MANTA

Technical Data Sheet

Version: 1.0

Manta A146

VOC-Free Aqueous Diamino-Functional Silane Oligomer

Description

Manta A146 is an eco-friendly, aqueous diaminofunctional silane hydrolysate (oligomer). Unlike traditional monomeric aminosilanes, Manta A146 is pre-hydrolyzed and water-borne, meaning it does not release any hazardous volatile organic compounds (VOC-free) such as methanol or ethanol during crosslinking or curing.

It acts as a highly effective adhesion promoter and surface modifier, specifically designed for integration into modern water-borne (WB) polymer systems, while also delivering exceptional performance in reactive resin systems.

Performance equivalent to Evonik Dynasylan 1146.

Typical Physical Properties

Product No.	Manta A146
Chemical Name:	Aqueous diaminofunctional silane hydrolysate
CAS NO.	Mixture
Formula:	Not Applicable (Aqueous Polymeric Mixture)
Appearance:	Colorless transparent liquid to light yellowish
Density(ρ20°C, g/cm³):	1.06
Viscosity(mPa·s):	approx. 35
VOC Content:	VOC-Free

Features

1. Zero VOC Emissions: Contains no volatile alcohols and does not release toxic byproducts upon curing, making it ideal for stringent green-building and eco-friendly certifications.
2. Water-Borne Compatibility: Highly miscible and stable in aqueous environments, allowing direct addition to water-based paints, coatings, and adhesives.
3. Dual-Amine Reactivity: The diamino functionality provides multiple reactive sites for very strong crosslinking with amino-reactive resins.
4. Non-Flammable: As an aqueous solution, it significantly reduces fire hazards during storage and transport compared to solvent-based silanes.

Applications

Manta A146 is an adhesion promoter for progressive, low-VOC formulations:

1. Water-Borne Systems (WB): An adhesion promoter for water-borne acrylics, polyurethane dispersions (PUDs), and WB epoxies used in eco-friendly paints and coatings.
2. Sealants & Adhesives: Significantly improves the adhesion of RTV silicones, two-component polyurethanes (2K PU), Silane-Modified Polymers (MS/SPUR), and two-component epoxies to inorganic substrates, glass, and plastics.
3. Glass Fiber & Mineral Fillers: Used as a highly effective, VOC-free sizing agent or surface treatment for glass fibers and inorganic fillers (ATH, MDH), improving mechanical strength in composite materials.

Packaging

In 20kg pail, 190kg drum and 950kg IBC

Safety and Storage

Storage Conditions: Keep tightly closed in a cool, well-ventilated area. Protect from freezing and direct sunlight. Store at or below 35°C in the original, unopened containers.

Handling: Although aqueous and VOC-free, handle with standard chemical safety precautions (eye and skin protection). Keep away from extreme heat and open flames.
Shelf Life: Minimum 12 months under proper storage conditions. It's shipped as non-hazardous material.

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: +86 18961071292
Mail: inquiry@mantasil.com Web: www.mantasil.com