MANTA

Technical Data Sheet

Version: 1.0

Manta MS3303M

Silyl-terminated polyether (STPE), SMP type

Description

Manta MS3303M is an alkoxysilane-terminated polyether (STPE, also known as silane-modified polymer, SMP) with a polyoxypropylene backbone. In moisture-curing systems it hydrolyzes and crosslinks with ambient humidity to form a durable elastic network. It is used as a base polymer for elastic sealants, structural adhesives and protective coatings.
Compared with conventional silicone and polyurethane technologies, MS3303M is solvent-free, suitable for low-VOC formulations and contains no free isocyanates. It offers good adhesion to many substrates without primer, bubble-free curing and a paintable surface.
Fields of use include construction, general industry, transportation and new energy (e.g., EV battery and solar module assembly, subject to application testing).

Typical Physical Properties

Manta Code:	MS3303M
Chemical Name:	Silane-terminated polyether
Appearance:	Transparent viscous liquid
Flash Point:	≥ 100 °C
Viscosity (25 °C):	40,000 – 50,000 mPa·s
Density (25 °C):	1.002 – 1.005 g/cm³
Activity:	High
Modulus:	Medium
Chemical Structure:	

Properties

- High activity, medium modulus
- Fast curing
- High transparency
- Good resistance to aging and yellowing
- Good bond strength and tensile elasticity
- Good resistance to water and chemical solvents
- Good storage stability
- Solvent-free and low odor
- Can be blended with other polymers

Applications

Manta MS3303M is used as the base polymer for adhesives, sealants, potting compounds and coatings. It cures at room temperature with atmospheric moisture in the presence of catalysts (e.g., amine or tin compounds) and can be formulated as one-component (1K) or two-component (2K) products that bond to a wide range of substrates.

Processing

1. Moisture: the alkoxysilane groups cure with moisture, so moisture-free conditions must be maintained during storage and production.
2. Fillers: MS3303M is compatible with fillers such as PCC, GCC, fumed silica, silica flour, diatomaceous earth and aluminum hydroxide.
3. Drying: dry fillers before use to prevent premature gelation; VTMO is recommended as a moisture scavenger.
4. Plasticizers: suitable plasticizers include phthalates (e.g., DINP, DIDP), PPG and other low-molecular-weight polyethers.
5. Additives: adhesion promoters, antioxidants, fungicides and UV stabilizers can be added to adjust the end-use properties.

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.

Contact Information

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