



Silfluo LS-ND43

High-Activity Alpha-Silane Intermediate

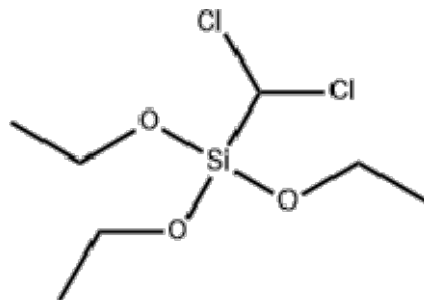
Description

Silfluo LS-ND43 is a highly reactive, specialized alpha-silane intermediate, chemically identified as Dichloromethyltriethoxysilane. Its molecular architecture is defined by the Alpha-Effect, where the highly electronegative dichloromethyl group is separated from the silicon atom by only a single methylene bridge. This extreme proximity dramatically accelerates the hydrolysis rate of the adjacent ethoxy groups compared to traditional gamma-silanes. More importantly, the presence of two reactive carbon-chlorine (C-Cl) bonds makes it an indispensable, highly versatile chemical building block. It is primarily utilized as a fundamental precursor for synthesizing a wide array of high-value, custom-designed Alpha-functional silanes and ultra-fast moisture-curing silicone polymers.

Typical Physical Properties

Silfluo Code:	Silfluo LS-ND43
Chemical Name:	Dichloromethyltriethoxysilane
Synonyms	
CAS No. :	19369-03-0
EINECS No. :	242-998-1
Molecular Formula:	C ₇ H ₁₆ Cl ₂ O ₃ Si
Molecular Weight:	247.19
Appearance:	Colorless transparent to slightly yellowish liquid
Density (ρ _{20°C} , g/cm ³)	1.01~1.20
Refractive Index (n _{25/D})	1.4660~1.4870
Purity:	95% min

Chemical Structure:



Features

1. Superior Alpha-Effect Reactivity: The intense electron-withdrawing nature of the dichloromethyl group fundamentally supercharges the hydrolytic kinetics of the ethoxy groups, enabling exceptionally fast

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Technical Data Sheet



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moisture-scavenging and crosslinking speeds.

2. Versatile Nucleophilic Substitution Platform: The two reactive C-Cl bonds on the alpha-carbon are highly susceptible to nucleophilic attack, making it an ideal, high-yield synthetic precursor for creating complex Alpha-amino, Alpha-mercapto, or Alpha-isocyanato functional silanes.
3. Controlled 3D Crosslinking: Provides a highly stable trifunctional ethoxy base that, upon hydrolysis and condensation, forms a dense, durable, and highly crosslinked inorganic siloxane network.
4. Halogen-Driven Surface Modification: The unique dichloro functionality can be leveraged to drastically alter the surface energy, oleophobicity, and chemical resistance of specifically targeted inorganic substrates.

Applications

1. Synthesis of Premium Alpha-Functional Silanes: Serves as the primary, high-value chemical intermediate for the industrial production of specialized Alpha-silane coupling agents. These advanced derivatives are absolutely essential for formulating the next generation of fast-curing, tin-free SPUR and MS Polymer sealants.
2. Specialty Silicone Resin Modification: Utilized as a critical reactive monomer to seamlessly introduce dichloromethyl functionality into siloxane backbones. This advanced structural modification significantly elevates the chemical inertness, solvent resistance, and thermal stability of aerospace-grade coatings and composites.
3. Hyper-Reactive Surface Primers: Acts as an ultra-high-activity adhesion promoting component in specialized primer formulations, ensuring rapid, moisture-triggered covalent bonding to notoriously difficult substrates under ambient, room-temperature conditions.

Packaging

In 20kg pail, 200kg drum and 950kg IBC

Safety and Storage

Keep in a cool, strictly dry, and well-ventilated environment, aggressively avoiding direct sunlight, heat, sparks, and open flames. The product is highly sensitive to ambient moisture and may release trace amounts of hydrogen chloride (HCl) upon severe hydrolysis. The shelf life is a minimum of 24 months from the date of manufacture when stored at or below 25°C in tightly sealed, original unopened containers.