

Silico® MF2010-12,500 cSt Silicone Fluid

Technical Data Sheet (TDS)

Product Identification

Product Name: Silico® MF2010-12,500 cSt Silicone Fluid

Chemical Name: Polydimethylsiloxane (PDMS)

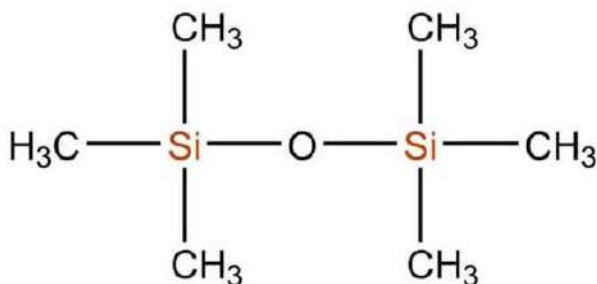
CAS Number: 63148-62-9

Molecular Structure: Linear dimethyl polysiloxane

Product Type: Ultra-high viscosity silicone fluid

Brand: Silico®

Chemical Structure



Product Description

Silico® MF2010-12,500 cSt Silicone Fluid is a high-purity, linear PDMS designed for ultra-high viscosity applications in industrial and engineering systems.

Its 12,500 cSt viscosity enables thick, durable fluid films for mechanical damping, heavy-duty lubrication, thermal management, and dielectric insulation.

The fluid exhibits excellent thermal stability, low volatility, chemical inertness, and strong dielectric performance, ensuring reliable long-term operation in demanding industrial environments.

Typical Physical & Technical Properties

Property	Typical Value
Appearance	Clear, colorless viscous liquid

Chemical Type	Polydimethylsiloxane (PDMS)
CAS Number	63148-62-9
Kinematic Viscosity (25 °C)	12,500 cSt
Density (25 °C)	~0.970 g/cm ³
Refractive Index (25 °C)	~1.403
Surface Tension (25 °C)	~21.3 mN/m
Flash Point (Closed Cup)	>300 °C
Pour/Freezing Point	~-50 °C
Solubility	Insoluble in water; miscible with many organic solvents
Thermal Stability	Excellent
Dielectric Properties	High resistivity and stable insulation

Key Performance Characteristics

Ultra-high viscosity for long-lasting film formation
 Excellent thermal and oxidative stability
 Low surface tension and strong hydrophobicity
 Chemically inert; compatible with metals, plastics, and elastomers
 Low volatility and high flash point for extended service life
 Stable dielectric properties for electrical insulation

Typical Applications

Mechanical damping and vibration control
 High-viscosity lubrication for slow-moving or high-load mechanical parts
 Mold release agents for rubber, plastics, and metal die casting
 Specialty fluid and formulation bases in coatings, antifoam, and surface treatment systems
 Electrical insulation and dielectric media
 Polishes and surface finishing additives for automotive and furniture applications

6. Handling, Storage & Packaging

Packaging: 180 kg drums, 950 kg IBC containers
 Storage Conditions: Keep in sealed containers in a cool, dry, ventilated area
 Shelf Life: Up to 24 months
 Handling: Use standard industrial hygiene practices; avoid prolonged skin contact; clean spills promptly