

Manta WS114

Concentrated Silicone Stone & Masonry Impregnator

Description

Manta WS114 is a concentrated aqueous solution of alkali metal methyl silicate. Developed specifically for the hydrophobic treatment of natural stone and mineral masonry substrates, it deeply penetrates the capillary network to deliver robust, long-lasting moisture protection.

Reaction Mechanism: Upon application, the active silicate reacts with atmospheric carbon dioxide to form an insoluble, highly cross-linked polymethylsiloxane water-repellent barrier deep within the substrate, preserving 100% of the stone's natural appearance and breathability.

Features

- **Eco-Friendly Profile:** A Zero-VOC, water-based formulation free of irritating solvent odors, complying with strict environmental emission standards.
- **Superior Impermeability:** Dramatically reduces capillary water absorption. Treated stone and masonry exhibit an impermeability rate up to 400% higher than untreated substrates.
- **Extended Durability:** Provides outstanding resistance against UV degradation and weathering, effectively extending the functional service life of the substrate by more than 6 times.
- **Rebar Passivation:** The inherent alkalinity promotes a passivating effect within concrete matrices, actively protecting internal reinforcing steel (rebar) from corrosion.
- **User-Friendly & Economical:** Highly water-reducible concentrate ensures straightforward application and exceptional cost-efficiency for large-scale projects.

Typical Physical Properties

Manta code:	WS114
Chemical Name:	Aqueous Alkali Metal Methyl Silicate
Appearance:	Colorless or light yellow transparent liquid
Total solid content:	30%
Yield of Polymethylsilsesquioxane	≥ 20%
Viscosity(25°C, mm ² /s)	8-15
pH:	≥12.5
Density(g/cm ³):	1.10-1.30
Alkali content%:	8-10

Applications

Manta WS114 is strictly engineered for the hydrophobic surface treatment of porous mineral building materials:

1. **Natural & Artificial Stone:** Provides robust, invisible moisture protection for marble, granite, limestone, and engineered stone surfaces.

2. Architectural Masonry: Highly effective for the impregnation of external brickwork, roofing tiles, gypsum boards, and fair-faced concrete, preventing weathering and efflorescence.
3. Coating Additive: Acts as a performance-enhancing additive in highly alkaline architectural coatings and water glass (sodium silicate), significantly upgrading water repellency while maintaining stable bond strength.

How to use

Surface Impregnation (Spray Application):

- Dilution: Dilute the WS114 concentrate with clean, potable water at a ratio of 1:10 to 1:15.
- Application: Apply evenly using a low-pressure sprayer onto the absorbent substrate (stone, brick, or painted walls). Ensure a saturating coat.
- Winter Construction: Fully compatible with standard sodium nitrite-based antifreeze admixtures for cold-weather application.

Precautions & Occupational Safety (CRITICAL)

- Highly Caustic (pH \geq 12.5): This is a strongly alkaline industrial chemical. Applicators must wear chemical-resistant gloves, protective clothing, and safety goggles. Avoid direct skin contact. In the event of ocular exposure, flush immediately with copious amounts of water and seek urgent medical attention.
- Metal Incompatibility (Explosion Hazard): Strictly avoid contact with active metals such as zinc, aluminum, and tin during transport and application. The chemical reaction generates flammable Hydrogen Gas.
- Storage Vessels: Do not store in iron or unlined metal containers to prevent chemical degradation and severe container corrosion. Store exclusively in high-density plastic (HDPE) drums.

Packaging

In 200kg drum, or customized.

Safety and Storage

Storage: Keep in a clean, cool, and dry place. Prevent rain, sun exposure, and container damage. Maintain storage temperatures between 0°C and 50°C (Protect from freezing). Shelf life is 12 months. Transported as a non-hazardous liquid for standard freight (check local corrosive transport guidelines).

Contact Information

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