



Brayco Micronic 881

Low Temperature Hydraulic Fluid

Description

Castrol Brayco[®] Micronic 881 is a fire resistant, synthetic hydrocarbon base, low temperature ISO viscosity Grade 7, red-colored hydraulic fluid for aircraft, missile, ordnance, and industrial use. It is specifically designed for low temperature applications where low temperature stability is particularly important. This product also provides controlled rubber swell for long seal life, low foaming properties, excellent anti-wear, corrosion protection, and oxidation stability.

Application

Castrol Brayco Micronic 881 is designed as a low temperature fire resistant hydraulic fluid for aircraft and missile use, but has use in many industrial applications as well.

Typical Characteristics

Name	Method	Units	Result
Kinematic Viscosity @ 100°C @ 40°C @ -40°C @ -54°C 3 hour soak @ -54°C 72 hour soak @ -54°C	ASTM D 445 ISO 3104	mm ² /s	2.21 7.2 492 2350 2354 2377
Evaporation, % wt 6.5 hrs @ 135°C	FTM 350	%	15
Flash Point, COC	ASTM D 92 ISO 2592	°C / °F	172 / 342
Fire Point, COC	ASTM D 92 ISO 2592	°C / °F	190 / 375
Four Ball Wear, wear scar diameter 1 kg load 10 kb load 40 kg load	ASTM D 4172	mm	0.12 0.22 0.56
Neutralization Number	ASTM D 664	mg KOH/g	0.11
Water Content	ASTM D 1744 ISO 6296	ppm	46
Rubber Swell, "L"	FTM 3603	%	28
Low Temperature Stability 72 hrs @ -54°C	FTM 3465	Pass/Fail	Pass

Name	Method	Units	Result
High Temperature Stability Viscosity Change @ 40°C Acid or Base Number Increase Precipitate or Insoluble material	Spec 4.4.5	% % None	2.25 0 None
Foaming Characteristics Sequence I, Foaming Tendency 5 minutes blowing Foam Stability after 10 min	ASTM D 892 ISO 6247	ml ml	25 0
Viscosity Index	ASTM D 2270 ISO 2909	-	115
API Gravity	ASTM D 287	degrees	36.3
Specific Gravity	ASTM D 1298 ISO 3675	-	0.843
Density	ASTM D 4052 ISO 12185	lbs/gal	7.02
Corrosion and Oxidation Stability 168 hrs @ 135°C Corrosion, pitting, etching Corrosion weight change Copper Steel Aluminum Magnesium Cadmium Viscosity Change @ 40°C Acid or Base Number Increase Evidence of separation	FTM 3603	mg/cm ² mg/cm ² mg/cm ² mg/cm ² mg/cm ² cSt mg KOH/g	None -0.02 0.01 -0.01 -0.01 0.02 +2 0.0 Pass
Copper Strip Corrosion	ASTM D 130 ISO 2160	-	2A
Solid Particle Contamination Size Autocount 5 - 15 µm 16 - 25 µm 26 - 50 µm 51 - 100 µm Over 100 µm Gravimetric Residue Filtration Time	Table VII Spec 4.4.6	mg solids minutes	2500 248 59 7 0 0.1 7
Pour Point	ASTM D 97 ISO 3016	°C / °F	-66 / -85
Bulk Modulus (Isothermal Secant) 0 to 6.9x10 ⁴ KpA @ 40°C 10,000 PSI @ 38°C	Spec 4.4.4	KpA psi	1.379x10 ⁶ min 200,000 min
High Temperature, High Pressure Spray Ignition	FTM 6052	-	No burn after ignition source is removed
Flame Propagation Rate	Spec.	cm/s	0.26
Auto-Ignition Temperature	ASTM E 659	°C / °F	345 / 653
Low Temperature Viscosity Stability 3 hrs @ -54°C 72 hrs @ -54°C	ASTM D 445 ISO 3104	cSt	2297 2331
ASTM Color - Basestock Color	ASTM D 1500	-	<0.5

Name	Method	Units	Result
Color, Finished Fluid	Spec. 4.4.7	-	Red

Subject to usual manufacturing tolerances

Additional Information

Temperature Range

-54°C TO 135°C (-65°F TO 275°F)

Specification

Castrol Brayco® Micronic 881 is qualified to MIL-PRF-87257C.

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