



Product Data

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 Sw ell, "L" | FTM 3603 | % | 28 |
| Low Temperature Stability 72 hrs @ -54°C | FTM 3465 | Pass/Fail | Pass |
| 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 |

| Name | Method | Units | Result |
|--|--------------------------|---|--|
| 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 | 2237 120 40 10 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 |
| 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.

Brayco Micronic 881

10 Jun 2021

Castrol, the Castrol logo and related marks are trademarks of Castrol Limited, used under licence.

This data sheet and the information it contains is believed to be accurate as of the date of printing. However, no warranty or representation, express or implied, is made as to its accuracy or completeness. Data provided is based on standard tests under laboratory conditions and is given as a guide only. Users are advised to ensure that they refer to the latest version of this data sheet. It is the responsibility of the user to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations. Safety Data Sheets are available for all our products and should be consulted for appropriate information regarding storage, safe handling, and disposal of the product. No responsibility is taken by either BP plc or its subsidiaries for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from hazards inherent in the nature of the material. All products, services and information supplied are provided under our standard conditions of sale. You should consult our local representative if you require any further information.

Castrol Industrial, Technology Centre , Whitchurch Hill , Pangbourne , Reading , RG8 7QR , United Kingdom

<http://msdspds.castrol.com>