MANTA

Technical Data Sheet

Version: 1.0

Manta EH102

Hydroxy Functional PDMS Emulsion

Description

Manta EH102 is a reactive water-based emulsion of hydroxyl-functional polydimethylsiloxane (PDMS / OH-Polymer). It is specifically designed to serve as a highly effective water-repellent admixture for cementitious materials and a performance-enhancing additive for silicone resin-based renders and plasters.

By introducing active silanol groups that chemically bond with the substrate, Manta EH102 ensures long-lasting, integral waterproofing without compromising the material's natural breathability.

Features

- Excellent Water Repellency & Beading: Provides outstanding liquid water resistance and a strong "lotus effect" (water beading) to cured mortars and dried renders.
- Reactive Chemical Bonding: The active silanol groups react chemically with hydroxyl-functional sites on the substrate, pigments, and cement hydrates, ensuring durable protection.
- High Vapor Permeability: Maintains the breathability of the treated materials, allowing trapped moisture (water vapor) to escape freely.
- Improved UV Resistance: In combination with silicone resin emulsions, increases the resistance of silicone resin renders to UV degradation.

Versatile & Easy to Formulate: Can be used directly as supplied or easily diluted in water, making it highly compatible with various water-based formulations.

Typical Physical Properties

Manta Code:	EH102
Chemical Name:	Hydroxyl-Terminated PDMS Emulsion
Appearance:	Milky white liquid
Active Content:	Approx. 50%
pH:	6.0-7.0
Density(g/cm3):	1.0
Solvent (Thinner):	Water

Applications

1. Silicone Resin-Based Renders & Plasters

Acts as a synergistic performance enhancer when formulated with silicone resin emulsions. It provides silicone resin renders with high water repellency and beading, high water vapor permeability and increased resistance to UV degradation.

2. Cementitious Admixtures (Integral Waterproofing)

Serves as a highly efficient waterproofing mass-admixture for cement-based products, such as concrete paving blocks (pavers), precast elements, and dry-mix mortars.

Application Guidelines & Dosage

- Preparation: Manta EH102 can be used directly as supplied or pre-diluted. When diluting, slowly add deionized water under gentle agitation. (Note: If the diluted product is stored, a suitable biocide/preservative may be required to prevent microbial growth.)
- Dosage for Renders: For optimal performance in exterior silicone resin plasters, an addition level of 0.5% to 2.0% by weight is recommended.

- Dosage for Cementitious Mixes: When utilized as an integral admixture, the recommended dosage is 0.25% to 1.0% by weight, based on the dry weight of the cementitious mixture (equivalent to 0.125% to 0.5% active silicone ingredients).
- Manta EH102 releases no volatiles during reaction.

Packaging

In 200kg drum and 1000kg IBC, or customized.

Safety and Storage

Storage Conditions: Store in a cool, dry, and well-ventilated indoor area. Strictly avoid exposure to direct sunlight.
Temperature Limits: Maintain storage temperatures between 5°C and 40°C. Strictly PROTECT FROM FREEZING. Freezing will cause irreversible emulsion breakdown.
Shelf Life: 12 months from the date of manufacture when stored properly in original, unopened containers. It is non-hazardous substance.

Contact Information

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