



Silfluo LS-AB31

Secondary Phenyl-Amino Functional Silane

Description

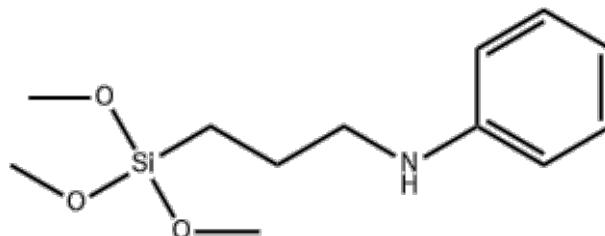
Silfluo LS-AB31 is a highly versatile, secondary amino-functional silane, chemically identified as N-phenyl-3-aminopropyltrimethoxysilane (also known as 3-(Phenylamino)propyltrimethoxysilane). Engineered with a unique molecular architecture that combines a reactive secondary amine with a sterically hindered, thermally stable phenyl group, it serves as an exceptionally effective adhesion promoter and coupling agent. The bulky phenyl ring fundamentally imparts superior thermal endurance for high-temperature composites while significantly mitigating the premature yellowing and thermal degradation typically associated with traditional primary aminosilanes.

Performance equivalent to industry standards: Momentive Y-9669, Dow Z-6083, Shin-Etsu KBM-573.

Typical Physical Properties

Silfluo Code:	LS-AB31
Chemical Name:	N-phenyl-3-aminopropyltrimethoxysilane
Synonyms	N-[3-(Trimethoxysilyl)propyl]aniline; 3-(Phenylamino)propyltrimethoxysilane
CAS No. :	3068-76-6
EINECS No. :	221-328-2
Molecular Weight:	255.39
Appearance:	Colorless to yellowish, transparent liquid
Purity (by GC, %):	95.0 min
Density ($\rho_{20^{\circ}\text{C}}$, g/cm ³)	1.070
Refractive Index ($n_{25/D}$)	1.5060±0.0050
Boiling Point:	310 °C
Flash Point:	110 °C closed cup

Chemical Structure:



Features

1. Supreme thermal stability driven by the bulky phenyl functional group, allowing the silane and the modified composite matrix to withstand severe, prolonged high-temperature exposure without structural

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degradation.

2. Highly controlled secondary amine reactivity, interacting predictably with isocyanates, epoxies, and acrylates. This fundamentally extends the pot-life of formulations and prevents unwanted premature crosslinking.
3. Outstanding low-yellowing profile compared to standard primary aminosilanes, preserving the pristine aesthetic appearance and optical clarity of light-colored adhesives, sealants, and clear coatings.
4. Exceptional interfacial adhesion, forging highly moisture-resistant, durable covalent bonds between challenging inorganic substrates (glass, aluminum, steel) and demanding organic polymer matrices.

Applications

1. High-Temperature Composites & Laminates: Highly recommended as a premium coupling agent for glass fiber-reinforced phenolic, polyimide, and epoxy resin laminates, ensuring enduring mechanical strength and interfacial integrity under extreme thermal stress.
2. Advanced Foundry Resins & Sand Binders: Acts as a critical strengthening additive in phenolic, furan, and melamine foundry sand binders, significantly improving the flexural strength and dimensional stability of molds and cores during the extreme heat of metal casting.
3. Premium Polyurethane & Epoxy Adhesives: Serves as an advanced adhesion promoter in high-performance urethane (PU) and epoxy adhesives and sealants, providing profound, moisture-resistant bonding to difficult inorganic substrates while maintaining a strictly low-color profile.
4. Glass Fiber Sizing & Mineral Finishes: Deployed as a specialized sizing agent and surface modifier for glass fibers, fiberglass, and mineral wool, drastically optimizing their compatibility, wet-out, and dispersion within advanced thermosetting resins.

Packaging

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

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is 24 months. It is shipped as hazardous substance.