

TRIBOLUBE[®] F-170

Synthetic Perfluoro Polyether Lubricant

CHARACTERISTICS

TRIBOLUBE F-170 Perfluoropolyether oil is high performance oil designed for applications in harsh environments where non-reactivity with strong oxidizers, insolubility in solvents, radiation resistance, and has an operating temperature of -80°F to 550°F. Tribolube F-170 oil has an excellent viscosity index and low temperature properties.

APPLICATIONS

Tribolube F-170 is an excellent lubricant for high speed precision bearings and electrical contacts and is insoluble in most organic solvents, but is soluble in highly fluorinated solvents. It is compatible with most plastics, elastomers and metals under normal operating temperatures. Although newly exposed surfaces of aluminum, titanium and magnesium under certain conditions may cause depolymerization of perfluoroether oils.

PERFORMANCE TEST	TEST METHOD	CONDITION	TYPICAL VALUES
Specific Gravity	Mohr Westphal	60 °F	1.85 g/cc
Viscosity index	ASTM-D-2270		360
Pour point	ASTM-D-97		-63 °C
Kinematic viscosity	ASTM-D-445	@ -60 °C	21,140 cSt
		@ -40 °C	6,625 cSt
		@ 20 °C	610 cSt
		@ 40 °C	355 cSt
		@ 100 °C	98 cSt
Evaporation Weight Loss	ASTM-D-2595	@ 149 °C, 22 hr.	NA
		@ 204 °C, 22 hr.	0.2%
Vapor Pressure Knudsen	Knudsen	@ 20 °C	1.1×10^{-16}
		@ 40 °C	5.5×10^{-15}
		@ 100 °C	4.1×10^{-11}
Load Wear Index	ASTM-D-2596	Init. Seiz. load	501 kg
		Welding load	631 kg
		Mean hertz load	118 kg
Four Ball Wear Test	ASTM-D-4172B	Avg. scar diameter	0.93 mm
Surface Tension	DuNouy Tensionmeter	@ 68 °F	23 dynes/cm
Flash & Fire Point	ASTM-D-92-66		None
Refractive Index	ASTM-D-1218	@ 68 °F	1.294
Copper Corrosion	FED-STD-791 Method 5309	24 hrs @ 212°F	1a, No stain

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