

Shieldproof CR100

Crystalline Waterproofing Admixture for Concrete and Mortar



MICSHIELD®

Description

Shieldproof CR100 is a high-performance, crystalline powder waterproofing admixture designed to provide long-lasting protection against water ingress and moisture. Ideal for use in concrete structures such as foundations, water storage tanks, reservoirs, potable water tanks, swimming pools, and similar applications. It penetrates the concrete matrix, initiates an insoluble crystalline network that becomes an integral part of the concrete, effectively sealing capillaries and pores, enhances durability and resistance to water, moisture, chemicals, and corrosion of reinforcing steel, as well as reduces the risk of deterioration, extending the life of concrete structures under aggressive environmental conditions.

Uses

- Provides concrete protection from water in:
 - Water tanks and reservoirs.
 - Walls and concrete slabs.
 - Sewage and wastewater treatment plants.
 - Swimming pools.
 - Below-ground structures such as foundations, basements, retaining walls, and tunnels.
 - Marine applications.
 - Closing the concrete capillary of in-service water-containing structures that require a nontoxic solution.

Characteristics / Advantages

- Ensures concrete waterproofing under high hydrostatic pressure.
- Reduces the capillary water absorption of concrete.
- Enhances concrete resistance to service conditions; freeze/thaw cycles, deicing chemicals, and moisture.
- Permanent self-sealing hairline cracks up to 0.4 mm.
- Vapor permeable.
- Provides corrosion protection.
- Compatible with all types of Portland cement.

Typical Properties

Appearance / Color	Grey powder
Specific Gravity @ 23°C	1.20 ± 0.05
Water Permeability Reduction	35 – 40%
VOC	Nil
Chloride Ion Content	Nil

Application Instructions

Dosage and Application

0.8 – 1.0% by weight of cement and supplementary cementitious materials. **Shieldproof CR100** is compatible with all mixes that contain Portland cement, Microsilica, Fly Ash, GGBFS, and other admixtures from MICShield as well.

Add **Shieldproof CR100** to the concrete mix along with the mixing water. Ensure thorough mixing for uniform dispersion. It is always recommended to carry out trial mixes to achieve optimal waterproofing performance. For truck drums mixing (on-site), mix for 5 – 10 minutes to ensure proper distribution and dispersion. Do not overdose to avoid workability reduction.

For precast applications, dosage may be adjusted depending on permeability requirements.

Cleaning

All equipment should be cleaned immediately with clean water after use.

Curing

Protect fresh mortar from winds, rain, and direct sunlight to avoid premature drying or uneven curing. Begin curing immediately after final finishing and use standard curing methods for at least 5 days. The full cure is 28 days.

Packaging

Shieldproof CR100 is supplied in 20 kg bags.

Safety Instructions

Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product.



Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C.
- **Shieldproof CR100** should be added to the mixture at the same time with cement, sand, and other aggregates. Do not dissolve it in the mixing water beforehand, and do not add to wet mixed concrete to avoid lumps.
- Under-mixing can cause clumping and lead to uneven waterproofing.
- Ensure even hydration of cement for strength and durability.
- Do not overdose to avoid workability reduction.

Shelf Life and Storage

Shieldproof CR100 has a shelf life of 12 months when stored in its original unopened containers in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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