

Castrol Brayco Micronic 883

Hydraulic Fluid, Rust Inhibited, Fire Resistant
Synthetic Hydrocarbon Base

Description

Castrol Brayco™ Micronic 883 is a rust-inhibited fire resistant synthetic ISO viscosity Grade 15 hydraulic fluid for aircraft, ordnance and industrial use. It contains no viscosity index improvers and therefore, unlike conventional hydraulic fluids, it is not subject to polymeric breakdown. This product is compatible with MIL-H-5606G and MIL-PRF-6083F in all proportions.

Application

Brayco Micronic 883 is primarily designed as a fire resistant hydraulic fluid with superior corrosion resistance. MIL-PRF-46170C is intended for use as a direct replacement for MIL-PRF-6083.

Typical Characteristics

TEST METHOD	DESCRIPTION	SPECIFICATION REQUIREMENTS	RESULT
D 287	API Gravity, degrees	Report	34.9
Table 3	Specific Gravity @ 16/16°C (60/60°F)	Report	0.85
Table 8	Pounds per Gallon @ 16°C (60°F)	--	7.1
D 445	Kinematic Viscosity, cSt	--	1.15
	@ 204.4°C (400°F)		3.7
	@ 100°C (212°F)	3.4 Minimum	15.6
	@ 40°C (104°F)	19.5 Maximum	2450
	@ -40°C (-40°F)	2600 Maximum	14,650
	@ -54°C (-65°F)	Report	
D 92	Flash Point, COC, °C (°F)	204 (400) Minimum	226 (440)
D 92	Fire Point, COC, °C (°F)	246 (475) Minimum	252 (485)
E 659	Auto-ignition Point, °C (°F)	343 (649) Minimum	380 (716)
D 97	Pour Point, °C (°F)	-54 (-65) Maximum	-60 (-75)
D 2273	Trace Sediment, ml	0.005 Maximum	0.001
D 664	Acid Number, mgKOH/g	0.20 Maximum	0.04
D 1744	Water (Karl Fischer), %	0.05 Maximum	0.02
FTM 3458	Low Temperature Stability, 72 hrs @ -40°C (-40°F)	Pass	Pass
D 1748	Rust Prevention, Polished/Sandblasted Panels	Pass	Pass
	100 hrs @ 100% humidity	Pass	Pass
FTM 3603	Rubber Swell, "L" Rubber, %	15.0 - 25.0	17
Spec	Incendiary Gunfire (.50 cal.) *	Pass	Pass
FTM 6052	High Temperature Pressure Spray Ignition *	Pass	Pass
Spec	Flame Propagation *	Pass	Pass
791-3009	Solid Particle Contamination, Autocount Number of Particles per 100 mL		
	5 - 25 microns	10,000 Maximum	4000
	26 - 50 microns	250 Maximum	36
	51 - 100 microns	50 Maximum	4
	100 + microns	10 Maximum	1
D 2270	Viscosity Index		126

TEST METHOD	DESCRIPTION	SPECIFICATION REQUIREMENTS	RESULT	
D 892	Foam Characteristics			
	Sequence 1 @ 24°C (75°F)			
	Tendency, mL	65 Maximum	10	
	Stability, mL	0 Maximum	0	
	Sequence 2 @ 93.5°C (200°F)			
	Tendency, mL	65 Maximum	10	
D 4172	Shell Four-Ball Wear Test, AWSD, mm			
	1200 rpm, 1 hr, 75°C (167°F)			
	@ 10 kgf	0.30 Maximum	0.25	
	@ 40 kgf	0.65 Maximum	0.45	
	FTM 5308	Oxidation and Corrosion Stability *		
		168 hrs @ 121°C (250°F), weight change		
Copper, mg/cm ²		<u>0.06</u>	-0.1	
Magnesium, mg/cm ²		<u>0.2</u>	0	
Aluminum, mg/cm ²		<u>0.2</u>	0	
Steel, mg/cm ²		---	0	
Viscosity change, %	---	2.5		
Change in neutralization number, mgKOH/g	0.20 Maximum	0.05		
<i>Bulk Modulus, Isothermal Secant *</i>				
	0 to 10,000 psi @ 37.8°C (100°F)			
	psi (minutes)			
	2000	200,000	206,000	
	4000	200,000	219,000	
	6000	200,000	234,000	
	8000	200,000	240,000	
10000	200,000	262,000		

Subject to usual manufacturing tolerances.

Additional Information

Temperature Range

Brayco Micronic 745 is designed to operate over the temperature range of -45°C to 204°C (-50°F to 400°F).

Specification

Brayco Micronic 883 meets and is qualified under military specification MIL-PRF-46170C, Type I, Amendment 2.

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