MANTA

**Technical Data Sheet**

Version: 1.0

# Manta MS310A

Hybrid Polymer

## Description

Manta MS310A is a silane-terminated polyether (STPE, also known as silane-modified polymer, SMP) with highly reactive silane end groups on a polypropylene oxide (PPO) backbone. It cures rapidly on exposure to atmospheric moisture.
MS310A cures to a stable siloxane network. It is intended for formulators who need a fast-curing binder for adhesives and sealants that can be formulated without organotin catalysts.
Performance equivalent to WACKER GENIOSIL® STP-E10.

## Typical Physical Properties

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|---|---|
| Manta Code: | MS310A |
| Chemical Name: | Silane-terminated polyether (high-reactivity type) |
| Appearance: | Colorless, transparent viscous liquid |
| Viscosity (25 °C): | 8,000 – 12,000 mPa·s |
| Density (25 °C): | 1.005 – 1.006 g/cm³ |
| Activity: | High |

## Properties

- High reactivity: short tack-free time and fast through-cure without heavy-metal catalysts.
- Tin-free formulation: allows tin-free and phthalate-free formulations for products with stricter environmental requirements.
- Transparency: suitable for clear sealants and transparent bonding.
- Weathering: good resistance to UV aging and yellowing.
- Processing: the low viscosity allows easy compounding with conventional fillers and additives and high filler loadings.
- Low-temperature flexibility: the low glass transition temperature (Tg) of the polyether backbone helps the cured material remain flexible over a wide temperature range.

## Applications

1. Sealants: construction and industrial sealants requiring fast curing and paintability.
2. Elastic adhesives: binder for elastic assembly adhesives in automotive, rail vehicle and structural engineering applications.
3. Flooring adhesives: parquet and wood flooring adhesives; high filler loadings are possible.
4. Potting and encapsulation: can be evaluated for protecting electronic components; electrical and long-term properties must be verified in the final formulation.
5. Coatings: reactive binder or additive to improve adhesion and crosslink density in coatings.
6. DIY and professional bonding: adheres without primer to many substrates, including metals, plastics and ceramics; adhesion should be confirmed on the actual substrate.

## Processing

1. Moisture sensitivity: Manta MS310A is highly reactive with moisture. Exclude moisture during storage, handling and production to prevent premature gelation.
2. Catalysis: tin-free formulations are possible without a special catalyst.
3. Fillers: can be compounded with PCC, GCC, fumed silica, quartz flour, diatomaceous earth and aluminum hydroxide.
4. Drying and water scavenging: dry all fillers thoroughly before use. Vinyltrimethoxysilane (VTMO) is

recommended as a water scavenger.

5. Plasticizers: compatible with phthalates (e.g., DINP, DIDP), DOTP and low-molecular-weight polyethers (PPG); phthalate-free or plasticizer-free formulations are also possible.
6. Additives: adhesion promoters, antioxidants, fungicides and light stabilizers can be added as required.

## 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.

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## Contact Information

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