

TECHNICAL DATA SHEET

HOMESURE w-Shield AQUA CONTROL

Crystalline forming chemical admixture for plaster and concrete

HomeSure w-Shield Aqua Control, crystalline waterproofing admixture is a cement-based, integral additive engineered for concrete and mortar. It utilizes advanced crystalline technology to block water ingress by forming insoluble crystals within capillaries and microcracks, providing permanent waterproofing while maintaining vapor permeability.

INDICATIVE TECHNICAL DETAILS

Nature	: Grey colour powder
Bulk density	: 800 – 1050 kg/m ³
Specific gravity	: ~2.8
Chloride ion content	: < 0.01% by weight
Water permeability	: No leakage
Strength	: Compressive & flexural strength equal or slightly higher than control
Capillary Absorption	: ≤ 60 % by mass (after 90 days curing)

APPLICATION AREAS

- ❖ Basements, foundations, and retaining walls.
- ❖ Water tanks, reservoirs, and wastewater treatment plants.
- ❖ Tunnels, dams, and marine and sub-grade structures.

FEATURES AND BENEFITS

Permanent Integral Waterproofing: Lifelong protection against water penetration.

Superior Hydrostatic Resistance: Effective at extreme pressure, outperforming benchmark products.

Self-Healing Technology: Seals crack up to 0.5 mm automatically upon exposure to moisture

Enhanced Durability: Improves resistance against freeze-thaw, chloride, and sulfate attack

Safe for Potable Water: Non-toxic, zero VOC, minimal chloride content

Cost-Effective: Reduces the need for external membranes or surface coatings.

GUIDANCE FOR USE

Dosage: 0.8–2.0% by weight of cementitious material

* The dosage amount depends on the concrete or mortar mix design and the cement's reactivity. Trial applications should be conducted to determine the appropriate dosage.

Dosage in Ready-Mix Factory:

- Add the Walplast crystalline waterproofing admixture to the aggregate and sand.
- Mix for at least 30 seconds before adding water and cement.
- Continue mixing for at least 45 seconds to ensure the concrete achieves the desired workability and homogeneity.

Dosage in Batch Truck (On-Site):

- Prepare a slurry by mixing the w-Shield Aqua Control crystalline waterproofing admixture with water in a 1:1.25 ratio by weight in a suitable vessel.
- Add the slurry to the mix drum of the batch truck.
- Mix for at least 1 minute per cubic meter of drum content, with a minimum mixing time of 5 minutes to ensure uniform dispersion.
- Important: Do not add the dry powder directly to wet concrete as it may cause clumping and uneven dispersion.

Dosage in Precast Batch Plant:

- Add the w-Shield Aqua Control crystalline waterproofing admixture to the aggregate and sand.
- Mix for 2-3 minutes before adding water and cement.
- Continue mixing for an additional 1 minute until the concrete achieves its desired working properties.

Setting Time:

- The setting time of concrete may vary based on the mix design, ambient temperature, and cement reactivity.
- Higher ultimate strength may be achieved with the use of the admixture.

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Compatible: Works seamlessly with plasticizers, retarders, and common admixtures.

CLEANING & EQUIPMENT MAINTENANCE

Regularly flush dispensing equipment with water to ensure consistent performance and reduce the risk of breakdowns.

PACKING

Available in 20 kg bags

ADDITIONAL NOTES

- ❖ Homogeneous mixing is essential to ensure optimal performance; never add the dry admixture powder directly to wet concrete.
- ❖ Conduct concrete trials as per standard protocols to determine the appropriate dosage and assess compatibility with specific mix designs.

- In some cases, a concrete retarder may be required. Conduct suitability tests before application.

SHELF LIFE & STORAGE INSTRUCTIONS

- 🌈 12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +5°C to 40°C
- 🌈 Store in dry and well-ventilated place away from heat source or direct sunlight.

HEALTH & SAFETY INFORMATION

- ★ Refer MSDS for information and advice on the safe handling, storage and disposal of chemical products.
- ★ Use rubber hand gloves & safety goggles, while using product
- ★ Avoid contact with skin/eyes and avoid swallowing. In case of contact with skin, wash with plenty of water.
- ★ Spillages of w-Shield Aqua Control crystalline waterproofing can be removed by dry wiping using brush.
- ★ Keep out of reach of children.