

Manta MS3030T

MS Polymer / Silyl-Terminated-Polyether

Description

Manta MS3030T is a low-viscosity, alkoxy-silane terminated polyether polymer featuring a high-purity polyoxypropylene backbone. Specifically engineered to replace traditional polyurethane and silicone systems, it provides a solvent-free and isocyanate-free base for high-performance elastic sealants and structural adhesives. The polymer cures at ambient temperature through a moisture-triggered cross-linking mechanism. Unlike PU systems, it releases no CO₂ during curing, ensuring a bubble-free and odorless finish. With a low glass transition temperature (T_g), MS3030T maintains stable mechanical properties and superior elasticity across a wide temperature range.

Typical Physical Properties

Manta code:	MS3030T
Chemical Name:	Silane terminated polyether
Appearance	Light yellow transparent liquid
Flash Point (°C):	≥237
Boiling Point(°C):	≥250
Viscosity (25°C) / mpa·s:	10000 – 15000
Density (25°C) / g/cm ³ :	ca.1.0
Water-Soluble	Virtually Insoluble
Activity:	Moderate Activity
Modulus:	Moderate Modulus

Properties

- Moderate Activity, Moderate Modulus
- Good adhesion strength
- Fast curing, non-tin catalysts used if needed, more eco-friendly
- Excellent aging and yellowing resistance
- Excellent water resistance, resistance to chemical corrosion
- Excellent elastic recovery rate
- Excellent storage stability
- Solvent free, odourless, eco-friendly
- Could be blended with other Manta polymers

Applications

Manta MS3030T is a high-performance base resin designed for formulating premium elastic sealants, structural adhesives, encapsulants, and protective coatings. Featuring a versatile moisture-curing mechanism, it can be engineered into both one-component (1K) and two-component (2K) systems to

meet diverse industrial requirements.

1. Construction & Infrastructure: Ideal for low-modulus construction sealants used in expansion joints and facade sealing, offering superior weatherability and movement accommodation.
2. Transportation & Automotive: Formulated into high-performance elastic sealants for rail transit, buses, and specialty vehicles, providing excellent vibration damping and structural integrity.
3. Consumer & DIY Markets: Perfect for Personal DIY sealants due to its ease of use, non-toxic profile, and bubble-free curing.
4. Eco-Friendly Interior Solutions: Specifically designed for green decoration sealants, offering a solvent-free, odorless, and paintable finish for indoor environments.
5. Industrial Assembly: Serves as an excellent binder for elastic structural adhesives and encapsulate potting compounds in electronics and general manufacturing.

Processing

Manta MS3030T is readily soluble in common organic solvents (e.g., ethanol) but insoluble in water; therefore, formulation components should primarily be oil-soluble. The polymer cures via a moisture-triggered mechanism: terminal silane groups hydrolyze into silanol intermediates, which then undergo catalyst-accelerated condensation to form a high-strength siloxane bond (-Si-O-Si-) network.

While MS3030T exhibits temporary stability in air without a catalyst, its high reactivity makes moisture control critical. To prevent premature gelation and ensure shelf-life stability, strict dehydration of raw materials and the use of a moisture scavenger—specifically Vinyl Trimethoxysilane (VTMO)—are mandatory during processing and storage.

Conventional mixing process can be suitable for MS3030T POLYMER. For more technical support, please consult our technical engineers.

Cleaning

This product can be removed before curing by the general solvent, such as ethanol, dimethyl carbonate. After curing can only be removed by mechanical means.

Packing

50kg plastic drum lined with aluminum foil bag;

200kg drum lined with aluminum foil bag;

1000kg IBC/Tote;

Can be customized.

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is 12 months. It is non-hazardous substance.

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: 0086 18962800162

Mail: inquiry@mantasil.com Web: www.mantasil.com