Technical Data Sheet

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Silfluo LS-E86

Alpha-Amino Functional Silane

Description:

Silfluo LS-E86 is a highly specialized, ultra-fast reacting secondary alpha-amino functional silane, chemically identified as N-(Triethoxysilylmethyl)butylamine. This premium organosilane combines two highly sought-after structural advantages: the alpha-effect (a short methylene bridge that drastically accelerates hydrolysis and curing) and a secondary amine functionality (which intrinsically reduces thermal and UV-induced yellowing). It is specifically engineered to act as a high-performance, tin-free crosslinker and unprimed adhesion promoter for advanced moisture-curing polymer systems requiring rapid curing kinetics and excellent optical stability.

Typical Technical Properties

Silfluo Code:	LS-E86
Chemical Name:	N-(3-(Triethoxysilyl)methyl)butylamine
Synonyms:	N-(n-Butyl)aminomethyltriethoxysilane
CAS No. :	
Molecular Formula:	$C_{11}H_{27}NO_3Si$
Molecular Weight:	249.31
Appearance:	Typically colorless to pale yellow liquid
Purity (by GC, %):	95min
Density (25°C, g/cm^3):	0.905~0.915
Refractive Index (nD 25°C):	1.409~1.419
Boiling Point:	
Flash Point:	
Chemical Structure:	

Features:

1. The Alpha-Effect (Tin-Free Curing): The ultra-short methylene bridge electronically activates the silane, triggering exceptionally rapid hydrolysis upon moisture exposure. This allows formulators to achieve fast skin-over times and completely eliminate heavy-metal (tin) catalysts.
2. Low-Yellowing Secondary Amine: The butyl-substituted secondary amine structure fundamentally mitigates the severe yellowing and discoloration typically associated with traditional primary aminosilanes, preserving the aesthetic quality of clear or white sealants.
3. Broad-Spectrum Adhesion: Maximizes interfacial chemical bonding, providing extraordinary unprimed adhesion to a wide variety of challenging inorganic substrates, including glass, aluminum, and engineered plastics.

Applications:

1. Tin-Free Silane-Modified Polymers (SMP / SPUR): Serves as the ultimate rapid-curing crosslinker and adhesion promoter for high-end MS Polymers and polyurethane prepolymers, specifically targeted at eco-friendly, tin-free green building certifications.
2. Non-Yellowing RTV Silicone Sealants: Extensively utilized in Room Temperature Vulcanizing (RTV) silicone formulations where both ultra-fast curing in low-humidity environments and long-term color stability (non-yellowing) are strictly mandatory.
3. High-Performance Primers & Coatings: Formulated into specialized industrial primers and protective coatings to dramatically enhance wet and dry bond strength, particularly in applications requiring immediate handling and fast production turnarounds.

Packing

In 25kg pail and 200kg drum.

Safety and Storage

Keep in a cool, strictly dry, and well-ventilated environment, aggressively avoiding direct sunlight, heat, and ignition sources. Because of its extreme reactivity (alpha-effect), it must be rigorously protected from any ambient moisture prior to formulation. Keep in tightly sealed, original unopened containers. Storage beyond the initially recommended shelf life does not necessarily mean the product is unusable; however, the properties required for the intended use must be thoroughly checked for quality assurance reasons prior to application.