MANTA

Technical Data Sheet

Version: 1.0

Manta MF3

Silane-Terminated Polyether Polymer

Description

Manta MF3 is an alkoxysilane-terminated polyether for moisture-curing elastic sealants and sealing coatings. Sealants formulated with MF3 show good adhesion to a wide variety of substrates. Unlike polyurethane or silicone systems, these formulations are solvent-free and isocyanate-free and cure without bubbles and with low odor. MF3 is used in construction, transportation and general industry. Performance equivalent to WACKER GENIOSIL® XM 25.

Typical Physical Properties

Manta Code:	MF3
Chemical Name:	Silane-terminated polyether
Appearance:	Yellow viscous liquid
Flash Point:	≥ 237 °C
Boiling Point:	> 250 °C
Viscosity (25 °C):	1,000 – 2,000 mPa·s
Density (25 °C):	1.02 – 1.05 g/cm³

Properties

- Low activity and low shrinkage
- Low viscosity, allowing higher filler loadings
- Good adhesion strength and tensile elasticity
- Good resistance to aging and yellowing
- Good resistance to water and chemical attack
- Solvent-free and low odor
- Can be blended with other Manta polymers

Applications

Manta MF3 is used as a base polymer in elastic sealants, elastic structural sealants, encapsulating adhesives and coatings. It cures by reaction with moisture and can be formulated as one-component or two-component systems.

- High-hardness joint sealants
- Elastic sealants for transportation
- Low-viscosity encapsulating adhesives
- DIY sealants
- Low-emission decoration sealants
- Reactive plasticizer: can be used as a reactive plasticizer in silane-terminated polymer formulations; the effect on modulus and hardness should be verified in the specific formulation.

Processing

Manta MF3 is readily soluble in common organic solvents such as ethanol and practically insoluble in water; formulation components are therefore typically oil-soluble.

Curing is based on moisture-initiated silane reactions: in the presence of a catalyst the terminal silane groups hydrolyze to silanols, which condense to siloxane crosslinks and form a three-dimensional network.

Although MF3 contains reactive functional groups, it remains stable for a certain time without

catalyst. Moisture must be controlled during storage and processing, and a chemical moisture scavenger is required for formulation stability; vinyltrimethoxysilane (VTMO) is recommended.
MF3 can be processed with conventional mixing equipment. Please contact Manta technical service for further support.

Packing

50 kg plastic drum with aluminum-foil liner bag;
200 kg drum with aluminum-foil liner bag;
1,000 kg IBC (tote);
Other pack sizes available on request.

Safety and Storage

Store in the tightly closed original container in a cool, dry place, protected from moisture and direct sunlight. Shelf life: 12 months from the date of production when stored as recommended. The product is classified as non-hazardous. Refer to the current Safety Data Sheet (SDS) for safety, handling and transport information.
Note: The values in this data sheet are typical values and are not intended for use in preparing specifications. Users should test the product to determine its suitability for their specific application.
GENIOSIL® is a registered trademark of Wacker Chemie AG.

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