Technical Data Sheet

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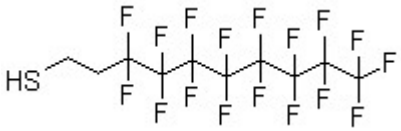
Silfluo LS-52

Fluoro Functional Organosilane

Description

Silfluo LS-52 is 1H,1H,2H,2H-Perfluorodecanethiol, a long-chain perfluoroalkyl thiol.
The molecule contains a C8F17 perfluorinated segment and a reactive mercapto (–SH) group.
The thiol group enables covalent bonding to gold, silver, copper, and other noble metal surfaces via Au–S or Ag–S bond formation, and participates in radical reactions and thiol-ene chemistry.
The perfluorinated chain reduces surface energy and provides water- and oil-repellent character on treated surfaces.
Used in SAM deposition on metal surfaces, fluoropolymer synthesis, chain transfer agent applications, and anti-fouling coating research.

Typical Technical Properties

Silfluo Code:	LS-52
Chemical Name:	1H,1H,2H,2H-Perfluorodecanethiol
Synonyms:	
CAS No. :	34143-74-3
EINECS No. :	N.A
Molecular Formula:	$C_{10}H_5F_{17}S$
Molecular Weight:	480.18
Appearance:	Colorless transparent liquid
Purity (by GC, %):	98.0 min
Density (20°C, g/cm^3):	1.678 ± 0.005
Refractive Index (nD 25°C):	1.333 ± 0.005
Boiling Point:	82°C
Flash Point:	N.A
Chemical Structure:	

Applications

1. SAM formation on metal surfaces
Used to form low-surface-energy SAMs on gold, silver, and copper surfaces via metal–sulfur bond formation.
2. Anti-fouling and surface modification coatings
Used as active component in protective coating formulations for glass, ceramics, and metal substrates.

3. Fluoropolymer synthesis and chain transfer
Used as chain transfer agent and functional building block in radical polymerization of fluorinated resins and fluorosurfactants.
4. Microelectronics and MEMS surface treatment
Used in surface treatment of metallic components in microelectronics and micro-electromechanical systems (MEMS).

Packing

In 1kg fluorinated bottle, 25kg pail and 200kg drum.

Safety and Storage

Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight, heat, and ignition sources. The shelf life is 12 months from the date of manufacture when stored in original unopened containers. Storage beyond the shelf life does not necessarily mean the product is unusable; however, the properties required for the intended use must be thoroughly checked for quality assurance reasons prior to application.