



Product Data

Brayco Micronic 756

Hydraulic Fluid, Petroleum Base

Description

Castrol Brayco® Micronic 756 is a petroleum base, low viscosity, red colored ISO Grade 15 hydraulic fluid for aircraft, missile and ordnance use. It is a blend of highly refined, selected base stocks with suitable additives, which yield a product with exceptionally good viscosity-temperature characteristics, good anti-wear properties, low rubber swell, and excellent oxidation stability. The use of a polymeric viscosity index improver of low molecular weight provides stability in comparison to typical hydraulic fluids.

Application

Brayco Micronic 756 is designed for use in aircraft, missile, and ordnance hydraulic systems where long term stability and a low temperature fluid is required. Brayco Micronic 756 is filtered to meet rigid particle contaminant requirements. It is intended for use in automatic pilots, shock absorbers, brakes, flap-control mechanisms, missile hydraulic servo-controlled systems and other hydraulic systems using synthetic sealing materials. Fluids compounded to meet this specification undergo certain changes with use. Further information relative to usable life may be found in Fainman and Mackenzie, "The Characteristics and Performance of Specification MIL-J-5606 Hydraulic Fluid," Lubrication Engineering 22234 (1966).

Typical Characteristics

Test Method	Description	MIL-SPEC 5606J Requirements	Results
ASTM D 287	API Gravity, degrees	30.5	30.1
Table 3	Specific Gravity @ 60°F	0.8735	0.87
Table 8	Pounds per Gallon @ 60°F	7.273	7.28
ASTM D 445	Kinematic Viscosity, cSt		
	@ 100°C	4.9 Min	5.1
	@ 40°C	13.2 Min	13.5
	@ -40°C	600 Max	487
	@ -54°C	2500 Max	2275
ASTM D 5949	Pour Point, °C	-60 Max	-60
ASTM D 93	Flash Point, °C	82 Min	96
ASTM D 664	Acid Number, mg KOH/g	0.2 Max	0.03
Spec	Color	Red Per Standard	Pass
ASTM D 4636	Corrosion & Oxidation Stability 168 hrs @ 135°C		
	Weight Change, mg/cm ²		
	Copper	±0.6	-0.053
	Aluminum Alloy	±0.2	-0.023
	Magnesium Alloy	±0.2	-0.015
	Steel	±0.2	0.000
	Cadmium	±0.2	+0.007
	Appearance		
	Copper Color, ASTM	3 Max	Pass
	Metal pitting/etching	None	Pass
	Viscosity Change @ 40°C, %	-5 - 20	+9.6
	TAN change, mg KOH/g	0.2 Max	0.02

	Oil insolubles/gums	None	Pass
FTM 3458	Low Temperature Stability @ -54°C for 72 hours	No Solids or Separation	Pass
ASTM D 4289	Rubber Swell "L", 168 hrs @ 70°C, (NBR-L, SAE-AMS 3217/2), %	19 - 30	28
ASTM D 972	Evaporation Loss, 6 hrs @ 71°C, %	20 Max	9.6
Spec	Copper Corrosion, 72 hrs @ 135°C	2e Max	2b
FTM 3012	Particulate Contamination/ 100 ml, Autocount		
	5-15 micron	8000	4500
	15-25 micron	1425	195
	25-50 micron	253	50
	50-100 micron	45	10
	>100 micron	8	1
ASTM D 4898	Gravimetric Residue, mg/ 100mL	0.3 Max	0.2
	Filtering Time, Minutes	15 Max	8.0
ASTM D 892	Foam Characteristics @ 24°C		
	Foam Tendency, mL	65 Max	35
	Foam Stability, mL	0 Max	0
ASTM D 6304	Water Content, ppm	100 Max	36
ASTM D 4172	Steel-on-Steel Wear Condition B, AWSD, mm	1 Max	0.77
Spec	Workmanship	Pass	Pass
ASTM D2603	Shear Stability		
	TAN change, mg KOH/g	0.2 Max	0.00
	Viscosity change less than reference fluid B	Pass	Pass
ASTM D 2270	Viscosity Index		367

Subject to usual manufacturing tolerances.

Additional Information

Specific Heat		Thermal Conductivity	
Temperature, °F	BTU/LB/°F	Temperature, °F	BTU-ft ² /hr/°F
-60	0.361	-65	0.0816
-30	0.377	0	0.0802
0	0.392	100	0.0777
80	0.453	200	0.0753
150	0.493	300	0.0730
200	0.523		
250	0.552		

Bulk Modulus, Adiabatic, @24°C (76°F)		Vapor Pressure	
Pressure, PSI	Bulk Modulus, PSI	Temperature, °C	Mm of Hg
0	232,000	145.6	30.3
100	243,000	133.3	17.9
2000	255,000	123.3	12.2
3000	266,000	110.0	6.7
		90.0	2.9
		12.8	0.01
		-17.8	0.0006
		-54.0	0.000005

Temperature Range Brayco Micronic 756 is designed to operate over the temperature range of -54°C to 135°C (-65°F to 275°F) Specification Brayco Micronic 756 meets the requirements and is qualified under military specification MIL-PRF-5606J. This fluid is identified by Military Symbol: OHA and NATO Code Number: H-515.

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