TECHNICAL DATA SHEET FOR RADCOLUBE® RHP6083
MIL-PRF-6083G HYDRAULIC FLUID, PETROLEUM BASE, PRESERVATION AND OPERATION

CHARACTERISTICS	REQUIREMENT	TYPICAL RESULTS	TEST METHOD
Acid Number, mgKOH/g, max	0.2	0.17	ASTM D664
API Gravity at 15.6°C/15.6°C	Report	30.4	ASTM D1298
Color, ASTM Color Scale, max	5.0	Conforms	ASTM D1500
Compatibility	Pass	Pass	Paragraph 4.5.1
Copper Strip Corrosion (72 hours at 100 ± 1°C), ASTM Standard, max	2e	1b	ASTM D130
Corrosion Protection (Humidity Cabinet), (100 ± 1 hours at 48.9 ± 1.1°C air temperature)			ASTM D1748
Sand-blasted (3 panels)	Pass	Pass	
Polished Panels (3 panels)	Pass	Pass	
Corrosiveness (Bimetallic Couple)	Pass	Pass	ASTM D6547
Corrosiveness and Oxidation Stability (168 hrs at 121 ± 0.5°C)			ASTM D4636 Procedure 2
Metal specimen weight change, mg/cm2, max			
Cadmium Anode	± 0.2	0.02	
Steel Grade 1010	± 0.2	-0.02	
Aluminum Alloy	± 0.2	0.01	
Magnesium	± 0.2	0.00	
Copper (No. 3 max)	± 0.2	0.00 (1b)	
Percent change in viscosity at 40°C	-5% to +20%	12.3%	
Change in acid number, max	0.2	0.20	
Separation of insoluble materials or gumming of the fluid	None	None	
Evaporation Loss (22 hours at 100 ±0.5°C), % by weight, max	75%	73%	ASTM D972
Foaming Characteristics			
Foaming Tendency			
Foam volume (mL) at end of 5 minute blowing period, max			
At 24°C	65	0	
At 94°C	65	10	
At 24°C after test at 94°C	65	10	
Foam Stability			
Foam volume (mL) at end of 10 minute setting period, max			
At 24°C	0	0	
At 94°C	0	0	
At 24°C after test at 94°C	0	0	
Isothermal secant bulk modulus @ 40°C and 27.6 MPa (4000 psig), MPa (psi) (minimum)	1379 MPa (200,000 psig)	1606 MPa (232,931 psig)	ASTM D6793
Low Temperature Stability (-54 ± 1°C for 72 hours)	Pass	Pass	FTM 3458
Particulate Contamination			
Particle Count, micrometers, max			FTM 3012
5 - 25	10,000	5,340	
26-50	250	10	
51-100	50	8	
over 100	10	4	
Gravimetric method, mg/100 mL, max	0.5	<0.005	ASTM D4898
Pour Point (°C) max	-59	<-72	ASTM D97
Rubber Swell, Standard Synthetic Rubber, NBR-L, % (168 ± 0.5 hours at 70 ± 2.5°C)	19.0% to 31.0%	19.4%	ASTM D4289
Shear Stability, percent, max	Pass	Pass	ASTM D2603
Steel-on-Steel wear (average wear scar), mm in diameter, max	1.0	0.74	ASTM D4172
Storage Stability (24 ± 3°C for 12 months)	Pass	Pass	FTM 3465
Viscosity, mm2/s			ASTM D445
At -54°C, max	3,300	2859	
At -40°C, max	700	559	
At 40°C, min	13.2	15.6	
At 100°C, min	4.6	5.45	
Water, mass %, max	0.05%	0.01%	ASTM D6304

* Data represents typical laboratory samples and are not guaranteed for all samples

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