MANTA

Technical Data Sheet

Version: 1.0

Manta WR-P02

Solid Silicone Water Repellent (Sodium-Based Powder)

Description

Manta WR-P02 is a solid silicone water repellent, formulated as an advanced powdered form of sodium methyl siliconate. It is designed to deliver exceptional capillary-penetrating and hydrophobizing properties for cementitious materials.

Moisture-Activated Cross-Linking: The core efficiency of Manta WR-P02 relies on its moisture-activated reactive mechanism. Upon hydration (contact with water during the mixing phase), the reactive silanol groups within its molecular structure chemically bond with the native hydroxyl groups of the silicate-based building materials. This permanent covalent reaction neutralizes capillary suction, establishing a robust, three-dimensional hydrophobic network deep within the porous matrix.

Densification: As it cures, it contributes to a denser internal matrix of the cementitious system together with a continuous moisture barrier. It is an ideal, easy-to-blend active additive for high-demand dry-mix formulations.

Typical Physical Properties

Manta Code:	WR-P02
Chemical Name:	Sodium methyl siliconate powder
CAS No. :	16589-43-8
Appearance:	White Powder
Solid Content:	≥ 90%
Methylsilsesquioxane Content (as $CH_3SiO_{1.5}$):	≥ 50%
pH:	12-14
Flammability:	Not flammable

Application

1. Dry-Mix Mortars & Tile Grouts

An integral water repellent for cementitious dry-mix formulations. Extensively used in tile grouts, joint fillers, and decorative stucco to impart long-lasting hydrophobicity, significantly reducing water absorption and mitigating the migration of waterborne salts.

2. Exterior Wall Putty & EIFS Systems

Highly recommended as a core additive in exterior wall putty powders and Exterior Insulation and Finish Systems (EIFS). Protects facades from driving rain while fully preserving the vapor permeability (breathability) of the protective layers.

3. Cementitious Waterproofing Slurries

An active ingredient in formulating rigid and semi-flexible cementitious waterproofing coatings. Provides robust barrier properties for roofs, basements, bathrooms, and retaining walls.

4. High-Absorbent Inorganic Aggregates

Ideal for dry-blending with highly porous lightweight aggregates (expanded perlite, gypsum powders, thermal insulation materials), endowing them with significant moisture-proof capabilities.

Application Guidelines (How to Use)

1. Integral Waterproof Mortar / Concrete

Dosage: Add Manta WR-P02 at 0.4% to 0.5% by weight of cement.
Mixing: To ensure optimal dispersion, dry-blend the WR-P02 powder thoroughly with the cement, sand, and aggregates before adding water.
Application: Proceed with standard mortar/concrete placement and curing methods.

2. Leakage Repair & Patching
Preparation: Mechanically profile smooth surfaces. Active water leaks must be plugged with a rapid-setting water-stop compound first.
Execution: Apply a slurry bond coat, followed immediately by the WR-P02 treated waterproof mortar.

3. Surface Spray Coating (Liquid Anti-Seepage)
Dilute 1 part WR-P02 powder with 50 to 70 parts of clean water. Spray directly onto highly absorbent inorganic substrates (concrete, fired bricks, roof tiles) to create an immediate moisture-proof barrier.

4. Pre-Packaged Waterproof Cement & Putties
Incorporate WR-P02 at a dosage of 0.4% - 0.5% by total dry weight into putty powders, tile grouts, or compatible dry-mix formulations to significantly enhance weather resistance.

Package &Storage:

In 25kg bags.
This agent dissolves in water. During transportation, pay attention to waterproofing and moisture-proofing to prevent rain and packaging damage.
Store in a dry environment at -20 to 40°C, with a shelf life of 24 months.

Contact Information

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