Technical Data Sheet

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Silfluo LF-MF10

Methoxy-Terminated Silicone Fluid

Description:

Silfluo LF-MF10 is a methoxy-terminated polydimethylsiloxane (CAS 68951-97-3) with reactive methoxy end groups on both chain termini and ultra-low viscosity of 3 mPa·s.

Terminal methoxy groups hydrolyze in the presence of ambient moisture to form silanols, which condense with each other or with substrate surface silanols to form siloxane crosslinks, releasing methanol as co-product. The bifunctional terminal reactivity incorporates the PDMS chain covalently into the moisture-cured network, preventing migration from the cured matrix.

Ultra-low viscosity (3 mPa·s) makes LF-MF10 useful as reactive diluent in alkoxy-cure RTV formulations — reducing compound viscosity without introducing non-reactive plasticizer that would bleed over time.

Typical Technical Properties:

Silfluo Code:	LF-MF10
Chemical Name:	Methoxy-Terminated Polydimethylsiloxane
Synonyms	Methoxy PDMS; Silicone fluid with methoxy end groups
CAS No. :	68951-97-3
Appearance:	Yellowish transparent liquid
Viscosity (25°C, mpa.s):	3
Chemical Structure:	

Applications:

1. Alkoxy-Cure RTV Sealants and Adhesives

Used as reactive diluent and modifier in alkoxy-curing RTV silicone sealants and adhesives. Ultra-low viscosity reduces compound viscosity and improves extrudability and tooling without introducing non-reactive plasticizer. Terminal methoxy groups hydrolyze and condense into the sealant network during moisture cure, incorporating the PDMS chain as a permanent network segment. Addition level should be optimized against target viscosity, cure rate, and final mechanical properties; excess methoxy groups accelerate cure but increase methanol release — assess occupational methanol vapor exposure per local regulations for enclosed application environments.

2. Hydrophobic and Anti-Graffiti Coatings

Used as reactive base or additive in alkoxy-cure coatings for surfaces requiring water repellency, weatherability, and abrasion resistance. Moisture-triggered crosslinking forms a covalently bonded siloxane coating layer on hydroxyl-bearing substrates (glass, concrete, ceramics, metal). Applied by spray or wipe in solution; cure proceeds at ambient temperature and humidity. Verify substrate hydroxyl density and ambient humidity conditions for consistent cure performance.

3. Electronic Conformal Coatings and Encapsulants

Used as low-viscosity reactive base in conformal coatings and encapsulants for electronics, providing moisture penetration into fine geometries and connectors followed by in-situ moisture cure to form a protective siloxane layer against moisture ingress and dielectric breakdown. Methanol release during

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cure must be managed in enclosed assemblies — ensure adequate ventilation or evaluate cure conditions for confined electronic housings.

4. Textile and Leather Waterproofing

Applied to textile and leather substrates as moisture-curing water-repellent treatment. Crosslinked siloxane network formed on fiber or leather surfaces reduces water absorption without forming a surface film, maintaining substrate breathability and tactile properties. Apply by padding or spray in dilute solution; cure at ambient conditions or accelerate with mild heat.

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.

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