MANTA

Technical Data Sheet

Version: 1.0

Manta MSEP

Potassium Methyl Siliconate (Aqueous Solution)

Description

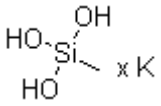
Manta MSEP is a water-reducible potassium methyl siliconate solution, designed as a water repellent for highly porous mineral substrates. Compared with conventional sodium siliconates, its potassium-based chemistry significantly reduces the risk of white salt deposits (efflorescence), making it well suited to high-aesthetic architectural surfaces.

Following application and deep penetration into the substrate's capillary tract, the active siliconate reacts with atmospheric carbon dioxide (CO_2). This rapid curing process constructs an invisible, highly cross-linked polymethylsiloxane network both internally and across the treated surface.

This permanent, insoluble silicone matrix delivers exceptional capillary moisture defense, significantly reducing water absorption while maintaining the material's natural vapor permeability (breathability). Treated structures exhibit outstanding weatherability, anti-aging performance, and resistance to dirt pick-up.

Performance equivalent to WACKER SILRES® BS 16 / Dow XIAMETER™ OFS-0777 Siliconate.

Typical Physical Properties

Manta Code:	MSEP
Chemical Name:	Potassium methyl siliconate aqueous solution
Synonyms:	Potassium Methylsilanetriolate; Methylsilanetriol potassium salt
CAS No.:	31795-24-1
EINECS No. :	250-807-9
Appearance:	Colorless to light yellow transparent liquid
Solid Content:	Customizable; typically 30%, 40%, 50% or 52% (± 2%)
Specific Gravity (25 °C):	1.30
pH:	13
Flammability:	Not flammable
Chemical Structure:	

Properties

- Low Efflorescence: Compared with sodium siliconates, the potassium-based formulation significantly reduces the risk of white salt staining.
- Exceptional Durability: Good weatherability and anti-aging performance; typical data indicate durability from -50°C to 150°C.
- Cost-Effective Dilution: Highly concentrated active ingredient; can be easily diluted with tap water directly on-site.

Applications

1. Architectural & Natural Stone Protection

A low-efflorescence water repellent for high-value aesthetic surfaces. Highly recommended for the treatment of natural marble, granite, terracotta, exposed concrete, and porous facing bricks where preserving the original appearance is critical.

2. Coatings & Paint Additives

Serves as a performance-boosting additive in water-borne architectural coatings and alkali silicate paints. Significantly enhances hydrophobicity, weather resistance, and color retention without compromising bonding strength.

3. Oilfield & Drilling Operations
Functions as an effective shale inhibitor and fluid modifier in oil drilling, efficiently adjusting mud viscosity. In Enhanced Oil Recovery (EOR), it is injected to stabilize formation integrity and prevent collapse of the reservoir rock matrix.
4. Specialty Wood & Cellulosic Treatments
When a dilute Manta MSEP solution is precisely neutralized with aluminum sulfate or aluminum nitrate, it becomes an exceptional impregnating agent, imparting outstanding water repellency and acting as a potent preservative for wood and fiberboards.

Packaging
In 50kg, 250kg drum, 1350kg IBC

Safety and Storage
Store in a cool, dry place and avoid direct sunlight. Keep containers tightly closed, as the product reacts with atmospheric carbon dioxide. Shelf life is 12 months from the date of production when stored at or below 25°C in the original unopened containers. The liquid is highly alkaline; avoid contact with skin and eyes and read the Safety Data Sheet before handling.

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: +86 18961071292
Mail: inquiry@mantasil.com Web: www.mantasil.com