

PT Crystalline Powder Admixture

**- powdery concrete admixture for integral waterproofing –
(deep penetration crystals, powder, high quality)**

Product description

PT Crystalline Powder Admixture is a high quality, integral and high concentrated waterproofing admixture for concrete and mortars. By reaction with the cement paste it forms nano-crystals. In the cement matrix PT Crystalline Powder Admixture is reducing the capillary and pore size. The formed crystal structure is not soluble. PT Crystalline Powder Admixture forms in combination with concrete an integral waterproofing system for all concrete construction.

Application areas

PT Crystalline Powder Admixture is used as a concentrate for all kinds of concrete integral waterproofing and as corrosion protection in concrete. Typical application areas are water retaining walls, water tanks, tunnels, dams, piles, sewers, foundations, basements, cooling towers etc. Wherever a watertight concrete construction is required, PT Crystalline Powder Admixture can be used. Also suitable as admixture in spray applied concrete.

Product advantages

- **Permanent activ**
 - **Seals microcracks and hairline cracks, up to 0.4 mm**
 - **Self-healing properties**
 - **Permanent waterproofed concrete**
 - **Protection to reinforcement steel**
 - **Easy dosing**
 - **Concrete corrosion protection**
 - **Withstands high water pressure (up to 13 bars)**
 - **Concrete hydrophobization**
 - **Integral waterproofing**
 - **Non toxic**
 - **Compatible with most types of concrete admixtures**
 - **„Made in Germany“**
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Specification

Base	: special cements, additives
Color	: grey
Consistency	: powder
Buld density	: approx. 1.11 kg/l
ph-value	: > 11.5

Watertightness according
DIN EN 12390-8

: positive side water pressure = 13 bar
negative side water pressure = 13 bar

Chloride content

: < 0,05%

Processing temperature

: +8°C up to +40°C

Consumption

: look below

All technical datas are measured in our laboraty.

Please take notice about the safety information and advice given on the safety data sheets and packaging labels. GISCODE: ZP1

Delivery form

20 kg bag

Article-No. 09300020

Storage

12 months (frost-free and dry, +5°C up to +35°C in original packaging).

Application

Surface preparation

Dosing:

The recommended dosage is 0.8 to 1.7% to cement weight. Minimum 3.5 kg per cbm concrete.

Reference values:

Dosing PT Crystalline Powder Admixture

Cement content per cbm	Amount of water in concrete formulation			
	40%	45%	50%	55%
280 kg/cbm	2.80 kg	3.15 kg	3.50 kg	3.85 kg
310 kg/cbm	3.10 kg	3.49 kg	3.88 kg	4.26 kg
340 kg/cbm	3.40 kg	3.83 kg	4.25 kg	4.68 kg
370 kg/cbm	3.70 kg	4.16 kg	4.63 kg	5.09 kg

More concrete formulation on demand.

The dosing is depend of required concrete or mortar quality and depend of reactivity of used cement. PT Crystalline Powder Admixture can be used in concrete with high W/C values (water/cement value) up to 0.55. We recommend to do some trial mixes to finalize the required dosing.

Dosage in batching plant (ready-mix factory)

PT Crystalline Powder Admixture must be added **to the aggregates** and mixed at least 30 seconds before adding cement and water. The mixing must be continued for at least 50 seconds until the concrete mix has reached the working properties.

Dosage in transport mixer truck

In case of adding PT Crystalline Powder Admixture on the construction site (transport mixer truck), it must be added as a suspension in water, not in powder form. For this the mixing ratio is 1:1 (powder: water). Mix the material in a bucket and add this slurry completely into the concrete mixing drum of the transport truck.

Average mixing time is 1 minute per cbm content, but minimum 5 minutes. Note that the additional slurry water does not increase the water/cement ratio above the projected value. The water of the slurry must be included in the water/cement calculation at batching plant.

The working time of with PT Crystalline Powder Admixture mixed concrete depends on the reactivity of used cement and can either be prolonged or shortened.

Dosage in mortars

PT Crystalline Powder Admixture must be added to the aggregates and mixed with approx. 45% of the mixing water. Mix at least 2 minutes before adding the remaining water and cement.

Please note:

- PT Crystalline Powder Admixture should be tested in trial mixes to determine the optimum dosage and any necessary changes to existing additive dosages.
- Do not use without checking workability.
- Avoid lump formation.
- With PT Crystalline Powder Admixture modified concrete may tend to slightly efflorescence depending on the composition.
- The material is non corrosive and has no adverse effects on the reinforcement steel.
- Never add PT Crystalline Powder Admixture into mixed fresh (wet) concrete or mortar mixes as this will increase the risk of lump formation.
- The aggregates must have a continuous sieve-line.
- A minimum cement content (CEM I) of 320 kg/cbm is required.
- The addition of coal fly ash is limited on 30 kg/cbm.
- The addition of brown coal fly ash is forbidden.

Application areas:**Remarks**

The information given in this technical data sheet corresponds to the current state of development and is based on our experience, our knowledge and is non-binding. An investigation has to be done with focus on the respective building project and the area of application. The technical expert advice of proof-tec employees does not exclude the planning or control by an engineer. We are liable within the scope of our general delivery and sales conditions, we are not liable for the application of our materials. The generally accepted rules of technology must be observed. If necessary, preliminary tests have to be carried out.

Version 02/2017

All previous versions of this technical data sheet are not valid anymore and should not be used anymore.