

# Manta MS3303H

MS Polymer / Silyl-Terminated-Polyether

### Description

Manta MS3303H is an alkoxy-silylated polyether polymer with a high-purity polyoxypropylene (PPO) backbone. Engineered for premium moisture-curing systems, M330A utilizes advanced silane-termination technology to ensure rapid cross-linking and a robust siloxane network upon exposure to humidity.

Designed as a superior alternative to traditional silicones and polyurethanes, MS3303H is entirely solvent-free, VOC-compliant, and contains no free isocyanates. It eliminates common curing defects such as bubbling and odor, delivering a flawless surface finish. Its exceptional versatility makes it the ideal binder for high-performance applications in Construction, Transportation, Industrial Assembly, and New Energy sectors.

### Typical Physical Properties

Manta code:	MS3303H
Chemical Name:	Silane terminated polyether
CAS NO.:	216597-12-5
Appearance	Transparent viscous liquid
Flash Point (°C):	≥100
Viscosity (25°C) / mpa·s:	50000-60000
Density (25°C) / g/cm <sup>3</sup>	1.002 ~ 1.005
Surface dry time min:	30
Tensile strength Mpa:	≥ 1.95
Elongation at break %:	≥ 300
Hardness Shore A:	≥ 38
PH Value:	6 ~ 8
Activity:	High Activity
Modulus:	Medium modulus
Chemical Structure:	



### Properties

- Accelerated Curing Profile: Optimized for fast tack-free times and through-cure, significantly improving production efficiency.
- Exceptional Optical Clarity: High transparency combined with superior resistance to UV aging and yellowing, perfect for crystal-clear bonding.

- **Advanced Mechanical Balance:** Delivers a high-strength bond while maintaining excellent tensile elasticity and recovery.
- **Superior Environmental Profile:** Solvent-free, odorless, and low-VOC; can be formulated with tin-free catalysts for eco-friendly compliance.
- **Robust Stability:** Exhibits excellent resistance to water, chemical solvents, and long-term storage stability.
- **Universal Compatibility:** Can be seamlessly blended with other Manta polymers or compatible resins to fine-tune mechanical properties and formulation costs.

### Applications

MS3303H is used as a base/reactive polymer for moisture-curing sealants, adhesives, potting/encapsulation compounds, and coatings. It cures at room temperature by reacting with atmospheric moisture, typically with the aid of catalysts (e.g., amine- or tin-based catalyst systems), and can be formulated into 1K or 2K systems. Typical uses include:

Transportation Grade Sealants;  
Medium-to-Low Modulus Construction Sealants;  
Crystal Clear Potting & Encapsulation Adhesives;  
Consumer & DIY Sealants;  
Eco-friendly Interior Decoration Sealants;

### Processing

1. **Moisture Sensitivity:** As alkoxy groups undergo hydrolysis and cross-linking in the presence of humidity, it is critical to maintain a strictly moisture-free environment during storage and production to prevent premature gelation.
2. **Formulation Flexibility:** Manta MS3303H offers high formulation latitude. It is compatible with a wide range of functional fillers, including PCC, GCC, fumed silica, quartz flour, diatomaceous earth, and aluminum hydroxide.
3. **Dehydration:** To avoid premature curing, fillers must be thoroughly dehydrated. Vinyltrimethoxysilane (VTMO) is recommended as an effective water scavenger during the compounding process.
4. **Plasticizer Selection:** Compatible plasticizers include various phthalates (such as DINP, DIDP, or DOTP) and low-molecular-weight polyethers (PPG).
5. **Performance Additives:** For optimized performance, MS3303H can be formulated with adhesion promoters, antioxidants, biocides (fungicides), and light stabilizers. Compatible with tin-free catalysts for environmentally sensitive applications.

### Typical Performance of a Reference Sample

MS3303H Inspection Items	Standard	Analysis Results
Appearance	Light yellow transparent liquid	Light yellow transparent liquid

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Viscosity(25°C) mPa.s	50000-60000	56670
pH Value	6.0-9.0	7.0
Tensile Strength Mpa	≥0.5MPa	0.82
Elongation at tensile break%	≥80	115.6
Hardness(Shore A)	≥35	38

### 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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