MANTA

Technical Data Sheet

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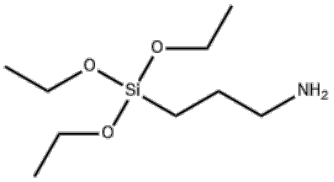
Manta A110

Amino-Functional Silane (APTES)

Description

Manta A110 is an amino-functional silane containing three hydrolyzable ethoxy groups. It undergoes hydrolysis to release non-toxic ethanol rather than methanol, making it suitable for formulations requiring strict environmental and worker safety compliance.
The reactive primary amine group (-NH2) forms powerful covalent bonds with organic polymers, while the silanol groups bond securely to inorganic substrates. It is a universal adhesion promoter and surface modifier used across countless industrial applications.
Performance equivalent to Momentive Silquest A-1100 / Evonik Dynasylan AMEO / Shin-Etsu KBE-903.

Typical Physical Properties

Product No.	Manta A110
Chemical Name	3-Aminopropyltriethoxysilane
CAS NO.	919-30-2
EINECS No.:	213-048-4
Formula	$C_9H_{23}NO_3Si$
Appearance	Colorless transparent liquid
Density(ρ20°C, g/cm³)	0.9400–0.9500
Refractive Index(n 25°C)	1.4180–1.4220
Purity (by GC,%)	98min; 99 min
Chemical Structure	

Applications

Manta A110 is a fundamental building block for composite materials, adhesives, and coatings:
1. Adhesives & Sealants: Functions as a primer and internal adhesion promoter in hybrid sealants, silicones, and advanced adhesives.
2. Composites & Fiberglass: Used extensively as a finishing and sizing constituent for glass fiber and glass fabric, significantly improving mechanical strength and moisture resistance.
3. Mineral-Filled Polymers (HFFR): Excellent for the pretreatment of mineral fillers (like ATH and MDH) in Halogen-Free Flame Retardant (HFFR) cables and thermoplastic polymers.
4. Foundry & Insulation: Acts as a key additive to phenolic, furan, and melamine resin binders in foundry resins and mineral fiber insulating materials.
5. Paints & Coatings: Formulated as a primer or additive to boost adhesion on difficult-to-bond glass and metal substrates.
6. Asphalt Anti-Stripping Agent: Utilized as a high-performance additive in heavy infrastructure to firmly bind asphalt to damp mineral aggregates, significantly preventing moisture-induced damage and extending the lifespan of highways.

7. Resin-Bonded Abrasives: Significantly enhances the interfacial bonding strength of phenolic resins used in high-speed grinding wheels and abrasive cutting discs, improving their structural integrity, durability, and operational safety.

Packaging

In 20kg pail, 190kg drum, 200kg drum

Safety and Storage

Keep away from heat and open flame. When stored at or below 25°C in the original unopened containers, the shelf life is 24 months.

Contact Information

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