

Polydimethylsiloxane Fluid (Dimethylsilicone Fluid)

TSF451-350

PRODUCT DESCRIPTION

TSF451-350 is a transparent dimethyl silicone fluid with nominal viscosity of 350 centistokes (mm²/s) at 25°C. TSF451-350 is a clear, inert, colorless, water-white, oily fluid. It has excellent wide temperature range stability that can be used from -50 to +180°C. TSF451-350 also exhibits excellent non-metallic lubricating and release properties in wide temperature range.

KEY PERFORMANCE PROPERTIES

- ◆ Wide temperature range service capability
- ◆ Low viscosity-temperature change
- ◆ Thermal stability
- ◆ Chemical inertness
- ◆ Low flammability
- ◆ Low surface tension
- ◆ Shear stability
- ◆ Non corrosive

APPLICATION

- ◆ Mechanical; damping, heat transfer, rubber & plastic lubrication
- ◆ Chemical specialties; polishes, household cleaners
- ◆ Plastics; tires mold release, rubbers & plastics mold release, wire & cable manufacturing
- ◆ Antifoams; formulations of aqueous defoaming products
- ◆ Textiles; fiber & thread lubricants, softeners, modifiers
- ◆ Paint and ink additives; flow control, gloss

TYPICAL PROPERTY DATA

PROPERTIES		TSF451-350
Appearance		Colorless, Transparent
Viscosity (25°C)	mm ² /s {cSt}	350 {350}
VTC*		0.60
Specific gravity (25°C)		0.970
Refractive index (n _D ²⁵)		1.403
Pour point	°C	-50 max
Flash point	°C	315
Weight loss (150°C,24h)	%	0.3
Surface tension (25°C)	mN/m {dyne/cm}	20.9 {20.9}
Specific heat (100°C)	J/(kg·K)	1.55×10 ³
Thermal conductivity	W/(m·K)	0.16
Coefficient of volume expansion (25-150°C)	1/K	9.5×10 ⁻⁴

*VTC (Viscosity Temperature Coefficient) = 1 – Viscosity at 98.9°C / Viscosity at 37.8°C

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting GE Toshiba Silicones Commercial Office.



TSF451-350

SOLUBILITY OF TSF451 IN VARIOUS SOLVENTS

SOLVENT	SOLUBILITY
Aliphatic hydrocarbons (hexane, heptane, naphtha)	Soluble
Aromatic hydrocarbons (toluene, xylene)	Soluble
Higher alcohol (octanol, lauryl alcohol)	Soluble
Higher ketones (methyl ethyl ketone etc.,)	Soluble
Ethers (ethyl ether, isopropyl ether)	Soluble
Lower alcohol (methanol, ethanol, isopropanol)	Insoluble
Higher hydrocarbons (waxes, fatty acids, lube oils)	Insoluble
Glycols (ethylene glycol, propylene glycol)	Insoluble
Water	Insoluble

HANDLING AND SAFETY (AND STORAGE)

- ◆ Wear eye protection, protective gloves at all times when working with this product.
- ◆ Keep out of the reach of the children.
- ◆ Store the product in a dark, cool place after closing the lid tightly.

PACKAGING

- ◆ 1kg can available in case of 10
- ◆ 15kg can available by the can
- ◆ 200kg drum

TSF451-350 E
Issued Dec. 2000

FOR INDUSTRIAL USE ONLY

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