MANTA

Technical Data Sheet

Version: 1.0

Manta S320

Isocyanate Functional Alkoxy Silane

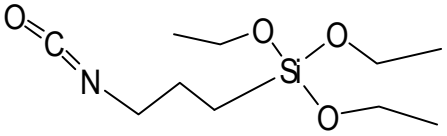
Description

Manta S320 is an isocyanate-functional silane containing a hydrolyzable triethoxy group. Unlike traditional methoxy-silanes, Manta S320 undergoes hydrolysis to release ethanol rather than methanol, making it a significantly safer and more eco-friendly choice for formulators subject to stringent environmental and VOC regulations.

The highly active isocyanate functionality reacts rapidly with active hydrogen-containing compounds, while the silane portion enables moisture-cured crosslinking or robust adhesion to a variety of substrates.

Performance equivalent to Momentive Silquest A-Link 25 and Shin-Etsu KBE-9007N

Typical Physical Properties

Manta Code:	S320
Chemical Name:	γ-Isocyanatopropyltriethoxysilane
Synonyms:	3-(Triethoxysilyl)propyl isocyanate; Triethoxy(3-isocyanatopropyl)silane;
CAS No. :	24801-88-5
EINECS No. :	246-467-6
Molecular Weight:	247.37
Appearance:	Colorless or light yellow clear liquid
Purity (by GC, %):	96.0 min
Density (ρ20°C, g/cm³):	0.950~1.050
Refractive Index (n25/D):	1.4140~1.4240
Boiling Point:	283°C
Flash Point:	77 °C Closed Cup
Chemical Structure:	

Properties

1. Controlled Crosslinking: Reactive with -OH, -NH2, and -SH functional polymers, providing a highly reliable and slightly more controlled moisture-cure mechanism compared to methoxy variants.
2. Exceptional Adhesion: Acts as a powerful adhesion promoter, providing superior wet and dry bond strength to difficult inorganic substrates (glass, metal, ceramics).
3. Durable Bonds: The resulting siloxane bonds deliver outstanding thermal, chemical, and UV stability.

Applications

Manta S320 is widely utilized as a crosslinker, end-capper, and adhesion promoter:

1. **Polymer Modification (SMP/SPUR)**: Functions as the critical, low-toxicity end-capping agent for diols or polyol polymers to manufacture Silane-Modified Polymers (MS Polymer) and SPUR systems.
2. **Adhesion Promoter:** Extensively used in silicone sealants, polyurethane paints, and hybrid adhesives requiring enhanced adhesion to organic plastics (like nylon) or inorganic substrates presenting active hydrogen species.
3. **Resin Crosslinking:** Serves as a highly efficient modifier for hydroxyl-bearing resins (such as

acrylic resins, PVA) and alkoxy-silyl crosslinked fluororesin fluids, significantly improving weatherability and chemical resistance.
4. **Reactive Additive:** Enhances the performance and durability of one-part moisture-curable and two-part reactive polyurethane systems.
5. **Eco-Friendly Automotive Glass Primers (AGR):** Functions as a low-toxicity adhesion promoter in advanced polyurethane primers for Automotive Glass Replacement (AGR), delivering secure and durable adhesion to glass while ensuring environmental compliance by releasing ethanol.

Packaging

In 20KG, 25kg iron pail, 200KG drum

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is min. 12 months. It is shipped as hazardous substance.

Contact Information

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