



Krytox[®]

performance lubricants

Krytox[®] XP Lubricants with Soluble Additives

Krytox[®] XP lubricants are formulated using patented soluble additives. Typical perfluoropolyether (PFPE) greases use solid additives for antirust, antiwear, or extreme pressure performance. These components are mixed into the grease and held in place by the grease thickener. There were no additives available for the oil because of the inertness of the oil and insolubility of available additives.

The Krytox[®] XP lubricant line offers greases and oils with a soluble additive in the oil. It won't be

washed away or left behind with the grease thickener. These new patented additives enhance the performance of Krytox[®] PFPE greases and oils, giving them improved performance properties. Bearings run quieter and wear less because there are no solid additives to make noise. Lower wear will extend bearing and component life. The anticorrosion protection of the additive will reduce rusting and allow longer grease and bearing life. The extreme pressure properties of the additive protect bearings under high loads.

Typical Properties of Krytox[®] XP Lubricants Products

	Oil Grease	XP 1A0 XP 2A0	XP 1A1 XP 2A1	XP 1A2 XP 2A2	XP 1A3 XP 2A3	XP 1A4 XP 2A4	XP 1A5 XP 2A5	XP 1A6 XP 2A6	XP 1A7 XP 2A7
ISO Grade of Base Oil		5	7	15	32	68	150	220	460
Estimated Useful Range									
°C		<-70-66	<-70-104	-63-132	-60-154	-51-179	-36-182	-36-182	-30-182
°F		<-94-150	<-94-220	-81-270	-76-310	-60-355	-33-360	-33-360	-22-360
Oil Viscosity, cSt									
20°C (68°F)		7	16	36	80	180	550	810	1600
40°C (104°F)		4	8	15	30	60	160	240	440
100°C (212°F)		—	2	3	5	9	18	25	42
Oil Viscosity Index		—	—	59	121	124	125	134	155
Base Oil Pour Point									
°C		<-70	<-70	-63	-60	-51	-36	-36	-30
°F		<-94	<-94	-81	-76	-60	-33	-33	-22

Krytox® XP lubricants are high-quality, ultra-high-performance antifriction and antitrust lubricants. Formulated with synthetic perfluoropolyether fluids, soluble additives, and the most efficient

polytetrafluoroethylene thickeners available, these lubricants exceed the performance requirements of your most demanding application.

Performance Test	Test Method	Typical Results
Water Washout	ASTM D1264, 79°C (175°F)	0.25%
Load Wear Index (4-Ball EP)	ASTM D2783 (Oil) ASTM D2596 (Grease)	1A3 = 53.3 2A6 = 143.6
Steel on Steel Wear (4-Ball) 1,200 rpm, 20 kg, 107°C (224°F)	ASTM D4172 (Oil) ASTM D2266 (Grease)	1A5 = 0.29 mm 2A5 = 0.34 mm
Steel on Steel Wear (Block on Ring)	ASTM D2714	1A5 = 0.70 mm
Steel on Steel Wear (Pin and Vee Block)	ASTM D3233	3000 lb, 51 torque
Rust Preventive Properties (Bearing)	IP 220 (EMCOR)	2A5 = 0 no rust
Rust Preventive Properties (Steel Panel in Salt Spray)	ASTM D117	2A5 = 100 hr no rust

XP lubricants will hold up under tremendous load conditions, preventing metal to metal contact and thereby reducing wear.

The long-term antitrust properties repel moisture, providing extra protection from corrosion of metal parts and bearing surfaces. It exhibits excellent resistance to water washout when used in wet environments.

While Krytox® oils are inert and nonreactive to all elastomers, plastics, and metals, the soluble

additives in the XP lubricants are new and have not been tested with all materials. It is possible that some reactivity and damage could occur to some materials. Initial testing has shown no problems with Teflon®, Kalrez®, Viton®, nitrile, and silicone rubbers. There is some reactivity of the additive with copper, but it is less with brass. These additives have not been tested at all temperatures and degradation of performance could occur at elevated temperatures over a long period of time.

For more information or technical assistance, visit us on the Web: www.krytox.com

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