



Silfluo LF-M107

Mono-Alkoxy Terminated Silicone Fluid

Description:

Silfluo LF-M107 is a series of mono-alkoxy terminated polydimethylsiloxane fluids with a single reactive alkoxy group and one inert trimethylsilyl terminus.

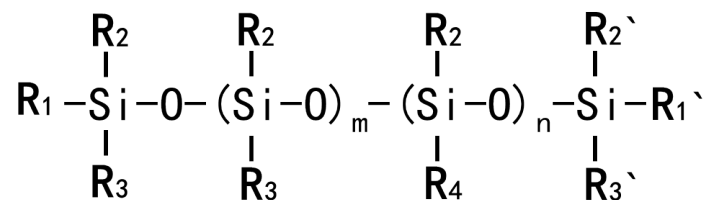
The monofunctional architecture allows covalent anchoring to inorganic substrate surfaces via hydrolysis and condensation of the single alkoxy group, while the PDMS chain extends away from the surface as a non-crosslinking, mobile silicone tail. This surface-grafted configuration reduces inter-particle friction and steric interactions in highly filled systems without forming a rigid crosslinked network — a topological distinction from dual-functional silane coupling agents or bifunctional silicone fluids.

Three grades — LF-M107-30, LF-M107-50, and LF-M107-70 — provide viscosities of 30, 50, and 70 mPa • s respectively; higher viscosity corresponds to longer PDMS chain length and greater steric separation between treated filler particles.

Typical Technical Properties:

Silfluo Code:	LF-M107-30	LF-M107-50	LF-M107-70
Chemical Name:	Mono-Alkoxy Terminated Polydimethylsiloxane		
Synonyms:	Single End-Capped Alkoxy Silicone Fluid; Mono-functional Alkoxy Siloxane		
End-capping:	Mono-Alkoxy (Single end-capped)		
Appearance:	Transparent to light yellow transparent liquid		
Viscosity (25°C, mpa.s)	30	50	70

Chemical Structure:



Applications:

1. Thermally Conductive Interface Materials (TIMs)

Used as surface treatment agent and dispersant for thermally conductive inorganic fillers — alumina (Al₂O₃), aluminum nitride (AlN), and zinc oxide (ZnO) — in thermal greases, gels, phase-change materials, and potting compounds. Single alkoxy group anchors to filler surface; PDMS tail reduces inter-particle friction and filler - polymer interaction, lowering compound viscosity at high filler loading and allowing increased filler volume fraction for higher thermal conductivity. Optimize addition level (typically 0.5 - 3 wt%)

Technical Data Sheet



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on filler weight), treatment method (dry blending or wet treatment), and cure conditions via compound trials.

2. Conductive Silicone Adhesives and Sealants

Used to improve dispersion stability and compatibility of electrically conductive metallic (silver, copper) or carbon-based fillers (carbon black, graphene) in silicone adhesive and sealant formulations, reducing filler agglomeration and improving electrical contact between filler particles.

3. Reactive Diluent for Low-Modulus Silicone Systems

Used as reactive diluent and base polymer component in low-modulus silicone rubbers, soft gels, and specialty foam formulations where reduction of compound viscosity and modulus without non-reactive plasticizer migration is required.

4. Organic-Inorganic Hybrid Polymer Compatibilizer

Used as reactive compatibilizer in hybrid polymer systems, anchoring to inorganic filler or substrate surfaces via the alkoxy group and providing silicone-compatible interface chemistry for organic polymer matrices incorporating inorganic components.

Package & Storage:

In 25kg pail, 200kg drum and IBC.

Keep in cool, dry and ventilated place. Keep away from sunlight and fire sources. Keep in unopened containers, shelf life is 12 months from the date of production. It is shipped as non-hazardous substance.

Storage beyond the shelf life does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.