

Cementitious Crystalline Capillary Waterproofing Admixture **NOVASTAR™** CCCW-SUPER AD

Description

CCCW-Super AD is a next-generation waterproofing admixture developed using advanced C-S-H crystallization technology. Through its hydrophilic C-S-H hydration enhancement mechanism, it is engineered to improve the waterproofing performance and durability of concrete.

CCCW-Super AD can be conveniently incorporated into fresh concrete either at the batching plant or directly in a ready-mix truck. It enhances cement hydration, forming additional beneficial C-S-H crystals within the concrete's micro-pore structure, which effectively prevents water ingress. This enhanced hydration not only ensures long-lasting waterproofing but also enables self-healing of microcracks upon moisture exposure.

Specification

Item	Specification
Color	White
Appearance	Granular powder
Density	1.4 g/cm ³
pH (when mixed with water)	13
Solid Content	100%
Hydrostatic Pressure Resistance	Up to 20 bar
Dosage	1 kg/m ³
Crack Self-Healing Capacity	Up to 0.5 mm
Particle Size	40–150 microns

Mixing Precautions

When incorporating multiple admixtures into a concrete batch, avoid adding CCCW-Super AD simultaneously with other admixtures. Add CCCW-Super AD first and pre-mix before introducing other admixtures to prevent interaction or interference.

Advantages

- Improves water resistance over time and reduces shrinkage cracking by up to 60%.
- Effectively seals and waterproofs cracks up to 0.5 mm.
- Delivers permanent, self-reactivating waterproofing that strengthens over time.
- Enhances resistance to sulfate and chloride ion attack.
- Remains unaffected by surface abrasion; retains over 70% waterproofing efficiency even after coating removal.
- Withstands hydrostatic pressure up to 12 bar.
- Provides two-way waterproofing (positive and negative sides), replacing unreliable membranes, liners, and coatings.
- Safe for use in potable water structures.
- Reduces overall water demand by approximately 5%.
- Eliminates the need for specialized waterproofing subcontractors.

Applications

- ★ Building foundations
- ★ Basements
- ★ Tunnels
- ★ Pipes
- ★ Marine projects
- ★ Elevator pits
- ★ Concrete walls
- ★ Concrete slabs
- ★ Construction joints
- ★ Swimming pools
- ★ Water treatment plants
- ★ Drinking water tanks
- ★ Underground parking

Dosage

Use 1 kg of CCCW-Super AD per cubic meter of concrete.

Application Instructions

Mixing and Application Procedures

★ Pre-Blending Method

1. Prepare a dedicated silo and dosing system for CCCW-Super AD, and introduce it directly into the ready-mix truck after cement addition.

Alternatively, it may be manually incorporated into the mixer or truck following cement addition.

2. Mix at high speed for approximately 10 minutes to ensure uniform dispersion throughout the mix.

3. If the slump is below the target level, add an appropriate amount of water reducer until the desired slump is achieved.

★ Post-Blending Method

Dry Shake Method

Method 1:

1. About one hour before pouring the concrete base slab, evenly spread the product on the cushion layer at 1.5 kg/m².

2. Pour the base concrete immediately.

Method 2:

1. After pouring and before concrete sets, evenly sprinkle the product on the surface at 1.5 kg/m².

2. Trowel uniformly to ensure full penetration into the upper layer.

(This method is suitable for various concrete pouring structures.)

Brush Method

1. Use a semi-stiff bristle or nylon brush to apply the prepared slurry evenly in two coats. Apply the first coat at 0.6–0.8 kg/m².

2. Apply the second coat after the first has initially set, brushing perpendicular to the first direction. If the first layer dries and whitens, lightly mist with water before the second coat.

3. Total dosage for both coats: 1.2–1.5 kg/m².

Spray Method

1. Use funnel-type or spray-gun-type equipment. Keep the nozzle within 0.5 m from the surface and maintain perpendicular alignment. Move at a steady speed to ensure uniform coverage.

2. Apply in two coats, with a total dosage of 1.2–1.5 kg/m². The final coating thickness should be approximately 1 mm after completion.

Packaging and Storage

Available in 20 kg or 25 kg white plastic buckets/bags.

Store sealed in a cool, dry indoor spot away from light.

Shelf Life

12 months if stored according to manufacturer's instructions in unopened containers.

Health and Safety

This product may exhibit corrosive behavior upon contact with water or perspiration.

Note

While the information and data herein are believed to be accurate and reliable, users are strongly advised to perform independent tests to confirm suitability for specific applications.

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The contents of this technical data sheet are valid as of the date of issue.