Technical Data Sheet

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Silfluo LS-E59

Eco-Friendly Short-Chain (C4) Fluoroalkyl Silane

Description

Silfluo LS-E59 is Nonafluorohexyltriethoxysilane, a short-chain fluoroalkyl-functional triethoxysilane. The molecule contains a C4F9 perfluoroalkyl group and three hydrolyzable ethoxy groups on silicon. The triethoxysilyl group hydrolyzes and condenses with hydroxylated inorganic surfaces including glass, ceramics, silica, and metal oxides.

The short-chain fluoroalkyl structure provides surface energy reduction while avoiding long-chain PFOA.PFOS-regulated structures; verify regulatory compliance per local requirements and formulation composition.

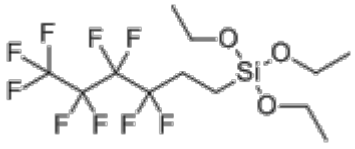
Compared with methoxy-functional analogs, the ethoxy groups release ethanol rather than methanol during hydrolysis.

Used in anti-fingerprint, anti-smudge, easy-to-clean, anti-graffiti, and low-surface-energy coating formulations.

Typical Physical Properties

Silfluo Code:	LS-E59
Chemical Name:	Triethoxy(3,3,4,4,5,5,6,6,6-nonafluorohexyl)silane
Synonyms	Nonafluorohexyltriethoxysilane
CAS No. :	102390-98-7
EINECS No. :	
Molecular Weight:	410.35
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97.0 min
Density (ρ20°C, g/cm³)	1.241
Refractive Index (n25/D)	1.3502
Boiling Point:	241°C at 760 mmHg
Flash Point:	100°C closed cup

Chemical Structure:



Applications

1. Anti-fingerprint and anti-smudge coatings

Used in AF and anti-smudge coating formulations for display glass, touch screens, optical lenses, and ceramic surfaces.

2. Automotive and architectural glass treatment

Used in surface treatment formulations for automotive windshields, architectural glass, and solar panel glass.

3. Natural stone, concrete, and ceramic treatment

Used as surface modifier for natural stone, concrete, and ceramic substrates.

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4. Sol-gel coating systems and optical resins
Used as fluoroalkyl-functional component in sol-gel coating formulations and low-refractive-index optical resin systems.

Packaging
In 500g, 1000g, 25kg pail, 200kg drum.

Safety and Storage
Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is min. 9 months. It is shipped as non-hazardous substance.

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