## Special Purpose Grease

## **CHARACTERISTICS**

Conforming to MIL-PRF-83363 requirements, the outstanding characteristics of this grease are its operating temperature range (-65°F to 350°F), its extreme pressure and anti-wear properties, and its ability to function in heavily loaded gear boxes and transmissions without excessive heat buildup of temperature. This grease was developed for lubricating helicopter transmissions, screw actuators, fine pitch gear trains and servo mechanisms. It is also used in aircraft windshield wiper motor gearboxes. Cost effective industrial uses for this lubricant are increasing rapidly as indicated by the following partial list of applications.

## **APPLICATIONS**

**Stepping motor drive** - excellent adherence and lubricity coupled with long life eliminating severe maintenance problems in a large telescope drive mechanism.

**Missile guidance controls** - long shelf life, high lubricity, and seal compatibility.

**Ball screw actuators** - required high lubricity, high load capability, seal compatibility, and low start run torques at -65°F.

PERFORMANCE TEST	TEST METHOD	CONDITION	MIL-PRF-83363 REQUIREMENTS	TYPICAL VALUES
Temperature Range				-65°F to 350°F
NLGI No.				1
Unworked Penetration	ASTM D-1403	@77°F	340 max	295
Worked Penetration	ASTM D-1403	60 Strokes	340 max	330
Worked Stability	FED-STD-791	100,000 Strokes	375 max	325
	Method 313			
Dropping Point	ASTM D-2265			+550°F
Evaporation	ASTM D-2595	22 hrs @ 300°F	5.0% max	2.80%
Oil Seperation	FED-STD-791	30 hrs @ 300°F	10.0% max	5.00%
	Method 321			
Density				1.20 gm/cm
Dirt Count	FED-STD-791	25-74 microns		24/cc
	Method 3005	Over 75 microns		0
Coef. of Friction		1,200 rpm, 90°F, 15 kg load		0.08
Load Wear Index	ASTM D-2596		90 min	146.1
Last Non-seizure		Load/Wear Scar		None
Last Seizure		Load/Wear Scar		315 kg/1.10 mm
Weld Point		Load		+800 kg
Steel-on-Steel Wear	ASTM D-2266	1200 rpm, 40 kg, 167°F, 2 hrs, 52100 Steel	1.3 mm max	1.06 mm
		1200 rpm, 40 kg, ambient, 4 hrs, 52100 Steel	1.3 mm max	1.16 mm
High Temperature Performance	ASTM D-3336	10,000 rpm, 300°F, 5 lbs		1,300 hrs
Low Temperature	ASTM D-1478	@-65°F,		
Torque		Starting	3,000 gm-cm Max	2,179 gm-cm
		Running	1,000 gm-cm Max	670 gm-cm
Rubber Swell	FED STD-791			
Buna "N"	Method 3603	168 hrs @ 158°F		31.70%
Buna "N"	]	72 hrs @ 275°F		36.90%
Viton "B"	]	168 hrs @ 158°F		-0.03%
Viton "B"		168 hrs @ 300°F		15.80%
Fluorosilicone	]	168 hrs @ 158°F		9.00%
Fluorosilicone		72 hrs @ 300°F		-7.00%