

# KRYSTALINE Add PLUS 2.5

CRYSTALLINE WATERPROOFING ADMIXTURE - DOSAGE 2.5 kg/m<sup>3</sup>

## DESCRIPTION

**Krystaline Add PLUS 2.5** is a specially formulated crystalline admixture used to waterproof concrete, reduce shrinkage cracks, and increase concrete durability. The secondary benefits include set retardation, water reduction, lower heat of hydration and increased compressive strength.

**Krystaline Add PLUS 2.5** is chemical admixture that can be used for the treatment of concrete structures and against water seepage, shrinkage and cracking, chemical attack, and corrosion of reinforcing steel. It effectively reduces the water/cement ratio by a much higher amount compared to normal crystalline admixtures.

Recent testing demonstrates that **Krystaline Add PLUS 2.5** can reduce water by up to 15%, subject to the design mix, and as can be expected the decreased water addition for equal slump concrete has shown dramatic increases in compressive strengths. It will now be possible to virtually remove other admixtures such as super plasticizers, water reducers, set retarders etc., from the concrete and simply use **Krystaline Add PLUS 2.5** to achieve High Durability concrete.

## FEATURES & KEY BENEFITS

- Stop water leaks in concrete
- Seals and waterproofs cracks up to 0.5 mm
- Protects reinforcing steel against corrosion
- Total and permanent waterproofing
- Waterproofing increases with time
- Gives concrete excellent resistance to attack by sulphates and chloride
- Increase mechanical strengths up to 30%
- Not affected by surface wear or abrasion
- Effective against hydrostatic pressure, tested at 12 bar (or over 122 meters of head)
- Waterproofs from any direction (positive or negative side)
- Water vapor permeable
- Safe for contact with potable water
- Replaces unreliable exterior membranes, liners and coatings

## TYPICAL APPLICATIONS

- Foundations
- Basement
- Tunnels
- Pipes
- Maritime projects
- Submarine works
- Elevator pits
- Concrete walls
- Concrete slabs
- Construction joints
- Marine structures
- Swimming pools
- Water treatment plants
- Channels
- Potable water tanks

- Parking structures

## PACKAGING

**Krystaline Add PLUS 2.5** is supplied in 18 kg pails. Available in 1 kg water soluble bags to be added directly to the concrete mix for easy on-site dosage and handling.

## APPLICATION GUIDELINES

Concrete is a naturally porous material, with microcracks, voids, pores and capillaries that are formed mainly in the early stages of curing. The more interconnection between these holes, the more permeable the concrete is and the more prone to damage caused by the entry of water and corrosive agents. However, **Krystaline Add PLUS 2.5** virtually eliminates porosity of the concrete and many of its inherent weaknesses, which increases durability.

**Krystaline Add PLUS 2.5** acts by hydrophilic crystallization. It catalyzes chemical reactions between unhydrated cement particles and water, creating insoluble crystalline hydration products which fill the concrete's capillary network. These crystal deposits become an integral part of the hydrated paste. The resulting concrete has a significantly greater ability to autogenously heal cracks and resist the penetration of water under hydrostatic pressure.

**Krystaline Add PLUS 2.5** is a powder admixture that is added to concrete at a minimum dosage of 2.5 kg/m<sup>3</sup> and minimum dosage of 2 kg/m<sup>3</sup> for concrete containing GGBFS, subject to mix design. Dosage within the scope of the BBA certification is 1% by weight of total cementitious content. Serves to reduce water by up to 15% subject to mix design. **Krystaline Add PLUS 2.5** is compatible with most super-plasticizers, it is recommended to test before mixing.

Add **Krystaline Add PLUS 2.5** directly to the concrete during mixing at any time. However, the addition can affect the plastic properties of concrete. Prior testing is recommended.

## DOSAGE

- Min. 2.5 kg/m<sup>3</sup>, subject to mix design.
- Min. 2 kg/m<sup>3</sup> with GGBFS, subject to mix design.
- Dosage within the scope of the BBA is 1% by weight of total cementitious content.

## TECHNICAL DATA

Color	Grey
Appearance	Powder
Density	1.1 g/cm <sup>3</sup>
Particle size	40 - 150 microns
pH (Mixed with water)	13
Solids content	100%
Hydrostatic resistance	12 bar (122 m of head)
Cracks self-sealing	< 0.5 mm

## STORAGE

**Krystaline Add PLUS 2.5** should be stored at room temperature (min 5°C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the



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product packaging is unopened, then a shelf life of 2 years can be expected.

## HEALTH & SAFETY

This product becomes caustic when mixed with water or perspiration.

### Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

For more information, please check the safety data sheet for this product.




\*Refer to BBA certificate for more details by following the above QR code or the below URL:

<https://www.bbacerts.co.uk/uploads/files/CertificateFiles/56/5612ps1i1.pdf>

## DISCLAIMER

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product, as no warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all previous. Please check with your office to confirm that this is current issue: (December 2023).

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<b>KRYSTALINE TECHNOLOGY, S.A.</b> C/ Nicolás de Bussi 52 03203 Elche (Alicante)  19  Certificate N°1170/CPR/AT.04078	
<b>Krystaline Add PLUS 2.5</b>  WATER RESISTING ADMIXTURES  EN 934-2:2009+A1:2012	
Essential requirement	Performance
Chloride content (Cl <sup>-</sup> )	≤ 0.1%
Alkali content (Na <sub>2</sub> O equivalent)	≤ 20%
Corrosion behavior	Contains only approved substances according to EN 934-1 Annex A1
Compressive strength at 28 days	≥ 85% about reference concrete
Air content	≤ 2% about reference concrete
Capillary absorption	At 7 days: ≤ 50% of reference concrete At 28 days: ≤ 60% of reference concrete