



Silfluo LS-533

Ultra-Low Surface Energy Fluoro-Silane (C6-Perfluoro)

Description

Silfluo LS-533 is [2-(Perfluorohexyl)ethyl]trichlorosilane, a fluoroalkyl-functional trichlorosilane.

The molecule contains a C6 perfluorinated chain and three hydrolyzable chloro groups on silicon.

The trichlorosilyl group reacts rapidly with hydroxylated inorganic surfaces including glass, silicon, silica, and metal oxides, releasing HCl upon hydrolysis.

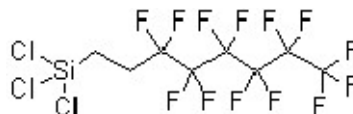
The perfluorinated C₆ chain reduces surface energy and provides water- and oil-repellent character on treated surfaces.

Used in self-assembled monolayer (SAM) deposition, microfluidic device surface treatment, mold release layers for soft lithography and nanoimprint lithography, and anti-fouling coating research.

Typical Physical Properties

Silfluo Code:	LS-533
Chemical Name:	Tridecafluorooctyl)trichlorosilane
Synonyms	
CAS No. :	78560-45-9
EINECS No. :	278-947-6
Molecular Weight:	481.54
Appearance:	Colorless transparent liquid
Purity (by GC, %)	97.0 min
Density ($\rho_{20^{\circ}\text{C}}$, g/cm ³)	1.639
Refractive Index (n _{25.D})	1.351
Boiling Point:	84-85°C
Flash Point:	Above 70 °C closed cup

Chemical Structure:



Applications

1. Microfluidic device surface treatment

Used for silanization of silicon and glass masters in soft lithography to form release layers for PDMS membrane demolding.

2. Self-assembled monolayers (SAMs)

Used to form low-surface-energy SAMs on silicon, glass, and metal oxide surfaces via vapor-phase or solution-phase deposition.

Technical Data Sheet



www.silfluosilicone.com

3. Mold release for nanoimprint lithography

Used as anti-sticking surface treatment on mold surfaces for nanoimprint lithography (NIL) processes.

4. Anti-fouling and superhydrophobic coating research

Used in anti-fouling, anti-icing, and corrosion protection coating research on glass, steel, and electronic substrates.

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 hazardous substance.