

CRYSTAL PW 25

Crystalline Waterproofing Powder Concrete Admixture

Description

CRYSTAL PW 25 is a hydrophilic crystalline waterproofing admixture designed to enhance the durability and longevity of concrete structures. Utilizing advanced crystal technology, **CRYSTAL PW 25** reacts with cement and water to initiate a catalytic process. This reaction forms a protective crystalline network within the concrete's pores, capillaries, and cracks, significantly reducing permeability.

The long-term reactivity of **CRYSTAL PW 25** endows the concrete with adaptive self-healing properties, effectively countering deterioration and maintaining structural integrity over time. As a Permeability Reducing Admixture for Hydrostatic Conditions (PRAH), it offers superior performance in challenging environments, ensuring robust and reliable waterproofing solutions.

Fields of Application

- Foundations, basements.
- Tunnels and subway systems.
- Pre-cast and shotcrete.
- Water and Wastewater structures.
- Water treatment plant.
- Swimming pools.
- Elevator pits.
- Parking structures.

Features and Benefits

- Protects the concrete against negative and positive water pressure (14 bars).
- Resistant to extreme hydrostatic pressure.
- Highly resistant to corrosive chemicals.
- Provides permanently active waterproofing. During the curing time, it creates insoluble nano structural crystal into the capillary cracks.
- Non toxic. Safely used in water tanks.
- Protects against water, chloride, and sulfate ingress; increases resistance to chemical attacks
- Water vapor permeable. It allows the concrete to breath.
- Easily added to ready-mix truck or central mixer.
- Self-seals hairline cracks up to 0.5 mm.
- It becomes an integral part of the concrete and improves the durability of the concrete.

CRYSTAL PW 25

Crystalline Waterproofing Powder Concrete Admixture

- Provides long term protection even though concrete surface is damaged.
- Does not need to any additional waterproofing applications.
- Does not harm for human health and environment.

Technical Data

Content	Active chemicals content special cement
Appearance	Grey Powder
Specific Gravity	2.7
Bulk Density	1,10 g/cm ³
VOC	None.
Hydrostatic resistance	14 bars
Cracks self-sealing	Up to 0.5 mm
HS Code	3824.40.00.00.00

Application Procedure

Application Method

Dry Batch Operation:

Add the required quantity of **CRYSTAL PW 25** powder form to the ready-mix truck. Drive the truck under the the batch plant and add 60% of the required water with 150-250 kg the large aggregate. Then mix for 2-3 minutes to ensure the **CRYSTAL PW 25** is distributed evenly throughout the pre-mix. Add the remaining materials to the back of the truck in accordance with standard batching practices and the mix design requirements.

Central Mix Operation:

The aggregates, sand, cementitious materials, and water are to be mixed first in accordance with standard batching practices and the mix design requirements. Add **CRYSTAL PW 25** to water in a large bucket to a ratio of 1:1 until reaching an easily pourable mix. Pour the required amount of mixed **CRYSTAL PW 25** into the truck and mix for at least 5 minutes to ensure an even distribution of the material throughout the concrete mix by taking into consideration the designed w/c ratio. If unsure, consult with Baumerk technical team.

CRYSTAL PW 25

Crystalline Waterproofing Powder Concrete Admixture

Precast Batch Plant:

Add the **CRYSTAL PW 25** to the aggregate and sand mix for 3 minutes before adding cement & water.

Note : **CRYSTAL PW 25** is compatible with all cement types, supplementary cementitious materials, admixtures, and fibers. A concrete trial mix is necessary to determine the actual plastic properties.

Dosage

CRYSTAL PW 25 is added 0,8-1,0 % by weight of cement. For assistance in determining the appropriate dosage rate and additional information, please consult a Baumerk representative.

Packaging

CRYSTAL PW 25 is available in 20 kg kraft bags or 25 kg metal pail

Shelf Life

12 months in original, unopened package.

Storage

Store in dry area between +5°C and +35°C. Protect from heat, freezing and direct sunlight.

Cautions / Limitations

- Water/Cement ratio should be $\leq 0,55$.
- It may be harmful with skin contact.
- Do not apply in freezing conditions or during precipitation.
- Protect applied materials from rain, freezing, foot traffic and continuous high humidity until completely dry.
- Do not use when air and surface temperatures are below +5°C and above +35°C.

CRYSTAL PW 25

Crystalline Waterproofing Powder Concrete Admixture

Health and Safety

Warning! Cause eye and skin irritation. If eye or skin contact, get immediate medical attention. If swallowed, do not induce vomiting. Call a physician or poison control center. Never give anything by mouth to an unconscious person.


Wash hands thoroughly after handling. Wear protective clothing, gloves, eye and face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Dispose of unused, contents, container and other contaminated wastes in accordance with local, state, federal and provincial regulations.

Keep container closed when not in use. Keep out of the reach of children.

Limited Warranty: This product is subject to a written limited warranty which can be obtained free of charge from BAUMERK Company. Please contact with technical service department for further information and support.

CRYSTAL PW 25

Crystalline Waterproofing Powder Concrete Admixture

 2184	
BAUMERK YAPI VE KİMYA SANAYİ VE TİCARET Ltd. Şti. Dursunköy Mahallesi Uygur Caddesi No:44 34555 Hadımköy Arnavutköy / İstanbul TÜRKİYE 17	
2184-CPR-0218 DOP NO: 0934-204 EN 934-2:2009+A1:2012 CRYSTAL PW 25 Harç ve Betonlarda Kullanılan Kristalize Esaslı Katkı Su Geçirimsizlik Katkıları , Çizelge 9 Crystalline Based Additive Used in Mortar and Concrete Waterproofing Additives, Table 9	
Capillary Water Absorption Kılcal Su Emme	After 7 days of cure, for 7 days of experiment; trial concrete, maximum 50% of the witness concrete; After 90 days of cure, for 28 days of experiment; trial concrete, maximum 60% of the witness concrete 7 günlük kürden sonra , 7 günlük deney için; deneme betonu , şahit betonun en çok % 50'si; 90 günlük kürden sonra, 28 günlük deney için; deneme betonu ,şahit betonun en çok %60'ı
Compressive Strength Basınç Dayanımı	In 28 days, the trial concrete is at least 85% of the witness concrete. 28 günde, deneme betonu, şahit betonun en az % 85'i
Amount of Air in Fresh Concrete Taze Betondaki Hava miktarı	Unless otherwise specified by the manufacturer, The trial concrete is at most 2% higher than the witness concrete by volume. Üretici tarafından aksi belirtilmedikçe, deneme betonu, şahit betonun hacimce en çok % 2 üzerinde
Highest Chlorine Content En Yüksek Klor Muhtevası	%0,08
Highest Alkali Content En Yüksek Alkali Muhtevası	%10,6
Dangerous materials Tehlikeli Maddeler	Does Not Contain Any Hazardous Substances Herhangi Bir Tehlikeli Madde İçermez

