

Manta MS3303T

MS Polymer / Silyl-Terminated-Polyether

Description

Manta MS3303T is an alkoxy-terminated polyether polymer with a polyoxypropylene backbone. It is specifically engineered as a base resin for moisture-curing systems, forming a resilient elastic network through the hydrolysis and cross-linking of alkoxy groups in ambient humidity. Compared to traditional silicone and polyurethane technologies, MS3303T provides a superior balance of mechanical properties and environmental safety. It is a 100% solvent-free, low-VOC resin that contains no free isocyanates, ensuring a safe and eco-friendly formulation.

Typical Physical Properties

Manta code:	MS3303T
Chemical Name:	Silane terminated polyether
Appearance	Transparent viscous liquid
Flash Point (°C):	≥100
Viscosity (25°C) / mpa·s:	40000 – 50000
Density (25°C) / g/cm ³ :	1.002- 1.005
Activity:	High activity
Modulus:	Medium modulus
Chemical Structure:	



Properties

- Fast Curing: Accelerated curing profile for increased productivity.
- High Transparency: Crystal clear appearance for optical-grade applications.
- Excellent Weathering & Yellowing Resistance: Long-term UV stability and anti-yellowing performance.
- Superior Adhesion & Elasticity: High bond strength combined with excellent tensile elongation.
- Excellent Water & Chemical Resistance: Highly resistant to moisture and various chemical solvents.
- Superior Storage Stability: Long shelf life and consistent viscosity over time.
- Eco-Friendly: Solvent-free and odorless, ensuring a safe working environment.
- Broad Compatibility: Can be seamlessly blended with other polymers for formulation flexibility.

Applications

Manta MS3303T is a versatile base resin designed for the formulation of high-performance

adhesives, sealants, potting compounds, and protective coatings. It features a flexible curing mechanism, triggered by atmospheric moisture at room temperature in the presence of catalysts (such as amines or organotin compounds):

1. **Optically Clear Sealants & Adhesives:** Due to its high transparency and anti-yellowing properties, it is ideal for "crystal clear" sealants used in glass assembly, decorative bonding, and visible joints.
2. **Fast-Assembly Industrial Bonding:** Optimized for production lines requiring rapid curing and high initial green strength. It is suitable for both one-component (1K) systems for ease of use and two-component (2K) systems for deep-section curing.
3. **Electronic Potting & Encapsulation:** Provides excellent moisture protection and chemical resistance for sensitive electronic components, ensuring long-term storage stability and reliability.
4. **Transportation & Automotive:** Used in the structural bonding and sealing of vehicle components where high elasticity and resistance to environmental aging are critical.
5. **High-End Construction:** Applicable for elastic sealing in curtain walls, window perimeters, and interior decoration, offering a paintable, solvent-free, and odorless finish.

Processing

1. **Moisture Sensitivity:** Due to the moisture-curing nature of alkoxy groups, it is critical to maintain a strictly dehydrated environment during storage and production to prevent premature cross-linking.
2. **Formulation Versatility:** The dosage of MS3303T can be adjusted based on specific requirements. It is highly compatible with a wide range of fillers, including PCC (Nano-precipitated Calcium Carbonate), GCC (Ground Calcium Carbonate), Fumed Silica (White Carbon Black), silica flour, diatomaceous earth, and aluminum hydroxide.
3. **Dehydration Process:** To avoid premature gelation, all fillers must be thoroughly dehydrated. Silane VTMO is typically recommended as a high-efficiency moisture scavenger.
4. **Plasticizer Compatibility:** Suitable plasticizers include Phthalates (such as DOP, DINP, DIDP), as well as PPG and other low-molecular-weight polyethers.
5. **Functional Additives:** For enhanced performance, MS3303T can be blended with various additives, including adhesion promoters (tackifiers), antioxidants, fungicides (mildew inhibitors), and UV/Light stabilizers.

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

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