



**TECHNICAL DATA SHEET FOR RADCOLUBE® 17111
MIL-PRF-17111F FLUID, POWER TRANSMISSION**

BASE STOCK CHARACTERISTICS	REQUIREMENT	RESULTS	TEST METHOD
Neutralization Number	0.05 mg KOH/g, max	0.01	ASTM D974
Aniline Point	77°C, min.	78.9°C	ASTM D611
Aniline Point Change	2.8°C, max.	-0.78°C	ASTM D611
Precipitation Number	0.05 mL, max.	0.00	ASTM D91

FINISHED FLUID CHARACTERISTICS	REQUIREMENT	RESULTS	TEST METHOD
API Gravity at 15.6°C	Report	29.6	ASTM D287
Viscosity at -35°C	1,000 mm ² /s (cSt), max.	993	ASTM D445
Viscosity at -20°C	500 mm ² /s, max.	313	ASTM D445
Viscosity at +40°C	25 mm ² /s, min.	26.8	ASTM D445
Viscosity at +100°C	8 mm ² /s, min.	8.8	ASTM D445
Pour Point	-40°C, max.	-66°C	ASTM D97
Flash Point, Cleveland Open Cup	104°C, min.	116°C	ASTM D92
Fire Point, Cleveland Open Cup	113°C, min.	119°C	ASTM D92
Neutralization Number	0.3 mg-KOH/g, max.	0.11	ASTM D974
Precipitation Number	0.05 mL, max	0.00	ASTM D91
Water	0.05%, max.	0.01%	ASTM D95
Color, ASTM D1500	2, max.	<0.5	ASTM D1500
High and Low Temperature Turbidity, 72 hours at 121°C and -40°C	MIL-PRF-17111F Paragraph 3.5.1	Pass	MIL-PRF-17111F Paragraph 4.5.3
Rust Prevention	No evidence of rust	Pass	MIL-PRF-17111F Paragraph 4.5.4
Corrosion and Oxidation Stability, 336-hour Test			MIL-PRF-17111F Paragraph 4.5.5.1
Copper weight loss	0.2 mg/cm ² , max.	-0.05	
No pitting, etching, or visible signs of corrosion	Pass	Pass	
Viscosity change at 100°C	25%, max.	7.3%	
Viscosity change at -20°C	25%, max.	18.2%	
Neutralization Number change	0.5 mg-KOH/g, max.	0.13	
Oil-insoluble material	0.5%weight., max	0.02%	
Color of fluid	5.0, max.	2.0	ASTM D1500
Corrosion and Oxidation Stability, 72-hour Test			MIL-PRF-17111F Paragraph 4.5.5.1
Viscosity change at 100°C	15%, max.	2.9%	
Viscosity change at -20°C	15%, max.	6.2%	
Neutralization Number change	0.5 mg-KOH/g, max.	0.12	
Acidity of Water-Layer	0.5 mg-KOH/g, max.	0.03	
Shear Stability			ASTM D5621
Viscosity change	20%, max.	-6.75%	
Neutralization Number change	0.20 mg-KOH/g, max.	0.01	
Steel-on-Steel Wear	1 mm, max.	0.51	MIL-PRF-17111F Paragraph 4.5.6
Evaporation Loss at 66°C	20%, max.	6.06%	ASTM D972
Water Sludging			MIL-PRF-17111F Paragraph 4.5.7
Viscosity change at 40°C of emulsion formed	-2 to +10%	-0.03%	
Workmanship	MIL-PRF-17111F Paragraph 3.6	Pass	MIL-PRF-17111F Paragraph 3.6