Technical Data Sheet

www.silfluosilicone.com

Silfluo LF-MF11

Methyl Fluorosilicone Fluid

Description:

Silfluo LF-MF11 is a series of methyl-terminated polymethyltrifluoropropylsiloxane fluids — non-reactive fluorosilicone oils with trifluoropropyl pendant groups along the siloxane backbone and inert trimethylsilyl chain termini.

The trifluoropropyl side groups provide resistance to hydrocarbon oils, fuels, and organic solvents, and lower surface tension below that of standard PDMS; the siloxane backbone retains broad service temperature range, low-temperature flexibility, and dielectric properties characteristic of polysiloxane chemistry.

Methyl termination renders the fluid chemically non-reactive, suitable for use as base oil, damping fluid, defoamer, and heat transfer medium without crosslinking or network formation.

Three grades — LF-MF11A, LF-MF11B, LF-MF11C — differ in refractive index and density, indicating decreasing trifluoropropyl content from A to C; grade selection determines fluorine level, chemical resistance, surface tension, and density. Custom viscosity available on request.

Typical Technical Properties:

Silfluo Code:	LF-MF11A	LF-MF11B	LF-MF11C
Chemical Name: Synonyms:	Methyl-Terminated Fluorosilicone Fluid Polymethyltrifluoropropylsiloxane; Non-reactive Fluorosilicone Oil		
Appearance	Colorless to yellowish transparent liquid		
Viscosity (25°C, mPa.s)	100-100000		
Volatile (%/ 200°C, 4h)	<5		
PH Value	6.0~7.5		
Flash Point (°C)	>240		
Refractive Index(25°C, nD25)	1.378±0.01	1.384±0.01	1.388±0.01
Density (25°C, g/cm^3)	1.25±0.03	1.13±0.03	1.09±0.03

Various viscosity can be customized.

Applications:

1. Defoamer and Antifoam Agent in Aggressive Chemical Systems

Used as foam control agent in oil and gas processing (crude oil/gas separation), solvent-based coating systems, and chemical process streams where standard PDMS-based defoamers dissolve in or are incompatible with the process medium. Insolubility of the fluorosilicone fluid in hydrocarbon and solvent media maintains defoaming efficacy where PDMS fails. Grade A (highest fluorine content) is preferred for maximum media incompatibility and defoaming persistence. Addition level typically 5 – 100 ppm in the process stream; optimize by trial for specific media and agitation conditions.

2. Base Oil for Chemical-Resistant Lubricating Greases and Pastes

Used as base oil for formulating lubricating greases and pastes for bearings, valves, O-rings, and mechanical seals in contact with fuels, hydraulic fluids, and aggressive chemicals. Fluorosilicone base oil resists swelling and dissolution in hydrocarbon media where standard silicone greases degrade. Select grade based on required chemical resistance level and operating temperature range.

3. Damping Fluid and Dielectric Heat Transfer Medium

Used as damping fluid in precision instruments and aerospace mechanical systems, and as dielectric heat transfer medium in chemical processing equipment, where resistance to fuel and solvent degradation is required alongside the flat viscosity-temperature profile and broad service temperature range of siloxane chemistry. Verify viscosity grade selection against required damping torque specification and operating temperature range.

Package &Storage:

In 25kg and 200kg drum.

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.

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.