TECHINCAL DATA SHEET FOR RADCOLUBE® LTGO
MIL-PRF-14107D LUBRICATING OIL, WEAPONS, LOW TEMPERATURE

CHARACTERISTICS	REQUIREMENT	TYPICAL RESULTS	TEST METHOD
Hydrolytic stability			FED-STD-791 Method 3457
Copper strip, change in weight, mg/cm^2 (appearance)	0.5 max	0.000 (1b)	
Neutralization number change of oil, mg KOH	0.5 max	0.25	
Viscosity change of oil at 100°F (37.8°C), percent	± 20%	-0.73%	
Neutralization number change of aqueous layer, mg KOH	0.5 max	0.31	
Insoluble material, percent weight	0.5% max	0.032%	
Swelling of Synthetic Rubber, SAE AMS 3217/2 NBR-L, 168 hours at 70°± 2°C (158° ± 5°F)	25% max	11.67%	FED-STD-791 Method 3603
Flash point	162.7°C (325°F) min.	164.4°C (328°F)	ASTM D92
Pour point	-59.4°C (-75°F) max.	≤ -69°C (-92°F)	ASTM D97
Neutralization number	1 max	0.35	ASTM D664
Viscosity, cSt			ASTM D445
at 37.8°C (100°F)	5.8 min	6.1	
at -54°C (-65°F)	950 max	866	
Precipitation, mL	0.05 max	0.00	ASTM D91
Evaporation loss, percent weight	10% max	4.04%	ASTM D972
Physical appearance	MIL-PRF-14107D ¶ 3.3.10	Conforms	MIL-PRF-14107D ¶ 4.3.2.10
Corrosion protection	MIL-PRF-14107D ¶ 3.4.1	Pass	MIL-PRF-14107D ¶ 4.3.3.1
Oxidation stability			MIL-PRF-14107D ¶ 4.3.3.2
Copper, change in weight, mg/cm2	± 0.2 max	0.00	
Steel, change in weight, mg/cm2	± 0.2 max	0.00	
Neutralization number of the oil, mg KOH	0.5 max	0.42	
Neutralization number of any volatile components, mg KOH	0.5 max	0.20	
No visual evidence of separation of insoluble materials or gumming of the oil	Pass	Pass	
Storage stability			MIL-PRF-14107D ¶ 4.3.3.3
Low temperature, 168 hours at -54°C	MIL-PRF-14107D ¶ 3.4.3.1	Conforms	MIL-PRF-14107D ¶ 4.3.3.3.1
Ambient temperature at 6 months, 65°F to 95°F (18.3° to 35°C)	MIL-PRF-14107D ¶ 3.4.3.2	Conforms	
Hydrolytic stability (after 6 months storage at ambient temperature)			FED-STD-791 Method 3457
Copper strip change in weight, mg/cm2 (appearance)	0.5 max	0.000 (1b)	
Neutralization number change of oil, mg KOH	0.5 max	0.23	
Viscosity change of oil at 100°F (37.8°C), percent	± 20%	-0.64%	
Neutralization number change of aqueous layer, mg KOH	0.5 max	0.31	
Insoluble material, percent weight	0.5% max	0.03%	
Evaporation loss, percent weight (after 6 months storage at ambient temperature)	10% max	6.68%	ASTM D972
Lubricating durability	MIL-PRF-14107D ¶ 3.3.9	Pass	MIL-PRF-14107D ¶ 4.3.2.9

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