

Estomax MX100

Crystallization Admixture Waterproofing

Description

Estomax MX100 is a powder form waterproofing admixture containing special chemical additive which blends well with concrete to induce a crystallization process to protect against water/vapour transmission, aggressive chemical, and corrosion of reinforcement steel.

Uses

Waterproofing system for:

- Basements – floor and wall
- Swimming pools, reservoirs and dams
- Waste tanks/water storage structures
- Underground tunnel structures
- Marine and coastal structures
- Roof garden or any fresh concrete

Advantages

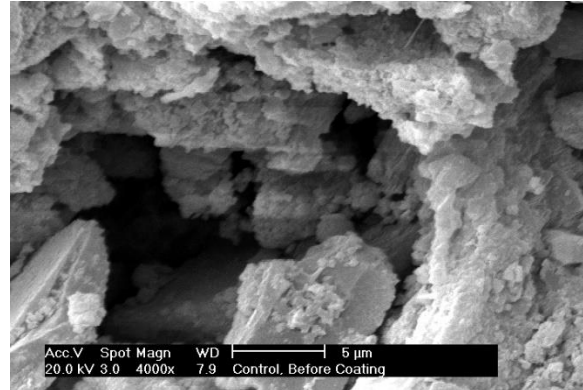
- **Estomax MX100** reacts with water to form a non-soluble crystalline matrix throughout the capillary voids in the concrete. This crystalline matrix will enable the concrete to be resistant to aggressive chemicals and water ingress at hydrostatic pressure up to 5 bars.
- Incorporating the latest technology from Japan, when **Estomax MX100** is dosed at 1.0% of cement content, it shall generate catalytic formation of ettringite crystals whereby it will regulate the exothermic hydration process of concrete to mitigate the early shrinkage crack within the concrete matrix.
- Suitable to be used for either new or restoration waterproofing works for water retaining concrete structure.
- Seals crack or voids up to 0.4 millimeter through continuous crystallization process under suitable conditions.
- Can be used for most concrete structure - either exposed to water or structures expected to be in contact with water.
- Suitable to be used as an additive in cement grout for new concrete to protect concrete structures from water ingress.

Physical Properties

| | |
|---|-------------|
| Color | Grey powder |
| Water Permeability Test at 28 days, mm DIN 1048-1991 Part 5 | 10.0 – 15.0 |
| Testing water for suitability for use in human consumption, BS 6920: Part 1 | Complied |

Note: The water permeability result above tested with concrete G40 at water-cement ratio less than 0.425. The water permeability performance may vary depends on cement content and concrete design mix. For further information, please contact Denka Construction Solutions (M) Sdn Bhd technical department.

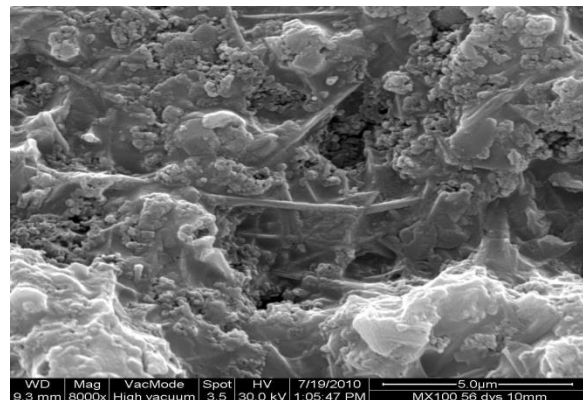
SEM Images – Crystallization of Estomax MX100



Untreated



Treated 28 days



Treated 56 days

220711

Application Instructions

Dosing

Estomax MX100 recommended minimum dosage shall be 0.7% of weight of cement content (Max: 2.1kg/m³ of concrete) for hydrostatic pressure up to 1.5 bar

Denka recommends a dosage of 1.0 % weight of cement content (Max: 4.0kg/m³ of concrete) for structure subjected to hydrostatic pressure above 1.5 bar.

Application and Mixing

Estomax MX100 may be added into concrete by either in concrete batching plant or into concrete mixing trucks. Dosing of **Estomax MX100** shall be in accordance to specification.

Estomax MX100 shall be weighed accordingly. In concrete batching plant, it is recommended that the **Estomax MX100** is to be added into the concrete mix after cement, sands and aggregates are discharged. It is highly recommended that the concrete mix is allowed to blend with **Estomax MX100** for at least 5 minutes before discharge.

The same method applies to concrete mixing truck. **Estomax MX100** is recommended to be added into concrete mixing truck directly on site and allow the mixture to mix for at least 5 minutes for a through mix.

Estomax MX100 is generally compatible with other concrete admixtures. **Trial batches are required to determine the actual setting time, slump and workability properties of concrete treated with Estomax MX100.**

Placing and Finishing

Complete the concreting work in accordance good concrete practice or to ACI guidelines.

Curing

Concrete curing is essential to achieve in the earliest possible time the optimum growth of the crystalline matrix by **Estomax MX100**. If possible, it is recommended that curing process takes place immediately once the concrete final set is achieved. Suitable curing agent such as Estocure range is recommended to be used during the curing process

Waterproofing to Concrete Joints

Denka's Estopper Range PVC Waterstops are recommended to be installed between lifts of concrete and joint in floor bays.

Packing & Size

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|----------------------|------------|
| Estomax MX100 | 20 kg/pail |
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Technical Support

Denka offers a comprehensive technical support, including help at the design stage, application advice and on the site problem solving. Specifiers and contractors are encouraged to contact our trained staff for answers to their questions.

Storage

Estomax MX100 has a maximum shelf life of 24 months from the date of production, if stored properly in its original, unopened and undamaged packaging. Store **Estomax MX100** in a dry enclosed area.

Precaution

Estomax MX100 contains cements which may cause skin irritation. For precaution, protective gloves and goggles are recommended to be worn when handling of this product. Always allow air to ventilate in basement or in an enclosed area. If ingested, do not induce vomiting but seek medical attention. In case of eye contact, rinse thoroughly with abundant water for at least 5 minutes. If case of skin contact, wash affected areas with soap and water. Change to clean clothes and shoes. Wash contaminated clothes/shoes thoroughly before reuse.

Additional Information

Denka Construction Solutions Malaysia Sdn Bhd offers a wide range of complementary products which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.



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