MANTA

Technical Data Sheet

Version: 1.0

Manta MS3303M

MS Polymer / Silyl-Terminated-Polyether

Description

Manta MS3303M is an alkoxy-terminated polyether polymer with a polyoxypropylene backbone. Designed for moisture-curing systems, it undergoes hydrolysis and cross-linking in ambient humidity to form a durable elastic network. It is an ideal base resin for formulating high-quality elastic sealants, structural adhesives, and protective coatings.

Compared to traditional silicone and polyurethane technologies, MS3303M offers a superior balance of performance and environmental safety. It is solvent-free, low-VOC, and contains no free isocyanates. Key technical advantages include excellent primerless adhesion to diverse substrates, a bubble-free curing process, and a surface finish that is readily paintable.

Due to its versatile properties, it is widely utilized in demanding sectors such as construction, general industry, transportation, and new energy (including EV battery and solar assembly).

Typical Physical Properties

Manta code:	MS3303M
Chemical Name:	Silane terminated polyether
Appearance	Transparent viscous liquid
Flash Point (℃):	≥100
Viscosity (25℃) / mpa·s:	45000 – 55000
Density （25℃) / g/cm3	1.002-1.005
Activity:	High activity
Modulus:	Medium modulus
Chemical Structure:	

Properties

- High Activity, Medium Modulus
- Fast curing
- High transparency
- Excellent anti-aging and anti-yellowing properties
- Excellent bonding strength and tensile elasticity
- Excellent water resistance and chemical solvent resistance
- Excellent storage stability
- Solvent-free, odor-free, environmentally friendly
- Can be mixed with other polymers.

Applications

MS3303M polymer is the main resin raw material for producing adhesives, sealants, potting compounds and coatings. Under room temperature, it solidifies by absorbing moisture in the air under the action of catalysts (such as amines, tin, etc.). According to needs, we can design it into a one-component or two-component system formula product, which can widely bond different substrates.

Processing

1. Due to the moisture-curing nature of alkoxy groups, it is critical to maintain moisture-free conditions during storage and production.
2. MS3303M offers excellent formulation flexibility and is highly compatible with various fillers, such as PCC, GCC, fumed silica, silica flour, diatomaceous earth, and aluminum hydroxide.
3. To prevent premature gelation, fillers must be dehydrated prior to use; VTMO is typically recommended as a moisture scavenger.
4. Suitable plasticizers include phthalates (e.g., DOP, DINP, DIDP), PPG, and other low-molecular-weight polyethers.
5. For enhanced performance, MS3303M can be formulated with adhesion promoters, antioxidants, fungicides, and UV 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

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