



MC-Special DM

High Grade Integral Waterproofing Additive For Concrete Using Dynamic Syncrystallization® And Hydrophobic Pore Blocking Technology For Production Of High Performance Waterproof Concrete

Product Properties

- Provides an efficient and durable barrier against rainwater, moisture and groundwater and makes concrete waterproof
- Makes the mix more workable
- Improves the slump
- Disperses rapidly & makes a homogenous mix
- Free from chloride
- Certified for use in concrete in contact with water intended for human consumption

Areas of Application

- Building Construction: Can be used in basement slab, basement walls, cast in place structural slabs, elevator pits, foundation, wet areas, podium decks, outdoor balconies, swimming pools, plasters, etc.
- Industrial: Can be used in water retention structures, cooling towers, floor slabs, etc.
- Infrastructure: Can be used in underground pipes, tunnels, pile foundations, manholes, dams, potable water tanks, etc.

Application Notes

General

Even in the case of excellent composition and compactness concrete consists of small voids. The so-called "capillary pores" (on average 13-16 percent by volume) which are due to a generous addition of mixing water. The additional mixing water is used to obtain sufficient compactness and workability. Owing to these capillary pores, concrete is always more or less pervious to water or hygroscopic. As opposed to conventional waterproofing products, **MC-Special DM** provides integral waterproofing properties by combining three characteristics into one specially designed product. These properties which give Your **Concrete** the **Extra Edge** in **Protection** against water ingress are:

1. Reduction of Capillary Pores: Special additives in **MC-Special DM** make the concrete more workable (increases slump) at the same w/c ratio or provide a reduction in w/c at the same workability levels. This property helps concrete achieve excellent compactability thereby reducing capillary pores.

2. Dynamic SynCrystallization® (DySc) Technology: **MC-Special DM** uses special latent hydraulic and pozzolanic Nanoparticles to ensure densest packing in the cement matrix at the Nano scale. The cement matrix is therefore densified by a complex process called - **Dynamic SynCrystallization**.

3. Hydrophobic Pore Blocking Mechanism: In addition to reduction of capillary pores and the Dynamic SynCrystallization®, **MC-Special DM** has special additives, which on one hand causes contraction of capillaries and on the other hand converts the water-absorbing capillary forces into water repellent capillary forces due to the hydrophobic effect of the constituent. Thus water is pushed out of the capillary pores and the concrete is kept dry.

A combination of the 3 properties above provide the concrete an efficient, reliable and durable waterproofing protection against rains, ground water, moisture, dampness, humidity etc.

MC-Special DM is an integral waterproofing compound in powder form, used for all types of concrete, requiring water impermeability.

It conforms with IS 2645.

Advantages

Following are a few advantages of using **MC-Special DM** as an additive to concrete.

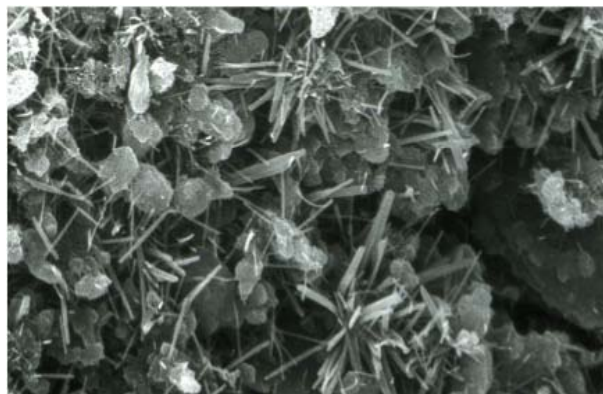
- Resists water penetration and absorption.
- Makes the mix more workable (improves the slump)
- Makes the w/c ratio reduction possible.
- Does not change setting time nor adversely effect the reinforcement.
- Disperses rapidly and makes a homogenous mix.
- Free from chlorides
- Provides an efficient and durable barrier against rain water, moisture and ground water
- Makes the concrete waterproof

Instruction for use

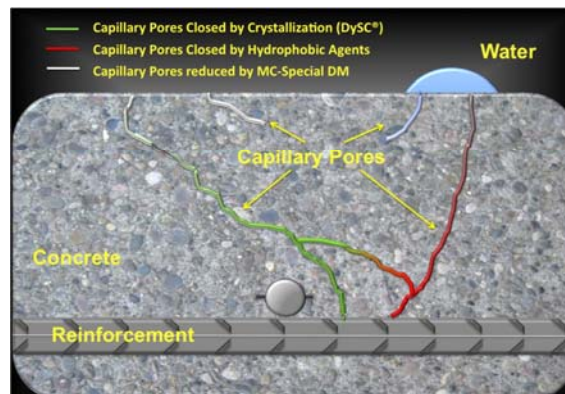
MC-Special DM is easy to use, either in the concrete batching plant or in a transit mixer at site. **MC-Special DM** should be added to the concrete after all other components of the mix have been added. Concrete should be mixed for atleast a minute after addition of **MC-Special DM**. Dosage is economical at 1.0 to 2.0% by weight of cement or atleast 3 kg **MC-Special DM** per m³ of Concrete.

Further Instructions / Precautions

Crystallization Formation by use of MC-Special DM



Working Mechanism for MC-Special DM



Technical Data For MC-Special DM

Characteristic	Unit	Value	Comments
Recommended dosage	% by weight Of cement	1.0 to 2.0 %	Dosage should be 1.0 to 2.0% by weight of cement, But in no case less than 3 kg/m ³ of concrete

Product Characteristics for MC-Special DM

Type of Product	High Performance Integral Waterproofing Additive
Form	Powder
Colour	Greyish to Offwhite
Shelf Life	12 Months from date of Manufacture
Delivery	20 kg Sacks
Storage	In Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost
Disposal	Empty packs completely and dispose off carefully to protect our Environment

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees, which may differ from the data contained in our information sheets, are only binding if given in written form. The accepted engineering rules must be observed at all times. E. & O.E.

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