

# KRYSTALINE ADD1

## C-S-H TECHNOLOGY WATERPROOFING ADMIXTURE - DOSAGE 1 kg/m<sup>3</sup>

### DESCRIPTION

**Krystaline Add1** is a next-generation, C-S-H technology, waterproofing admixture. It has been designed to waterproof and improve the durability of concrete through hydrophilic C-S-H hydration enhancement.

**Krystaline Add1** is added to fresh concrete easily at the batch plant or directly into ready-mix trucks. It works continuously to enhance cement hydration, increasing C-S-H content within the concrete's micropore structure of the concrete thereby preventing moisture from penetrating through. The enhanced hydration process not only provides waterproofing characteristics to the concrete but also allows for an increased ability to self-heal micro-cracking upon the presence of moisture.



### FEATURES & KEY BENEFITS

- Stop water leaks in concrete
- Seal and waterproof cracks up to 0.7 mm
- Protects reinforcing steel against corrosion
- Permanent waterproofing
- Waterproofing increases with time
- Resists sulfate and chloride attack
- Not affected by surface wear or abrasion
- Effective against hydrostatic pressure up to 20 bar
- Waterproofs from any direction (positive or negative)
- Water vapor permeable
- Safe for contact with potable water
- Replaces unreliable exterior membranes, liners, and coatings
- Reduces shrinkage cracks by up to 60%
- Reduces water demand by approximately 5%
- Eliminates the use of a waterproofing sub-trade
- Continually improves impermeability benefits with time
- Will reactivate if water is present in the future
- Will increase the durability of the concrete

### TYPICAL APPLICATIONS

- Foundations
- Basement
- Tunnels
- Pipes
- Maritime projects
- Elevator pits
- Concrete walls
- Concrete slabs
- Swimming pools

- Water treatment plants
- Potable water tanks
- Parking structures

### DOSAGE

- 1 kg of **Krystaline Add1** per m<sup>3</sup> of concrete.

### PACKAGING

**Krystaline Add1** is supplied in 20 kg pails containing 20 x 1 kg water soluble bags to be added directly to the concrete mix for easy on-site dosage and handling.

### APPLICATION GUIDELINES

**Krystaline Add1** uses hydrophilic hydration enhancing technology that creates a chemical reaction between the unhydrated cement particles and water. It creates additional insoluble C-S-H gels and reduced calcium hydroxide within the micropore structure which continually reduces the pore size and total pore volume within the concrete's capillary network. The resulting concrete has a greater ability to autogenously heal cracks and resist the penetration of water under hydrostatic pressure.

**Krystaline Add1** is a dry powder that is added directly to the concrete during mixing. The dosage rate is 1 kg per cubic meter of concrete. Check for potential water reduction in higher w/c ratio mix designs. The water component may be reduced to achieve equal slumps. **Krystaline Add1** increases the consolidation of the concrete mix. It may appear less wet than control concrete, but it will provide increased workability and flow. Add **Krystaline Add1** directly during mixing. Prior testing is recommended.

### BATCH PLANT ADDITION INSTRUCTION

**Krystaline Add1** may be added directly to the central mixer with the dry mix or wet mix.

1. Prepare a separate silo or addition method for **Krystaline Add1**, adding it directly to the mixer or with the aggregates into the dry mix. Dose water and mix
2. Follow standard mixer practices for mixing.
3. If the slump is lower than required, add a water reducer or plasticizer to increase the slump to the required slump.

**Krystaline Add1** may be added directly to the ready-mix truck mix with the other dry materials.

1. Prepare a separate silo or addition method for **Krystaline Add1** and add it directly to the ready-mix vehicle after the cement has been added or add **Krystaline Add1** directly to the ready-mix vehicle manually after the cement has been added.
2. Allow 5 to 10 minutes at high speed for mixing. This can be done during transport to the site.
3. If the slump is lower than required, add a water reducer or plasticizer to increase the slump to the required slump.

**Krystaline Add1** may also be added directly to the ready-mix truck after the concrete has been batched at the batch plant.

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1. Add **Krystaline Add1** directly to the ready-mix vehicle manually or with a separate silo.
2. Allow 5 to 10 minutes at high speed for mixing. This can be done during transport to the site.
3. If the slump is lower than required add a water reducer or plasticizer to increase the slump.

### JOB SITE ADDITION INSTRUCTIONS

**Krystaline Add1** may be added directly at the job site. Please note the following instructions:

4. Add **Krystaline Add1** directly to the ready-mix vehicle manually at the job.
5. Allow 5 to 10 minutes at high speed for mixing before the concrete is to be placed.
6. If the slump is lower than required add a water reducer or plasticizer to increase the slump.

In general, **Krystaline Add1** is recommended for concrete using 300 kg or more of total cementitious materials. Consult a Krystaline representative for dosages with lower content.

**All applications must be wet-cured for 3 to 7 days.**

**Attention! For any kind of application, do not premix Krystaline Admixture with water!**

### TECHNICAL DATA

Color	White
Appearance	Granular Powder
Density	1.4 g/cm <sup>3</sup>
pH (Mixed with water)	13
Solids content	100%
Hydrostatic resistance	Up to 20 bars
Dosage	1 kg/m <sup>3</sup>
Crack self-sealing	up to 0.5 mm
Particle size	40 - 150 microns

### STORAGE

**Krystaline Add1** should be stored at room temperature in min 5°C and max 35°C, kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 2 years can be expected.

### HEALTH

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.

### SAFETY

#### 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.

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<b>KRYSTALINE TECHNOLOGY, S.A.</b> C/ Nicolás de Bussi nº 52 03203 Elche (Alicante) 17 1170/CPR/AT.04078	
<b>Krystaline Add1</b>  WATER RESISTING ADMIXTURES  EN 934-2:2009+A1:2012	
Essential requirement	Performance
Chloride ion content	≤ 0,1%
Alkali content	≤ 40%
Corrosion behavior	Contains only approved substances according to EN 934-1 Annex A1
Capillary absorption (g/mm <sup>2</sup> )	At 7 days: ≤ 50% At 28 days: ≤ 60%
Compressive strength	At 28 days: ≥ 85%
Air content	≤ 2%
Dangerous substances	Anexo ZA de EN 934-2

## 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: Document version: (January 2025)