



## Silfluo LS-ND22

Alpha-Amino Functional Silane

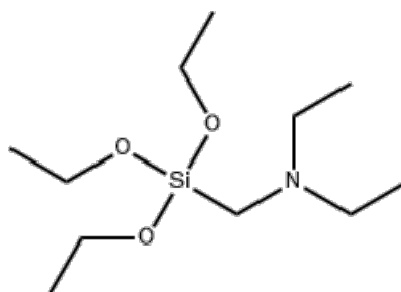
### Description

Silfluo LS-ND22 is a highly reactive, specialty alpha-amino functional organosilane, chemically identified as (N,N-Diethylaminomethyl)triethoxysilane. Its molecular architecture is uniquely defined by the Alpha-Effect: the highly basic diethylamino functional group is separated from the silicon atom by only a remarkably short, single methylene (-CH<sub>2</sub>-) bridge. This extreme proximity forces the electron-donating nitrogen atom to intensely activate the adjacent silicon center. Consequently, the triethoxy groups become hyper-reactive, leading to drastically accelerated moisture hydrolysis and crosslinking rates that far exceed traditional gamma-silanes. It serves as an ultra-fast crosslinker, an intrinsic moisture-cure catalyst, and a powerful adhesion promoter for high-performance elastomers and advanced hybrid composite materials.

### Typical Physical Properties

Silfluo Code:	LS-ND22
Chemical Name:	Diethyl amino methyl triethoxy silane;
Synonyms	(Triethoxysilylmethyl)diethylamine;
CAS No. :	15180-47-9
EINECS No. :	518-047-9
Molecular Structure:	C <sub>11</sub> H <sub>27</sub> NO <sub>3</sub> Si
Molecular Weight:	249.42
Appearance:	Colorless transparent to pale yellow liquid
Density (ρ <sub>20</sub> °C, g/cm <sup>3</sup> )	0.916~0.933
Refractive Index (n <sub>25</sub> /D)	1.4130~1.4430
Purity:	95% min
Boiling Point (5mmHg):	110~130°C
Flash Point:	>110°C

Chemical Structure:



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## Features

1. The Alpha-Effect Hyper-Reactivity: The uniquely short methylene spacer fundamentally supercharges the hydrolytic kinetics of the ethoxy groups, ensuring instantaneous moisture-scavenging capabilities and ultra-fast curing speeds.
2. Tin-Free Catalytic Potential: The strongly basic tertiary amine acts as an internal autocatalyst, enabling formulators to develop rapid-curing polymer systems while eliminating the need for toxic heavy-metal (organotin) catalysts.
3. Superior Interfacial Adhesion: Acts as a remarkably powerful coupling agent, creating instantaneous, moisture-resistant covalent bonds between demanding organic polymer matrices and complex inorganic substrates.

## Applications

1. Advanced RTV Silicone Rubbers: Highly sought after as an ultra-fast crosslinking agent and adhesion promoter for Room Temperature Vulcanizing (RTV) silicones. It provides exceptionally rapid deep-section curing, minimizes production cycle times, and enhances unprimed adhesion to difficult substrates.
2. SMP & SPUR Hybrid Polymers: Serves as a critical reactive modifier and crosslinker in Silane-Modified Polymers (MS Polymers) and Silyl-Terminated Polyurethanes (SPUR). Its alpha-reactivity ensures rapid network formation without sacrificing matrix flexibility or requiring elevated curing temperatures.
3. High-Performance Epoxy & FRP Composites: Deployed as an elite coupling agent in Fiberglass Reinforced Plastics (FRP) and advanced epoxy composites. It chemically bridges the inorganic glass fibers with the epoxy resin, drastically elevating structural tensile strength and long-term moisture resistance.
4. Premium Fabric & Textile Finishing: Acts as a highly reactive chemical intermediate in the manufacturing of high-end textile finishing agents, aggressively grafting onto natural and synthetic fibers to impart enduring softness and extreme wash-resistance.

## Packaging

In 20kg pail, 190kg drum and 950kg IBC

## Safety and Storage

Keep away from heat and open flame. When stored at or below 25°C in the original unopened containers, this product has a usable life of 24 months from the date of production (200L drum).