

Manta MS692

Silane-Modified Polyether Binder for Mineral Substrate Protection

Description

Manta MS692 is a low-viscosity, moisture-curing silane-modified polyether (SMP) binder. Engineered on a tin-free catalysis framework, the polymer network crosslinks via the hydrolysis and subsequent condensation of terminal alkoxy silane groups when exposed to ambient moisture. The reaction kinetics and the rheological profile of the final formulation are strictly dependent on the stoichiometric addition of primary amino-silanes, which function simultaneously as co-reactants and catalysts.

Typical Physical Properties

Manta Code:	MS692
Chemical Name:	Silane-Modified Polyether
Appearance	Clear to pale yellow liquid
Viscosity (25°C) / mPa·s:	150
Specific Gravity(g/cm ³)	1.13
Active Substance	100% (Solvent & Plasticizer-free)

Properties

- **Catalyst Profile:** Operates via 100% tin-free amine catalysis, complying with advanced global environmental and regulatory restrictions.
- **Cured Matrix:** Forms a highly crosslinked, hydrophobic siloxane network within the substrate capillaries or as a surface film, providing durable resistance against water ingress and oleophilic stains.
- **Zero VOC Emission (Base Binder):** Contains no volatile organic solvents or low-molecular-weight plasticizers, minimizing shrinkage during the curing phase.
- **Processability:** The inherently low dynamic viscosity (150 mPa·s) facilitates rapid wetting of fillers and pigments during compounding and ensures deep penetration into porous mineral substrates.

Applications

Manta MS692 is utilized as the primary binder in formulations designed for the protection of mineral surfaces:

- **Penetrating Impregnation:** Formulated with appropriate amino-silanes for the stain-resistant treatment of highly porous substrates (e.g., paving stones, clinker, masonry, natural stone).
- **Thin-Film Coatings:** Applied as a clear or pigmented topcoat (typically <100 µm wet film thickness) for polished and non-polished industrial concrete flooring.
- **Application Methods:** Compatible with standard industrial application techniques including short-hair roller, brush, mop, or airless spray equipment.

Formulation and Processing Guidelines

- **Compounding Sequence:** Manta MS692 can be processed in standard planetary mixers or high-speed dissolvers. Rheological additives, matting agents, or pigments should be dispersed into the base binder first.
- **Catalyst Addition:** The amino-silane catalyst must be incorporated as the final component.
- **Moisture Control:** Upon addition of the catalyst, the system becomes highly reactive to atmospheric moisture. Open-air exposure must be strictly minimized. Blanketing the mixing vessel with an inert gas (e.g., Nitrogen) and immediately discharging into hermetically sealed containers is mandatory to prevent premature crosslinking.

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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