MANTA

Technical Data Sheet

Version: 1.0

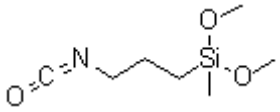
Manta S121

Isocyanate functional dialkoxy silane

Description

Manta S121 is a specialized, bifunctional organosilane featuring a reactive isocyanate group and a dialkoxy (methyldimethoxy) silyl group. Unlike standard trialkoxy silanes that form rigid 3D crosslinked networks, the dialkoxy structure of S121 promotes linear chain extension during moisture curing. This chemistry makes it an exceptional end-capping agent for formulators seeking to produce highly elastic, low-modulus polymers with superior elongation capabilities. Performance equivalent to Shin-Etsu KBM-9207.

Typical Physical Properties

Manta Code:	S121
Chemical Name:	(3-Isocyanatopropyl)methyldimethoxysilane
Synonyms:	(gamma-Isocyanatopropyl)methyldimethoxysilane;
CAS No. :	26115-72-0
Molecular Weight:	189.28
Appearance:	Straw liquid
Purity (by GC, %):	98.00 min
Density (ρ20°C, g/cm³):	0.950-1.050
Refractive Index (n25/D):	Approx. 1.4200
Boiling Point:	194°C
Flash Point:	Approx. 71°C closed cup
Chemical Structure:	

Properties

1. High Flexibility & Low Modulus: The methyldimethoxy configuration reduces crosslink density, producing significantly softer, highly elastic, and lower-modulus cured elastomers.
2. Chain Extension: Acts as an excellent chain extender in urethane/polyol systems, significantly improving the elongation at break of the final sealant or coating.
3. Rapid Reactivity: The isocyanate functional group reacts rapidly with active hydrogen-containing species (amines, hydroxyls, thiols).
4. Adhesion Promotion: Improves the coupling and adhesion of urethanes and other polymers to various organic and inorganic substrates.

Applications

Manta S121 is a critical raw material for advanced polymer synthesis and modification:

1. Polymer End-Capping (Low-Modulus MS/SPUR): Used for end-capping polyols to synthesize high-movement, low-modulus Silane-Modified Polymers (SMP) and SPUR sealants, suitable for construction joints subject to high thermal expansion and contraction.
2. Flexible Adhesives & Coatings: Used as an additive or modifier in polyurethane adhesives and coatings where impact resistance, high flexibility, and stress relaxation are required.
3. Coupling Agent: Acts as an effective coupling agent between inorganic substrates and amine/hydroxyl-functional polymers.

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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