



Silfluo LS-AD31

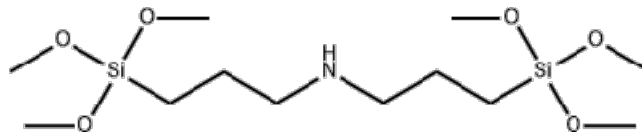
Secondary Bis-Amino Functional Silane

Description

Silfluo LS-AD31 is a highly versatile, secondary amino-functional bis-silane, chemically identified as Bis(trimethoxysilylpropyl)amine. Characterized by a unique "bis" molecular architecture containing two hydrolyzable trimethoxysilyl groups, it delivers double the crosslinking density and hydrolytic stability compared to standard primary aminosilanes. It is globally recognized as the premier end-capping agent for Silane-Terminated Polyurethanes (SPUR) and MS Polymers. Its reactive secondary amine interacts rapidly and cleanly with isocyanate (NCO) groups, fundamentally suppressing unwanted side reactions to yield low-viscosity, highly stable prepolymers with superior UV resistance and minimal yellowing. Performance equivalent to industry standards: Momentive Silquest A-1170, Evonik Dynasylan 1124, Wacker GENIOSIL GF 95.

Typical Physical Properties

Silfluo Code:	LS-AD31
Chemical Name:	Bis(trimethoxysilylpropyl)amine
Synonyms	
CAS No. :	82985-35-1
EINECS No. :	280-084-5
Formula:	$C_{12}H_{31}NO_6Si_2$
Molecular Weight	341.55
Appearance:	Colorless or yellowish clear liquid
Density ($\rho_{20^{\circ}C}$, g/cm ³)	1.045
Refractive Index ($n_{25/D}$)	1.429
Purity (by GC, %):	95.0min;
Chemical Structure:	



Features:

1. Dual silane functionality (bis-structure) fundamentally delivers an extraordinarily high crosslink density and durable wet adhesion to a wide variety of inorganic substrates.
2. Premier SPUR end-capping efficiency, reacting cleanly with NCO-terminated prepolymers to yield highly stable, low-viscosity silane-modified polymer matrices.
3. Specialized secondary amine architecture drastically mitigates the thermal and UV-induced yellowing typically associated with primary aminosilanes (such as APTES).



4. Exceptional formulation versatility, acting as a robust adhesion promoter and crosslinker across polyurethanes, epoxies, phenolics, and advanced silicone systems.

Applications

1. Silane-Terminated Polyurethanes (SPUR / MS Polymers): Serves as the ultimate end-capping agent for NCO-terminated urethane prepolymers. It reacts exceptionally fast with free isocyanates while minimizing side reactions, producing colorless, low-viscosity prepolymers with vastly improved storage stability and reduced yellowing in the final sealant.
2. High-Performance Adhesives & Sealants: Functions as a critical primer, integral additive, or chemical modifier to drastically improve the wet and dry adhesion of polyurethane, epoxy, and silicone sealants to difficult inorganic substrates like architectural glass and metals.
3. Glass Fiber & Composite Sizing: Deployed as a highly effective surface sizing agent for glass fibers and fiberglass fabrics, fundamentally enhancing the interfacial shear strength and moisture resistance of the cured composite matrix.
4. Foundry Resins & Mineral Insulation: Utilized as a vital strengthening additive in phenolic, furan, and melamine sand binders for high-stress foundry applications, as well as in phenolic binders for mineral fiber insulating materials and industrial abrasives.
5. Mineral-Filled Polymers & HFFR Cables: Acts as an advanced surface modifier for inorganic fillers and pigments, distinctly improving dispersion, mechanical integrity, and electrical properties in specialized polymer composites, including Halogen-Free Flame Retardant (HFFR) cable compounds.
6. Premium Industrial Paints & Coatings: Formulated as an advanced adhesion-promoting additive and primer for industrial coatings, maximizing the structural bond strength between the coating film and the underlying substrate.

Packaging

In 25kg pail, 200kg drum and 1000kg IBC

Safety and Storage

Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight, heat, and open flames. The shelf life is 24 months from the date of manufacture when stored at or below 25°C in the original, tightly sealed and unopened containers. Storage beyond the 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.