

HYDRAULIC FLUIDS

QUINTOLUBRIC® 865 FIRE RESISTANT HYDRAULIC FLUID APPLICATION SHEET

BENEFITS

- » Excellent lubrication properties and shear stability
- » Compatible with standard seal materials
- » Product is >90% biodegradable according to CEC L-33-T-82



APPLICATIONS

QUINTOLUBRIC® 865 was designed to replace anti-wear, mineral oil based hydraulic fluids as well as vegetable-based fluids and polyol esters. QUINTOLUBRIC® 865 can be used in or near fire hazards and in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operation.

QUINTOLUBRIC® 865 is based on high-quality, natural esters and carefully selected additives to achieve excellent hydraulic fluid performance. QUINTOLUBRIC® 865 does not contain water, mineral oil or phosphate ester.

PROPERTIES

PROPERTIES (TEST METHOD)	TYPICAL VALUES
Appearance	Yellow to amber fluid
Kinematic Viscosity (ASTM D 445)	
At 20°C	149 mm ² /s or cSt
At 40°C	66 mm ² /s or cSt
At 100°C	16 mm ² /s or cSt
Viscosity Index (ASTM D 2270)	250
Density at 15°C (ASTM D 1298)	0.92 g/cm ³
Acid Number (ASTM D 974)	0.7 mg KOH/g
Pour Point (ASTM D 97)	< -25°C / < -13°F
Foam Test at 25°C (ASTM D 892)	15-0 ml-ml
Sequence I	
Corrosion Protection	
ISO 4404-2/ASTM D 665 A/ASTM D 130	Pass / Pass / 1a
Flash Point (ASTM D 92)	307°C / 585°F
Fire Point (ASTM D 92)	357°C / 675°F
Auto Ignition Temperature (DIN 51794)	>427°C / >800°F
Air Release (ASTM D 3427)	7 min
Vane Pump Test (ASTM D 2882)	<10 mg wear
Gear Lubrication (DIN 51354-2)	>12 FZG load stage
Demulsability (ASTM D 1401)	41-39-0 (25) ml-ml-ml (min)

QUINTOLUBRIC® 865

FIRE RESISTANT HYDRAULIC FLUID

APPLICATION SHEET

METALS

QUINTOLUBRIC® 865 is compatible with iron and steel alloys and most nonferrous metals and their alloys. It is not compatible with lead, cadmium and has limited compatibility with alloys containing high levels of these metals. QUINTOLUBRIC® 865 has limited compatibility with hot dipped or electro galvanized surfaces and good compatibility with zinc containing alloys. Suitable substitutes for these materials are available and should be used.

PAINTS AND COATINGS

QUINTOLUBRIC® 865 is compatible with multi-component epoxy coatings. It is not compatible with zinc-based coatings. Specific coating and application recommendations can be obtained from coating manufacturers or directly from Quaker.

FLUIDS

QUINTOLUBRIC® 865 is compatible and miscible with nearly all mineral oil and polyolester-type hydraulic fluids and with some, but not all, phosphate esters. It is not miscible or compatible with water-containing fluids. For conversion recommendations, please contact Quaker.

COMPATIBILITY

SEALS, HOSES AND PACKINGS

Most standard materials like NBR or buna (medium to high nitrile rubber) are compatible, but because of the number of material types available and variations in their application, specific recommendations should be solicited from the materials manufacturer, or the Quaker Chemical laboratory. Excellent results are obtained with FPM (Viton®) and it is therefore recommended for higher system temperatures.

ISO 1629	DESCRIPTION	S*	MD*	D*
NBR	Medium to high nitrile rubber (Buna N, >30% acrylonitrile)	C	C	C
FPM	Fluoroelastomer (Viton®)	C	C	C
CR	Neoprene	S	S	S
IIR	Butyl rubber	S	N	N
EPDM	Ethylene propylene rubber	N	N	N
PU	Polyurethane	C	C	C
PTFE	Teflon®	C	C	C

** (S- Static, MD- Mild Dynamic, D- Dynamic)
 C = Compatible
 S = Satisfactory for short term use, but replacement with a completely compatible elastomer is recommended at the earliest convenience.
 N = Not Compatible

FLUID MAINTENANCE

In order to prolong fluid life, the product should be kept free from water and dirt. High temperatures should also be avoided. We recommend a program of regular fluid analysis (no less than twice per year). Fluid analysis services are available directly from Quaker.

ENGINEERING DATA

PROPERTIES	TYPICAL VALUES
Specific Heat at 20°C (D 2766)	2.06 kJ/kg°C .49 Btu/lb °F
Coefficient of Thermal Expansion at 20°C (D 1903)	6 X 10 ⁻⁴ per °C
Vapor Pressure (02551)	
At 20°C	3.2 X 10 ⁻⁶ mm Hg
At 66°C	7.5 X 10 ⁻⁶ mm Hg
Bulk Modulus at 20°C	
At 210 bar	1.87 X 10 ⁵ N/cm ²
At 3,000 psi	266,900 psi
Thermal Conductivity at 19°C (D 2717)	0.167 J/sec/m/°C
Dielectric Breakdown Voltage (D 877)	30 kV

*country specific SDS are available

STORAGE AND HANDLING

If the following criteria are adhered to, the product can be stored for at least twelve months. Recommended long-term storage temperature range: 0-40°C. Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area.

SAFETY

Please consult the Safety Data Sheet (SDS) for information on measures to be taken to ensure the protection of health and safety at the workplace. SDS's are available directly from Quaker.

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