Technical Data Sheet

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Silfluo LS-651

Fluorosilicone Cyclic Monomer (D3F)

Description

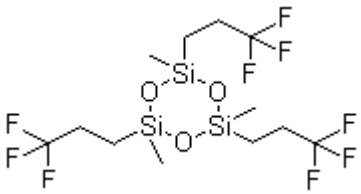
Silfluo LS-651 (D3F) is 1,3,5-Tris(3,3,3-trifluoropropyl)-1,3,5-trimethylcyclotrisiloxane, a fluorine-containing cyclic siloxane trimer.

The molecule contains three trifluoropropyl groups and three methyl groups on a six-membered Si–O ring structure.

Appears as a colorless crystalline solid below 30°C; melts to a clear liquid above 30°C.

Used as primary monomer for ring-opening polymerization of fluorosilicone fluids and fluorosilicone elastomer bases (FVMQ), and as comonomer for introducing trifluoropropyl functionality into siloxane copolymers.

Typical Physical Properties

Silfluo Code:	LS-651
Chemical Name:	1,3,5-Tris(3,3,3-trifluoropropyl)-1,3,5-trimethylcyclotrisiloxane
Synonyms	1,3,5-Trimethyl-1,3,5-tris(3,3,3-trifluoropropyl)cyclotrisiloxane;D3F
CAS No. :	2374-14-3
EINECS No. :	219-154-7
Molecular Weight:	468.54
Appearance:	Colorless crystalline solid (< 30°C) / Clear liquid (> 30°C)
Purity (by GC, %)	99.8 min
Water:	≤100ppm
Density (ρ20°C, g/cm³)	
Refractive Index (n25/D)	N/A
Boiling Point:	239℃
Chemical Structure:	

Applications

1. Fluorosilicone elastomer (FVMQ) synthesis

Used as primary monomer for ring-opening polymerization to produce fluorosilicone elastomer bases and FVMQ rubbers.

2. Fluorosilicone fluid synthesis

Used as monomer for preparing fluorosilicone fluids and oils for lubrication, defoaming, and hydraulic fluid applications in chemically demanding environments.

3. Siloxane copolymerization

Used as comonomer with D4 and other cyclic siloxanes to introduce trifluoropropyl functionality into conventional silicone polymer chains.

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4. Fluorinated intermediates
Used as reactive intermediate in the synthesis of fluorinated surfactants, cosmetic polymers, and specialty fluorosilicone materials.

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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