

OPTEC[®] EC-905 (DM)

Multi-Functional Efflorescence Control Admixture Waterproofing admixture for concrete acc. to EN 934-2:T9

Product Description

OPTEC[®]EC-905 is GCP Applied Technologies' latest product offering for efflorescence control. It is an innovative multi-function admixture specifically formulated to enhance the overall appearance of hardscape and architectural zero-slump concrete masonry units. OPTEC[®]EC-905, through its novel chemistry, enhances color and controls both primary and secondary efflorescence. OPTEC[®]EC-905 provides a swipe neutral surface texture on the unit for better water control. OPTEC[®]EC-905 is supplied as ready-to-use liquid.

Product Advantages

- Optimized for dosage efficiency
- Can be used across multiple product lines
- Controls both primary and secondary efflorescence
- Increases density
- Lowers absorption

Product Function

OPTEC EC-905 works by reacting with the concrete materials in the mix and creating a hydrophobic pore structure. As a result, the ability of water to penetrate the concrete and solubilize the efflorescence causing salts are significantly reduced. OPTEC EC-905 is a swipe neutral formulation that allows the producer to better manage the moisture content of the concrete mix. Consequently, this may allow for increased water in the mix, which promotes greater cement hydration allowing for cement optimization (testing is recommended to determine cement reduction potential). When added at higher addition rates, OPTEC EC-905 reduces wicking allowing it to be used as an integral water repellent for architectural concrete masonry units.

Product Uses

OPTEC EC-905 is formulated for use in manufactured concrete products plants that produce architectural concrete masonry units, concrete pavers, segmental retaining wall units and other zero-slump concrete products where improved aesthetics are desired. OPTEC EC-905 is designed to reduce both primary and secondary efflorescence, while maintaining unit physical properties. A full line of companion products are available to provide additional qualities such as densification and acceleration.

Mixing Procedure

OPTEC®EC-905 should be added separately to the mix with or after the addition of the final mix water. Once OPTEC®EC-905 is batched, it should be mixed for a minimum of one minute, but preferably for two minutes. Mix times of less than one minute should be avoided. Never add OPTEC®EC-905 to dry cement. Variables such as cementitious content, aggregate gradations, processing equipment, and curing conditions may have an impact on the effectiveness of OPTEC®EC-905. Testing with local materials and production equipment is necessary to determine the end results. Consult your GCP Products Representative for more information.

Health and Safety

All precautions defined on the SDS (Safety Data Sheet) for OPTEC®EC-905 must be followed.

Technical Data: OPTEC® EC 905 (DM)

Color	White
Physical form	Liquid
Density (g/cm³)	0.94 (+/-) 0.02
pH-Value	8.5 (+/-) 1.0
Chloride content [m.-%]	< 0.1
Alkali content [m.-%]	< 0.5

Addition Rates

OPTEC®EC-905 is generally used at a rate of 0.20–0.50%, by weight, of cementitious materials. In applications where water repellency is desired the typical dosage rate is 0.50–1.50%, by weight, of cementitious materials. The addition rate is dependent upon the specific set of materials and the desired end properties to meet industry standards.

Packaging

OPTEC®EC-905 is supplied in the following pack sizes: 900 kg containers; 180 kg drums; 23 kg cans.

Storage

OPTEC®EC-905 must be protected from freezing at temperatures of 32°F (0°C) and below, as the admixture is not usable once frozen. Unopened containers of OPTEC®EC-905 have a shelf life of 12 months from the date of manufacture. The shelf life of opened containers may be less.

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