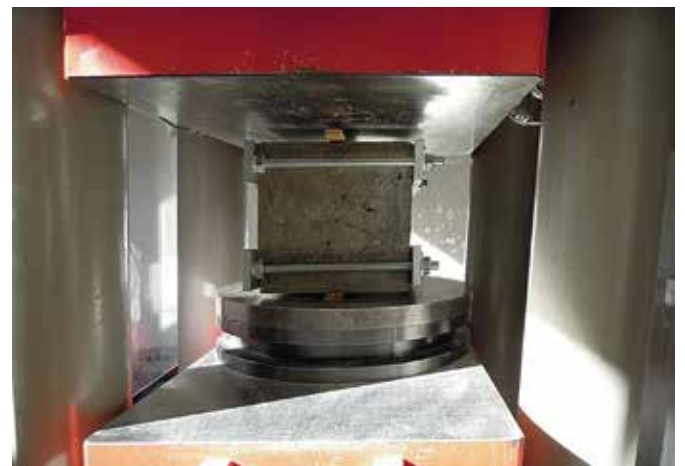
- Crystalline waterproofing function.
- Powder.
- High quantity of active ingredient.
- Crack closure up to 0.4 mm possible.
- Universal application.



BETOCRETE® C-Series

BETOCRETE® competence center

Large Projects need always a lot of pretests. The Betocrete test center is a modern concrete laboratory with a qualified staff, where different kinds of test methods are available. Our Service consists of the excellent customer consulting as well as pretests with the country-specific concrete and raw materials. If necessary we are also able to modify the products for the specific types of concrete and according to the requirements of usage and climate conditions. These tests for specific projects are free of charge for our customers. Furthermore we are able to support you locally.



Additional products

AQUAFIN®-CJ2

Injection tube for the injection of all suitable injection resins, gels and acrylates, pressure watertight.

- Officially approved for use in the system with **AQUAFIN®-P**-resins.
- Internal diameter: 6 mm, external diameter: 11 mm.

AQUAFIN®-CJ6

Thermoplastic expanding and jointing tape. Rapid and vigorous expansion for waterproofing construction joints. Completely dimensionally stable, also at high temperatures.

- Expansion process indefinitely often reversible.
- Suitable for fresh and salt water.
- Valid general building regulations certificate available.

AQUAFIN®-CJ-Set

Complete set incl. 10 m injection tubes accessory product incl. 10 m injection tube.

- Set 1 contents: 10 m **AQUAFIN®-CJ1**, each 20 cm ventilation tube: red and white incl. connector, 1 isolation box, injection valve, tube clamp, 2 x 10 cm heat shrinking tubes, 2 plugs, 1 tube PVC-glue, 60 plastic clips. All parts are pre-assembled.
- Set 2 contents: 10 m **AQUAFIN®-CJ1**, 2 standard packers, 60 plastic clips, 2 tube clamps.

AQUAFIN®-IC

Crystalline waterproofing slurry. Cementitious, capillary active waterproofing slurry for the secure waterproofing of concrete substrates also against negative water pressure.

- Especially for waterproofing foundations, lift pits, water tanks and retaining structures, parking garages, tunnels, etc.
- Technical approval for structural waterproofing.
- Approved for potable water structures according to DVGW W270, W347.

FIX 20-T

Rapid setting swellable waterproofing chloride free, without corrosion promoting substances. Membrane and plugging mortar. Highly reactive rapid mortar.

- Strong bond to concrete substrates.
- Rapid setting – also under water.
- Compatible with the crystalline waterproofing system **AQUAFIN®-IC**.
- For interior and exterior use.

ASOCRET-IM

Crystalline repair and sealing capillary active mortar for concrete. For the watertight filling of opened cracks and holes, which are subsequently to be covered with **AQUAFIN®-IC**. Alternatively **ASOCRET-IM** can also be used to form covered fillets.

The SCHOMBURG Group develops, produces and markets high quality building product systems for

- Construction waterproofing
- Construction restoration
- Tiles/natural stone installation
- Screed installation
- Civil engineering
- Surface protection
- Concrete technology

SCHOMBURG is recognised for its development competency and is distinguished both nationally and internationally with over 75 years in the market. System based construction products from its own production plants are held in 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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