

CRYST ADMIXTURE[®]

Article-No.: 09100

INTEGRAL WATERPROOFING ADMIXTURE BY CRYSTALLIZATION TECHNOLOGY

DESCRIPTION

CRYST ADMIXTURE[®] is a concentrate crystalline waterproofing admixture for concrete specifically formulated to protect concrete in-depth and reinforcing steel against corrosion. When CRYST ADMIXTURE[®] is mixed with the concrete at the time of batching reacts with cement that provides permanent waterproofing concrete by forming nanocrystals that seal the capillary pores and cracks in the concrete structures. These nanocrystals are active for the life of the concrete to prevent any further water ingress. CRYST ADMIXTURE[®] is designed to provide durability to concrete by protecting it against corrosion of reinforcing steel and aggressive chemicals. With CRYST ADMIXTURE[®] the concrete is permanently waterproofed for positive and negative water pressures, even under high hydrostatic pressure.

FEATURE AND BENEFITS

- Environmentally friendly
- Active crystallization to seal cracks up to 0.5mm wide, even if they appear after the setting of concrete.
- Effective against extreme hydrostatic pressure from either the positive or negative surface of the concrete.
- Does not tear, puncture or delaminate as membranes can.
- Improves workability and strength.
- Non-toxic – ideal for potable water tanks.
- Protection of the reinforced steel from corrosion.
- Replaces the use of an unreliable exterior membranes, liners and coatings.
- Permanently waterproof and active throughout the life (longevity) of the structure, thus it prevents water from penetrating the building.
- Protects against water, chloride, sulfate ingress, and chemical attack.
- Reduces construction scheduling time.
- Protects against concrete carbonation.
- Improves durability of concrete.
- Added to the mix during the batching process, so it's not affected by weather conditions.
- Significant decrease in water absorption by capillaries.
- No VOCs.
- Suitable with other concrete admixtures.

FIELD OF APPLICATION

Used for all types of waterproofing and concrete corrosion protection in:

- Below grade: parking structures, basements, elevator pits, and foundations of towers.
- Water containment: water tanks.
- Waste treatment Facilities: reservoirs, water treatment tanks, sewage, and manholes.
- Tunnels, subway systems and below-grade concrete pipelines,
- Marine structures.
- Bridges, dams, and highway infrastructure.
- Swimming pools, decks, bathrooms, and garages.
- Precast, and shotcrete applications.

MATERIAL PROPERTIES

Form:	powder
Apperance:	grey
Bulk Density:	1.11 kg/l
Processing temperature :	+8°C up to +40°C

DOSAGE RATE

CRYST ADMIXTURE® typically dosed at 0.8 - 1 % to the weight of cementitious material for most applications. Please consult your local CRYSTARM® representative for further dosage recommendations.

DIRECTION FOR USE

During the batching time apply the CRYST ADMIXTURE® since it will dissolve in the concrete later. The order of the operations for addition will differ depending on the kind of batch plant operation and equipment.

Addition in batching plant (ready-mix factory): Add CRYST ADMIXTURE® in powder form to the aggregates and cement mixed for at least 30 seconds before adding water. The mixing must be continued for at least 60 seconds until the concrete mix has reached the working properties.

Addition in batching plant (ready-mix factory): Add CRYST ADMIXTURE® in powder form slowly to the empty drum of the ready-mix truck. Then add water with a ratio is 1:1 (powder: water). Let the drum of the ready-mix truck mix the materials for 2 minutes at a fast speed to ensure the CRYST ADMIXTURE® is mixed with water. Then Drive the truck under the batch plant to load the concrete.

Addition to the concrete ready-mix truck in the wet form: Adding CRYST ADMIXTURE® on the construction site (transport mixer truck), Mix CRYST ADMIXTURE® with water to form a very thin slurry 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. Let the mix for at least 5 minutes to ensure even distribution of CRYST Admix throughout the concrete.

Addition to the concrete ready-mix truck in the dry form: CRYST ADMIXTURE® can be added directly in dry form slowly to the drum of the ready-mix truck (on the construction site), and let the mixing continue for at least 10 minutes to ensure even distribution of CRYST Admix throughout the concrete.

Notes:

- A minimum cement content (CEM I) of 250 kg/cbm is required.
- CRYST ADMIXTURE® is designed to have minimal or no effect on setting time.
- Concrete containing the CRYST ADMIXTURE® may develop higher ultimate strengths than plain concrete.
- Store in a dry environment.
- For more detailed instructions, consult with a CRYSTARM® Technical Services Representative or your local CRYSTARM® representative for the most appropriate CRYST ADMIXTURE® for your project.

RECOMMENDED TOOLS

Gloves, safety glasses, and stirring mixing machine.

PACKAGING

CRYST ADMIXTURE® is available in 20 kg bags or pails.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

STORAGE & SHELF LIFE

Keep CRYSTARM® products must be stored dry and at a temperature of no less than 45°F (7°C). 2 years is the maximum shelf life when stored under proper conditions in original unopened packaging.

SAFETY HANDLING

CRYST ADMIXTURE® is made of alkaline cement which will irritate your eyes and skin and create sensitivity to your skin. Take adequate precautions, such as wearing protective gloves and using breathing apparatus if applied in enclosed environments. If contact is made, flush areas with lots of water. For further information please refer to Safety Data Sheet. KEEP OUT OF REACH OF CHILDREN.



CRYSTARM®
Drescherstraße 53, D-71277 Rutesheim
EN 934-2
CRYST ADMIXTURE® Crystalline Capillary
Admixture Water Resisting Admixture
EN 934-2:T9
Chloride content: < 0,05% by mass
Alkali content < 10.3 % by mass
Air content in fresh concrete: ≤ 2 % by volume
Compressive strength: ≥ 85 % of control
Conventional dry material
content: > 99,5 %
Capillary water Absorption
(after 90 day curing): ≤ 60 % by mass
Dangerous substances: NPD

CRYSTARM®

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WARRANTY: The Manufacturer warrants that the products manufactured by it conform to the formulation standards contained in all components in their proper proportion and are free from material defects. If any of the products are found to be defective the subsequent liability to The Manufacturer shall be limited only to the replacement of the product proven to be defective and shall not be liable for any other claim or for incidental or any consequential damages that may arise directly or indirectly with the said defective product. The user shall determine the suitability of the product for its intended use and the user assumes all liability in connection therein and The Manufacturer shall not be liable save for terms of this warranty.