## **TECHNICAL DATASHEET**

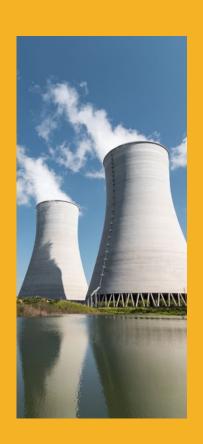




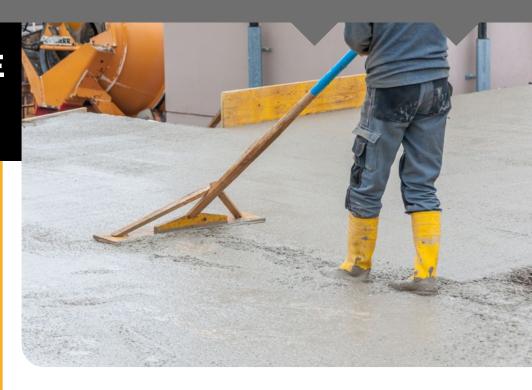
# TT-BETOCRETE CL-210

waterproofing concrete admixture

TT-Betocrete CL-210 is a crystalline waterproofing concrete admixture with hydrophobic effects







**TT-Betocrete CL-210** is a liquid admixture for designing a water-tight concrete with innovative '2 in 1' technology. Initially it functions chemically and reduces the water absorption in the matrix. In the next step, nano-scale crystals are formed in the capillary system by special active catalysts, which become active on contact with water. This forms a concrete that is sustainable and permanently impermeable to water.

**TT-Betocrete CL-210** can be added to all concrete where water penetration should be permanently prevented. For example: basements, cooling towers at power stations, tanks and containers, retaining basins, swimming pools, car parks, foundations, sandwich units, waterproof concrete, sewer channels/manhole access points, tunnels, concrete pipes and everywhere where water-tightness is needed.

#### **FEATURES**

- Liquid system suited to on-demand volumetric concrete supply.
- Crystallization of the capillaries
- Reduces capillary absorption
- Crack healing possible for penetrating cracks up to 0.4 mm and for map/pattern cracks up to 0.5 mm
- Improvement of the resistance to freeze/thaw
- Reduction in Chloride migration
- Minimization of maintenance and repair costs
- Time saving
- Simple and assured



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### **TECHNICAL DATA**

Colour	White	
Consistency	Liquid	
Density (at +20°C)	1.05 g/cm <sup>3</sup>	
pH-value approximately	11.5	
Application temperature	+5°C to +40°C	
Storage	Frost free, 12 months in the original unopened container at + 20°C. Use opened container promptly.	
Packaging	1,040 kg container - 220 kg drum - 25 kg can	
Water pollution class	1 (Self classification)	

#### **Concrete requirements**

Minimum cement content	CEM I 270 kg/m³ - CEM II 290 kg/m³ - CEM III /A 380 kg/m³
Pozzolanic cement with pozzolan content >20%:	300 kg/m³
Granulated slag:	max.100 kg/m³
Fly ash:	max. 80 kg/m³

## **PRODUCT PREPARATION**

#### Dosage

The required dosage rate is 1.75–2.25% based on CEM weight and is dependent, amongst other criteria, on the concrete formula and the reactivity of the cement. The dosage should be identified with a suitability trial. The following dosage levels have stood the test of time:

w/c value	< 0.4	1.75 % based on CEM
	> 0.4–0.5	1.85 % based on CEM
	> 0.5–0.55	2.00 % based on CEM

Do not exceed the maximum dosage level of 2.25 % based on CEM weight.

#### Dosage at concrete plants

**TT-Betocrete CL-210** can be added to the mix water or added to the wet concrete mix.

#### Dosage in concrete trucks

 Place all the TT-Betocrete CL-210 into the mixing drum and then mix well for 1 minute per m3 of drum contents but for a minimum of 5 minutes and use quickly.

#### **Advice**

- A storage temperature of >30°C can lead to parts of TT-Betocrete CL-210 settling. After thorough mixing, this has no influence on the product features.
- TT-Betocrete CL-210 has to be thoroughly mixed after a longer storage period (>2 months).
- Carry out preliminary trials in accordance with current standards before using TT-Betocrete CL-210 or other types of additives.
- Lignite fly ash is only suitable with restrictions.
- The use of CEM III/B&C cements is excluded.
- The prescribed crack width restrictions given by the Planner/ Engineer/Structural Engineer must be respected in all circumstances. Differing interpretations are to be proven with relevant design verification and design suitability.
- Concrete with TT-Betocrete CL-210 must be produced, installed and cured following current valid standards.
- TT-Betocrete CL-210 does not contain materials which cause corrosion.

Please also refer to current valid EU safety data sheet.

Boran Court, Network 65 Business Park, Hapton, Burnley Lancashire BB11 5TH t: +44 (0)1282 473 100 e: info@wykamol.com www.wykamol.com



Unit 3-5 Crayford Commercial Centre, Greyhound Way, Kent, DAI 4HF t: +44 (0)1322 318 830 e: info@tritonsystems.co.uk www.tritonsystems.co.uk

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