

Manta WS110

Polymethyl Hydrogen Hydroxy Siloxane Emulsion

Description

Manta WS110 is an elastomeric waterproofing emulsion based on poly-methyl hydrogen hydroxy siloxane. It is characterized by excellent penetrating crystallization and film-forming properties. Core Mechanism: The active hydrogen and hydroxy siloxane groups within its molecular structure undergo a rapid dehydrocondensation cross-linking reaction when in contact with the silanol groups of the substrate. This specific reaction inherently releases minute amounts of hydrogen gas, providing a unique "micro-expansion" capability that densifies the internal capillary network of the substrate. This combination of a "reverse capillary effect" and micro-expansion ensures a highly efficient and durable hydrophobic barrier.

Features & Benefits

- Superior Hydrophobicity: Delivers outstanding, long-lasting water repellency coupled with excellent weathering resistance (UV stability) against harsh environmental conditions.
- Advanced Impermeability: Significantly enhances the substrate's resistance to water penetration. Testing demonstrates that treated surfaces exhibit an impermeability rate up to 400% higher than that of ordinary untreated cement.
- Extended Durability & Abrasion Resistance: Actively protects the substrate matrix, improving surface wear resistance and effectively extending the functional service life of the structure by more than 6 times.
- Rebar Passivation: Non-corrosive formulation that promotes a passivating effect within the concrete matrix, actively protecting internal reinforcing steel (rebar) from chloride-induced corrosion.
- Cost-Effective Application: Highly water-miscible for easy dilution, ensuring a safe, user-friendly, and highly economical application process on-site.

Typical Physical Properties

Manta code:	WS110
Chemical Name:	Polymethyl hydrogen hydroxy siloxane
Appearance:	Milky white aqueous liquid
Active content:	30%
pH:	6-8
Density(g/cm ³):	1.00-1.10
Flammability	Non-flammable

Applications

1. General Construction & Rebar Protection: Widely applicable for waterproofing roofs, natural

stone, interior/exterior walls, floors, bathrooms, kitchens, basements, and warehouses. Provides anti-seepage protection for reinforced concrete structures.

2. Underground & Civil Defense Projects: Prevents water erosion and weathering in culverts, bridges, dams, tunnels, hydropower stations, and water diversion projects.
3. Water Containment Structures: Suitable for swimming pools, water purification tanks, sewage tanks, and water towers.
4. High-Absorbent Inorganic Aggregates: Impregnation for perlite boards, roof tiles, cement bricks, lightweight facades, asbestos, inorganic fabrics, and thermal insulation materials.
5. Water-Soluble Architectural Coatings: Enhances waterproofing, color protection, anti-pollution, and anti-aging properties; widely applied in exterior wall finishes.
6. Latex Paint Additive: Imparts obvious hydrophobicity to latex paints while maintaining stable bonding strength.
7. Other Special Uses: Applied anywhere requiring reduced water absorption and anti-seepage treatment.

How to use

1. Addition to Latex Paint & Waterproof Coatings: Calculate the total water content of the paint or coating formulation. Add Manta WS110 at a ratio of 1/15 of the water content. **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 Si-H reaction will continuously generate hydrogen gas (H₂) and cause severe container swelling or rupture.
2. Spray Application for Anti-Seepage: Dilute Manta WS110 with 10 to 20 times its volume of clean water. Spray onto the surfaces of water-absorbent inorganic materials (cement, bricks, tiles, plasterboards, marble, granite, artificial stone, painted walls). Optimal results are achieved after 48 hours.
3. Ceramic Floor Tile Waterproofing: Mix 1 part of Manta WS110 with 80 to 120 parts of water. Soak or spray the target surface. Excellent waterproofing is achieved after drying and curing.

Precautions

The application environment temperature for this product is 0°C to 50°C (Note: Standardized for water-based emulsion stability).

This product is a novel green chemical, non-toxic and harmless to the body and skin. However, standard industrial hygiene must be maintained. Wear protective gloves during operation. If splashed into the eyes, rinse immediately with plenty of clean water and seek medical attention.

Packaging

In 50kg, 60kg, 250kg drum, or customized.

Safety and Storage

Prevent rain, sun exposure, and damage to the packaging. The storage environment temperature should be 0°C to 50°C (Protect from freezing). Shelf life is 12 months.

Contact Information

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