

Manta WS116

Silicone Stone Impregnator

Description

Formulated specifically for the protection of mineral and stone substrates, Manta WS116 is an advanced, high-performance aqueous silicone emulsion. It acts as a deep-penetrating impregnator, safeguarding the natural aesthetics of the stone without forming a visible surface film.

Features & Benefits

- **Advanced PMHS Chemistry:** Composed of a highly reactive poly-methyl hydrogen hydroxy siloxane blend. Upon application, the active siloxane groups undergo a catalytic dehydrocondensation cross-linking reaction with the substrate and ambient moisture.
- **Structural Densification:** The specific Si-H cross-linking process inherently releases trace hydrogen gas, initiating a controlled micro-expansion within the capillary network. This actively densifies the stone matrix and enhances its internal cohesion without compromising its natural water vapor permeability (breathability).
- **Capillary Suction Reversal:** Actively reverses the capillary action of the stone (inverse capillary effect). The treated pores form a robust water-repellent barrier that effectively halts moisture ingress.

Typical Physical Properties

Manta code:	WS116
Chemical Name:	Poly-methyl hydrogen hydroxy siloxane blend
Appearance:	Milky white aqueous liquid
Total solid content:	Approx. 30%
pH:	6-8
Density(g/cm ³):	1.00-1.10
Flammable:	Non-flammable

Applications

Manta WS116 is engineered for the hydrophobic impregnation of premium natural stones and porous mineral substrates:

1. **Natural & Artificial Stone:** Provides superior moisture resistance for marble, granite, limestone, and engineered stones used in facades and flooring.
2. **General Masonry & Concrete:** Protects exterior/interior brickwork, roofing tiles, gypsum boards, and conventional fair-faced concrete from weathering and structural degradation.
3. **Underground & Civil Defense:** Mitigates water erosion and weathering in culverts, bridges, dams, tunnels, and underground projects.

4. Water-Retaining Facilities: Secures the impermeability of swimming pools, water purification tanks, and sewage tanks.

5. Coating Enhancement: Acts as a performance-boosting additive for water-borne architectural paints, significantly upgrading weatherability, color protection, and anti-aging properties on exterior finishes.

How to use

1. Surface Impregnation (Spray or Roller)

Dilution: Dilute the WS116 emulsion with clean water at a ratio of 1:10 to 1:20.

Method: Apply evenly onto the absorbent mineral substrate using a low-pressure sprayer or roller. Optimum water repellency is typically achieved after 48 hours of natural ambient curing.

2. Ceramic Floor Tile Treatment (Dipping/Spraying)

Dilution: Dilute 1 part of WS116 with 80 to 120 parts of water.

Method: Treat the tile surface via spraying or full immersion. Allow to dry completely. (Note: Waterproofing efficacy is proportional to the active concentration of the diluted solution).

3. Addition for Water-Borne Coatings

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

Add the WS116 at a ratio of 1/15 relative to the water phase.

CRITICAL EHS WARNING: This must be applied strictly as a post-addition (on-site mix). Do not incorporate this product into alkaline latex paints for long-term closed storage, as the inherent Si-H reaction will generate hydrogen gas and cause container swelling.

Precautions

Operating Temperature: Apply at ambient temperatures (above 0°C).

Safety: Formulated as a sustainable, non-toxic green chemical. Applicators must adhere to standard industrial hygiene practices, wearing chemical-resistant gloves. If splashed into the eyes, immediately flush with copious amounts of water and consult a doctor.

Packaging

In 200kg drum, or customized.

Safety and Storage

Keep in a clean, cool, and dry place. Prevent rain, sun exposure, and container damage. Maintain storage temperatures STRICTLY between 0°C and 30°C (Protect from freezing and extreme heat). Shelf life is 12 months. It is non-hazardous substance.

Contact Information

Nanjing Manta New Material Co., Ltd

Add: Room 102-247, Building 17, No. 1 Qiliqiao North Road, Nanjing Area of the China (Jiangsu)
Pilot Free Trade Zone, Nanjing, China

Factory: Miaoguan Town Industrial Park, Sishui County, Jining City, Shandong Province, China

Mob: 0086 18962800162

Mail: inquiry@mantasil.com Web: www.mantasil.com