



RADCO INDUSTRIES, INC.

TECHNICAL DATA SHEET FOR RADCOLUBE® RHP5606 HYDRAULIC FLUID
MIL-PRF-5606K, HYDRAULIC FLUID, PETROLEUM BASE; AIRCRAFT, MISSILE, AND ORDNANCE

Property	Requirement	Result	Test Method
Acid number, mg KOH/g	0.20 max	0.12	ASTM D664
Barium content, mg/kg	10 max	< 1	ASTM D5185
Color	MIL-PRF-5606K Section 3.4.1	Pass	ASTM D1500
Compatibility	MIL-PRF-5606K Section 3.4.2	Pass	MIL-PRF-5606K Section 4.4.2
Copper strip corrosion, ASTM Standard	2e max	1b	MIL-PRF-5606K Section 4.4.3
Corrosiveness and oxidation stability (168 hours at 135°C ± 1°C)			ASTM D4636 Procedure 2
Change in acid number, mg KOH/g	0.20 max	0.18	
Metal specimen weight change, mg/cm ²			
Aluminum	± 0.2	0.02	
Cadmium plated steel	± 0.2	0.01	
Copper (color)	± 0.6 (No. 3 max)	-0.008 (1b)	
1010 Steel	± 0.2	0.01	
Magnesium	± 0.2	0.03	
Percent change in viscosity at 40°C	-5% to +20%	9.27%	
Separation of insoluble materials or gumming of the fluid	None	Conforms	
Evaporation loss (6 hours at 71°C), %	20% max	18%	ASTM D972
Flash point, °C	82 min	86	ASTM D93
Foaming characteristics at 24°C			ASTM D892
Foaming tendency, mL	65 max	60	
Foam stability, mL	Complete collapse	0	
Isothermal secant bulk modulus @ 40 °C and 27.6 MPa (4000 psig), MPa (psi)	1379 (200,000) min	1680 MPa (243,663 psi)	ASTM D6793
Low temperature stability, 72 hours @ -54 °C ± 1 °C	MIL-PRF-5606K Section 3.4.3	Conforms	FED-STD-791D Method 3458
Particulate contamination			
Particle count, AS4059 Contamination Class	Class 5 max	4	FED-STD-791D Method 3012
Particle size range NAS 1638 (ISO 11171), Differential, micrometers			
5-15 (6-14 _(c))	8000 max	901	
16-25 (15-21 _(c))	1425 max	117	
26-50 (22-38 _(c))	253 max	78	
51-100 (39-70 _(c))	45 max	18	
Over 100 (Over 70 _(c))	8 max	0	
Gravimetric analysis, mg/100mL	1.0 max	0.0	ASTM D4898
Pour point, °C	-60 max	≤ -69	ASTM D97
Relative density at 15.6/15.6°C	MIL-PRF-5606K Section 3.4.4	0.8740	ASTM D1298
Rubber swell, standard synthetic rubber L (168 hours @ 70 °C), %	19.0 to 30.0%	29.8%	ASTM D4289
Shear stability	MIL-PRF-5606K Section 3.4.5	Pass	ASTM D2603
Steel-on-steel (average wear scar), mm in diameter	1.0 max	0.66	ASTM D4172
Storage stability (24°C ± 3°C for 12 months)	MIL-PRF-5606K Section 3.4.6	Pass	FED-STD-791D Method 3465
Viscosity, mm ² /s at			ASTM D445
-54°C	2500 max	2231	
-40°C	600 max	510	
40°C	13.2 min	14.0	
100°C	4.90 min	5.09	
Water, mg/kg	100	41	ASTM D6304
Workmanship	MIL-PRF-5606K Section 3.5	Conforms	ISO 9001:2015

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