Technical Data Sheet

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Silfluo LF-211

Low Viscosity Dimethyl Silicone Fluid

Description:

Silfluo LF-211 is a series of low-viscosity polydimethylsiloxane (PDMS) fluids (CAS 63148-62-9), available in four precisely controlled viscosity grades from 5 mPa • s to 50 mPa • s.

The low molecular weight and short chain length of the LF-211 series deliver exceptionally low surface tension, rapid spreading and penetration, lightweight non-greasy skin feel, and fast-acting defoaming capability — performance characteristics fundamentally distinct from the standard-to-high viscosity LF-201 series.

Flash points range from ≥115° C (5 mPa • s grade) to ≥270° C (50 mPa • s grade); the lower flash point of the 5 mPa • s and 10 mPa • s grades requires attention to flammability classification in specific regulatory frameworks.

Typical Technical Properties:

Silfluo Code:	LF-211-5	LF-211-10	LF-211-20	LF-211-50
Chemical Name:	Polydimethylsiloxane (PDMS)			
Synonyms:	Low Viscosity Dimethyl Silicone Oil; Dimethicone			
Molecular Formula:	$(C_2H_6OSi)_n$			
Molecular Weight:	Variable (Polymer)			
CAS NO.:	63148-62-9			
EINECS NO.:	613-156-5			
Viscosity (25°C, mPa.s)	5±1	10±1	20±2	50±5
Flash Point (opened cup)	≥115°C	≥160°C	≥180°C	≥270°C
Density (25°C, g/cm3)	/	0.930~0.940	0.940~0.960	0.956~0.966
Refractive Index(25°C, nD25)	1.3940~1.4020	1.3940~1.4020	1.3940~1.4020	1.4020~1.4040
Volatile (150°C, 2h)/%	/	/	/	≤1.0

Grade	Viscosity	Recommended Primary Use
LF-211-5	5 mPa·s	Maximum penetration lubricant; fast-spreading defoamer base; volatile carrier
LF-211-10	10 mPa·s	Premium personal care carrier; antiperspirant base; precision lubrication
LF-211-20	20 mPa·s	Skin care and hair care emollient; leather care; light damping
LF-211-50	50 mPa·s	Surface care polishes; mold release; heat transfer; defoamer base

Applications:

1. Personal Care and Cosmetics (Premium Dimethicone)

Used as volatile carrier and lightweight base fluid in antiperspirants, skin care creams, and premium hair care products. Provides excellent wet and dry combing, static reduction, and a silky non-greasy tactile finish. Recommended grades: LF-211-5 to LF-211-20.

2. Leather and Premium Surface Care

Used in high-end leather protectants, furniture polishes, and automotive interior care formulations, delivering high gloss, superior spreading, and deep conditioning feel without heavy residue. Recommended grades: LF-211-20 to LF-211-50.

3. Penetrating Lubricant

Exceptionally low viscosity enables outstanding penetration into tight clearances and fine mechanical contacts in precision machinery, delicate plastic-to-metal components, and fine mechanisms where standard oils are too viscous. Recommended grades: LF-211-5 to LF-211-10.

4. Defoaming Base Material

Low surface tension and strict incompatibility with aqueous systems make LF-211 a highly effective, fast-spreading base fluid for formulating specialized defoamers and antifoaming agents in chemical processing, fermentation, and paint manufacturing. Recommended grades: LF-211-10 to LF-211-50.

5. Damping and Heat Transfer Fluid

Used as low-temperature damping fluid for delicate precision instruments and as thermally stable heat transfer medium in specialized thermal management systems. Recommended grades: LF-211-20 to LF-211-50.

6. Precision Mold Release

Fast-spreading, lightweight release agent for intricate rubber and plastic molding with complex geometries requiring rapid, uniform parting film formation and minimal residue on the molded part. Recommended grades: LF-211-20 to LF-211-50.

Package &Storage:

In 200kg drum and 950kg IBC

Keep in cool, dry and ventilated place. Keep away from sunlight and fire sources. Keep in unopened containers, shelf life is 24 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.