Krytox FPG 182

Performance Lubricants

Rust Preventive, High Performance, Wide Temperature Grease

Product Information

Krytox™ FPG 182 is a smooth, buttery white grease. It has been specifically developed to operate over a wide temperature service range and in extreme chemical and vacuum conditions. It has exceptional performance as shown by its bearing life test that has over 7 times the life of similar products. It is a perfluoropolyether (PFPE)-based grease thickened with a special high performance PTFE thickener, and has exceptional chemical and oxygen resistance. It is designed to operate under severe conditions, and can be used for bearings, gears, and as a lubricant for O-rings and elastomers.

Properties of Krytox™ FPG 182

Property	Analysis	Method
Penetration at 25 °C (77 °F), mm^{-1}		D217
Unworked	305	
Worked, 60 strokes	303	
Cone Oil Separation, 30 hr, 204 °C (399 °F), wt %	13	ASTM D6184
Rust Prevention	Pass	ASTM D1743
Copper Strip Corrosion	1b	FTM 5309
Four-Ball Wear Test, mm, 1200 rpm, 40 kgf load, 1 hr, 75 °C (167 °F)	1.33	ASTM D2266
Use Range	−80 °C (−112 °F) to 210 °C (410 °F)	
Four-Ball Extreme Pressure Weld	800+ kg	ASTM D2596
Vacuum Stability Test, 24 hr, 125 °C (257 °F), 10^{-6} torr		ASTM E595
Total Weight Loss (TWL), wt%	0.070	
Volatile Condensable Material (VCM), wt%	0.027	
Low Temperature Torque, g-cm		ASTM D1478
at −62 °C (−80 °F)		
Starting	1070	
Running, 1 hr	507	
at −73 °C (−99 °F)		
Starting	3250	
Running, 1 hr	1141	
LOX Impact Sensitivity, 100 mm, 20 drops	Pass	ASTM D2512
Evaporation Loss, % wt, 22 hr, 204 °C (399 °F)	0.07	ASTM D2595
Foreign Particles, Micron Range		FTM 3005
25–74 micron	45	
75 microns or larger	0	

continued

Properties of Krytox™ FPG 182 (continued)

Property	Analysis	Method
Bearing Life, 10,000 rpm, 204 °C (399 °F)	5400+ hr	ASTM D3336
SRV Wear, 50 Hz, 200N, 50C, 120 min	699 µm ball scar/0.084 Friction coefficient	ASTM D5707
Wear at 5000 Cycles, 150 lb Load, mm	1.03	ASTM D2714 (mod)
Density, g/mL at 20 °C (68 °F)	1.94	
Base Oil Characteristics		
Kinematic Viscosity, cSt		ASTM D445
at 40 °C (104 °F)	138	
at 100 °C (212 °F)	37.57	
at −54 °C (−65 °F)	9256	
Viscosity Index	313	ASTM D2270
Pour Point	−72 °C (−98 °F)	ASTM D97
Vapor Pressure, torr, 20 °C (68 °F)	8×10^{-11}	

Storage and Handling

Shelf life: Indefinite shelf life in unopened container. It is normal for oil to separate from grease during storage. Before use, knead tubes or stir larger containers to remix.

Product Package

Krytox™ FPG 182 is available in 50 and 100 g syringes, 8 oz tubes, and 1.76 lb cartridges.

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