

Method Statement

BETOCRETE-CL170-P

Crystalline waterproofing concrete admixture

Scope

This method statement covers liquid crystalline waterproofing admixture for concrete.

Part 1 – General

This section covers materials, labour, tools and equipment for installation and application of liquid crystalline waterproofing admixture that are used to produce permanently active waterproof concrete.

1.1 Standards

DIN EN 934-2 - Admixtures for concrete, mortar, and grout - table 2: water reducing / plasticizing admixtures

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 12 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 lower than +40 °C, for lower temperature curing time extends & for higher temperature curing time reduces. During application at higher temperatures protect material from direct sunlight.

Part 2 – Product

2.1 Manufacturer

BETOCRETE-CL170-P as manufactured by SCHOMBURG GmbH & Co. KG conforms to all requirements of this method statement

2.2 Materials

Liquid crystalline waterproofing admixture that used to produce permanently active waterproof concrete

Component: In liquid form.

It is supplied in:

- 25 kg canister
- 220 kg drum
- 1,040 kg container

BETOCRETE-CL170-P

2.3 Performance Criteria

BETOCRETE-CL170-P has the following properties:

Colour:	colourless, clear
Form:	liquid
Density:	1.19 g/cm ³
Application temp.:	+5°C to +40°C
Compressive strength according to EN 12390-3	≥110% compared to untreated concrete after 7/28 days
Air content according to EN 12350-7	≤2% higher volume share than untreated concrete
Reduction of Water requirement according to EN 12350-2 or EN 12350-5	≥5% slump increase or flow increase compared to untreated concrete

Part 3 – Execution

3.1 General:

Assure that concrete mix design and proposed materials are in compliance with manufacturer's recommendations. Assure that test batching and material testing, if recommended by manufacturer, has been carried out prior to starting concrete work. Comply with manufacturer's product data and installation instructions..

3.2 Application:

Stir liquid crystalline waterproofing admixture in a container provided prior to use, to assure that the mixture is homogeneous specially when stored for longer periods. Assure that the water/cement ratio (w/c) does not exceed 0.55 (liquid crystalline waterproofing admixture is included).

Dosage range

w/c ratio <0.4:	0.75% by weight of CEM
>0.4-0.5:	0.80% by weight of CEM
>0.5-0.55:	0.90% by weight of CEM

Do not exceed 2.25% by weight of CEM.

Minimum Cement Content:

CEM I:	270 kg/m ³
CEM II:	290 kg/m ³
CEM III /A:	380 kg/m ³
Puzzolanic cements with puzzolan content >20%:	300 kg/m ³
Granulated slag:	max. 100 kg/m ³
Fly ash:	max. 80 kg/m ³

Dosage in ready-mix factory:

BETOCRETE-CL-170-P can be added to the mix water or added to the finished concrete mix.

Dosage in truck mixer on the job site:

Dose BETOCRETE-CL170-P directly into the mixing drum. Mix thoroughly mixed for 1 min per m³ of concrete, but at least 5 minutes. Use quickly

3.3 Important Advice:

- Please ensure that pre-tests were made with all admixtures that will be used in the concrete mix
- A storage temperature of >30 °C can lead to a brown discoloration of BETOCRETE-CL170-P. This has no influence on the product features.
- BETOCRETE-CL170-P has to be thoroughly mixed after a longer storage period (>2 months)
- The addition of a concrete retarder can be necessary when using Portland Cement Type II or III. Suitability tests have to be carried out before usage.
- It is rarely possible that BETOCRETE-CL170-P influences the setting of the concrete. Our product RUXOLITH-T5 (VZ) has proven as the most effective retarder.
- Concrete modified with BETOCRETE-CL170-P

BETOCRETE-CL170-P

may tend to effloresce depending on the composition.

- If the BETOCRETE-CL170-P was stored at temperatures below +5 °C crystals may form, BETOCRETE-CL170-P is suitable for usage again after warming up to minimum +15 °C followed by stirring or homogenizing.
- Suitability tests according to valid standards and norms have to be carried out prior to application.

3.4 Cleaning:

Regular water flushing of dispensing equipment will prolong service life and reduce breakdowns. Use REINIT-BM on internal metal surfaces subject to contact with concrete in concrete mixers, batch plants and truck mixers regularly to prevent concrete crust formations. Use ASO-R005 to remove hardened concrete crusts.