



Silfluo LS-AD323

Secondary Bis-Amino Functional Silane

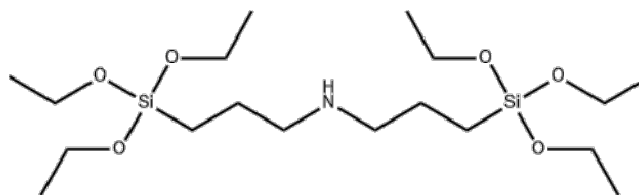
Description

Silfluo LS-AD323 is a highly versatile, secondary amino-functional bis-silane, chemically identified as Bis(triethoxysilylpropyl)amine. Differentiated by its dual symmetric triethoxysilyl groups, it features a highly favorable, eco-friendly toxicological profile—releasing benign ethanol rather than toxic methanol upon hydrolysis. Functioning as a premium adhesion promoter and crosslinking agent, its unique "bis" molecular architecture delivers extraordinary crosslink density. It is specifically engineered to bridge challenging inorganic substrates with organic polymer matrices, serving as a powerful surface modifier and a highly sought-after end-capping agent for advanced, environmentally compliant polyurethane and SMP systems. Performance equivalent to industry standards: Evonik Dynasylan 1122, Momentive Silquest A-1172.

Typical Physical Properties

Silfluo Code:	LS-AD323
Chemical Name:	Bis(triethoxysilylpropyl)amine
Synonyms	3-(triethoxysilyl)-N-[3-(triethoxysilyl)propyl]propan-1-amine
CAS No. :	13497-18-2
EINECS No. :	236-818-1
Molecular Weight:	425.71
Appearance:	Colorless or light yellow transparent liquid
Purity (by GC, %):	95.0 min
Density ($\rho_{20^{\circ}\text{C}}$, g/cm ³)	0.9630 ~ 0.9830
Refractive Index ($n_{25/D}$)	1.4240 ~ 1.4340
Boiling Point:	160°C(0.6mmHg)
Flash Point:	> 140 °C Closed Cup

Chemical Structure:



Properties

1. Exceptional crosslink density driven by the symmetric bis-silane structure, creating a highly dense, impermeable siloxane network that drastically increases substrate moisture and corrosion resistance.
2. Superior mechanical enhancement, distinctly improving the tensile strength, flexural modulus, and impact resistance of cured advanced composites and high-performance structural adhesives.

Technical Data Sheet



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3. Outstanding rheology optimization, significantly improving the dispersion and wet-out of inorganic fillers, thereby safely reducing resin matrix viscosity and allowing for maximum filler loading.

Applications

1. Eco-Friendly SPUR & MS Polymers: Highly recommended as an elite end-capping agent for NCO-terminated polyurethane prepolymers. It reacts rapidly with free isocyanates with minimal side reactions, yielding colorless, low-viscosity, and aniline-free prepolymers ideal for structural parquet adhesives and over-paintable hybrid sealants.
2. Advanced Glass Fiber & Composite Sizing: Serves as a premium sizing and finishing constituent for glass fibers and specialized fabric composites, securing an extremely durable, moisture-resistant covalent bond between the inorganic glass surface and the organic thermoset resin.
3. Mineral-Filled Polymers & HFFR Cables: Deployed as a powerful pretreatment surface modifier for mineral fillers (such as ATH and MDH) in Halogen-Free Flame Retardant (HFFR) cable compounding, critically boosting both mechanical integrity and long-term electrical insulation properties.
4. High-Performance Adhesives & Sealants: Acts as a critical reactive primer or integral chemical modifier in high-end industrial sealants, ensuring robust, unprimed adhesion to notoriously difficult substrates like aluminum, cold-rolled steel, and concrete.
5. Industrial Coatings & Foundry Resins: Utilized as an advanced adhesion-promoting additive in heavy-duty metal primers to withstand severe corrosive environments, as well as a strengthening additive for phenolic, furan, and melamine resins in extreme-heat foundry applications.

Packaging

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

Safety and Storage

Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight, heat, and moisture exposure. The shelf life is 24 months from the date of manufacture when stored in original unopened containers. Classified and shipped as a hazardous substance; handle with appropriate industrial safety protocols. 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.