BETOCRETE®-CL170-P

Crystalline waterproofing admixture with liquefying properties

Material number	Contents	Unit of quantity	Packaging	Colour
206443001	25	KG	Canister	Colourless
206443002	220	KG	Drum	Colourless
206443003	1100	KG	Container (IBC)	Colourless

Areas of application

- For integral crystalline waterproofing of concrete components in direct ground contact
- For foundations and watertight concrete components
- For economic, commercial, sports facilities and housing construction
- For infrastructure, water and wastewater structures
- For in-situ concrete, pre-cast concrete components and shotcrete
- BETOCRETE-CL210-WP shows the highest effectiveness in exposure class XS

Product features

- Liquid
- Increased active crack healing in concrete
- Concrete plasticiser (BV) after DIN EN 934-2:T2
- Water savings of up to 10 %
- Improves frost resistance and resistance to thaw
- Reduced chloride ion migration
- Suitable for drinking water after DVGW worksheet W-347 and W-270

Advantages

- crack healing of surface and continuous cracks up to 0.4mm (tapering down to 0.5mm) possible
- Increase durability of concrete component
- Minimisation of concrete servicing and maintenance costs
- Economic liquid dosing in the concrete plant

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Technical Data

Material properties

Density (spec. weight)	approx. 1.18 g/cm³
Alkali content (Na2O equivalent)	≤ 10.5 percentage by weight
Chloride content	≤ 0.1 %
Water pollution class (WGK)	1 (Selbsteinstufung)

Mixing

Mixing time, concrete plant	> 45 seconds
Mixing time, mixer truck (transport concrete)	> 5 minutes

Application

Application temperature	approx. 8 - 40 °C
Recommended dosing in regards to cement	approx. 1.75 - 2.25 %

Material rate

Material consumption rate according to the area of application

The following dosing levels have proven to be successful:

w/c ratio	Dosing level
< 0.4	1.75 % relative to CEM
> 0.4–0.5	1.85 % relative to CEM
> 0.5–0.55	2.00 % relative to CEM

Do not exceed the max. dosing level of 2.25% relative to CEM.
For a cement content of ≥400 kg/m³, a dosing level of 7.00 kg/m³ is sufficient.

Minimum cement content in concrete

Requirement for the concrete		
Minimum cement content in kg/m³	CEM I	270
	CEM II	290
	CEM III/A	380
Minimum quantities of binders/mixtures in kg/m³	Portland cement	270
	Portland cement ≤ 35 % mixed with blast furnace slag, fly ash or pozzolans	290
	Portland cement ≤ 50% mixed with blast furnace slag	380
Maximum additions to the binder in kg/m³	Blast furnace slag	100
	Fly ash	80

Application

Dosing in concrete plant

BETOCRETE®-CL170-P can be added with the mixing water or the finished concrete mixture.

Dosing in mixer truck

1. BETOCRETE®-CL170-P is dosed directly into the mixing drum of the mixer truck
2. The mixing time must be approx. 1 minute per m³ drum content (however, at least 5 minutes)

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Storage conditions

Storage

Store in a frost-free, cool and dry place. At min. 8 - 40 °C for 12 months in the original canister. Promptly use opened container.

Disposal

Must not be disposed of in household waste. Do not allow to enter the sewer system.

Notes

- Stir BETOCRETE®-CL170-P thoroughly after a long storage period (> 1 month).
- BETOCRETE®-CL170-P modified concretes may have crystals on the surface, depending on the composition.
- At storage temperatures > +30 °C, BETOCRETE®-CL170-P may change colour. This will not have a negative influence on the product features.
- Concrete with BETOCRETE®-CL170-P must be produced, applied and post-treated in accordance with the currently valid standards.
- Lignite fly ash is only of limited suitability.
- The use of CEM III/B&C cements is prohibited.
- The crack expansion limitations must be complied with by the planner/engineer/structural engineer under any circumstances. Contrary designs must be verified after the corresponding verification and suitability!
- Before applying BETOCRETE®-CL170-P, even with other types of additives, preliminary tests must be carried out in accordance with the valid standards.
- In rare cases, BETOCRETE®-CL170-P can influence the solidification behaviour of the concrete. As a system-compatible product, RUXOLITH-T5 (VZ) is available for controlling the concrete.
- Excluded are concretes of exposure class XA3 in accordance with DIN EN 206-1/DIN 1045-2.
- Movements in the concrete component, e.g. due to traffic loads or temperature differences, can cause sealed crystalline cracks to open again.

Observe applicable safety data sheet!

GISCODE: BZM30

Explanations

Conformity / Declaration / Verification

CE

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EN 934-2
BETOCRETE-CL170-P
Concrete liquefier for concrete
EN 934-2:T2

Chloride content	max. 0.10 M.-%
Alkali content	max. 10.5 M.-%
Corrosion behaviour	Only contains components per EN 934-1:2008, Annex A.1
Compressive strength	Satisfied
Water requirement reduction	Satisfied
Air content	Satisfied
Hazardous substances	NPD

NPD = "No Performance Determined"