

Manta WS113

Reactive Siloxane Waterproofing Emulsion

Product Description

Manta WS113 is a high-performance waterproofing emulsion based on reactive hydroxymethylsiloxane. Engineered for superior architectural protection, it functions as a state-of-the-art elastic treatment that delivers both deep-penetrating cross-linking and flexible surface film-forming properties.

Features

- **Active Chemical Cross-linking:** The reactive hydroxymethylsiloxane structure undergoes a dehydration cross-linking reaction with the alkaline components (such as calcium and sodium ions) inherently present in the cementitious matrix. **Capillary Suction Reversal:** Actively transforms the substrate's internal pores into a robust water-repellent barrier, effectively achieving an inverse capillary effect that halts moisture ingress.
- **Enhanced Mechanical Integrity:** The elastic nature of the cured siloxane film accommodates substrate movement (anti-stretching and shrinkage) and actively densifies the matrix, ensuring a highly efficient, dual-barrier (internal and external) waterproofing mechanism.

Typical Physical Properties

Manta code:	WS113
Chemical Name:	Hydroxymethylsiloxane
Appearance:	Milky white aqueous liquid
Total solid content:	Approx. 30%
pH:	6-8
Density(g/cm ³):	1.00-1.20
Flammable:	Non-flammable

Applications

Manta WS113 is a highly versatile emulsion engineered for both surface impregnation and integral waterproofing across diverse sectors:

1. **Architectural Waterproofing:** Widely specified for interior and exterior walls, flat roofing systems, floors, basements, and wet rooms (bathrooms/kitchens). Provides robust rust prevention and anti-seepage for reinforced concrete.
2. **Civil Engineering & Infrastructure:** Provides moisture mitigation in underground civil defense projects, tunnels, culverts, dams, bridges, and large-scale hydroelectric facilities.
3. **Water-Retaining Structures:** Ideal for the heavy-duty waterproofing of liquid containment facilities such as swimming pools, wastewater treatment tanks, and potable water towers.
4. **Substrate Impregnation:** Highly effective for the hydrophobic treatment of high-absorbent inorganic aggregates, including perlite boards, roofing tiles, cementitious bricks, lightweight

masonry claddings, and thermal insulation materials.

5. Architectural Coatings Additive: Serves as a premium performance additive in water-soluble architectural coatings, significantly enhancing waterproofing, weatherability, anti-pollution, and color retention properties.

How to use

1. Formulation into Water-Borne Coatings (In-Can Addition)

Calculate the dosage based strictly on the water content of the existing waterproof coating formulation.

The recommended addition rate is 1/20 (approx. 5%) relative to the water phase.

2. Integral Admixture for Concrete & Waterproof Mortar

Pre-dilute 1 part of the WS113 emulsion with 40 parts of clean water (1:40 dilution ratio) and mix evenly.

Utilize this diluted solution directly as the gauging water during the mechanical mixing of the cement mortar or concrete.

Precautions

Operating Temperature: This product should be applied within an ambient temperature range of 0°C to 50°C.

Occupational Safety: Formulated as a new green chemical, non-toxic and harmless to the body and skin. However, standard industrial hygiene must be maintained. Applicators should wear protective gloves. In the event of ocular contact during storage, transportation, or use, flush immediately with copious amounts of water and seek medical advice.

Packaging

In 50kg, 60kg, 200kg drum, or customized.

Safety and Storage

Keep in a clean, cool, and dry place. Prevent rain, sun exposure, and damage to the packaging container. Maintain storage temperatures strictly between 0°C and 50°C (Protect from freezing). It is non-hazardous substance.

Contact Information

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