

TECHNICAL DATA SHEET

QUINTOLUBRIC® 888-68 NSB FIRE RESISTANT HYDRAULIC FLUID



QUINTOLUBRIC® 888-68 NSB does not contain water, mineral oil, or phosphate ester, and is based on high-quality, synthetic, organic esters and carefully selected additives to achieve excellent hydraulic fluid performance.

Applications

QUINTOLUBRIC® 888-68 NSB was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist. QUINTOLUBRIC® 888-68 NSB can also be used in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operations. QUINTOLUBRIC® 888-46 NSB offers the lubrication level of premium, antiwear hydraulic oils, and can be used with hydraulic components from all major manufacturers.

Engineering Data

PROPERTY (TEST METHOD)	TYPICAL VALUE	UNIT	
Specific Heat at 20°C (D 2766)	2.06	kJ/kg°C	
	.49	Btu/lb°F	
Coefficient of Thermal Expansion at 20°C (D1903)	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	
Bulk Modulus at 20°C			
	At 210 bar	1.87 X 10 ⁵	N/cm ² psi
	At 3,000 psi	266,900	
Thermal Conductivity at 19°C (D2717)	0.167	J/sec m/°C	
Dielectric Breakdown Voltage (D877)	30	kV	

*Country specific SDS are available

Benefits

- High ignition temperature and low heat release
- Properties that limit the spread of fire
- Excellent shear stability
- Non-toxic / non-toxic to aquatic life

Properties

PROPERTY (TEST METHOD)	TYPICAL VALUE	UNIT	
Appearance	Yellow to amber fluid		
Kinematic Viscosity (ASTM D 445)	At 0°C	615	
	At 20°C	165	mm ² /s or cSt
	At 40°C	68	
	At 100°C	14	
	Viscosity Index (ASTM D2270)	215	
Density at 15°C (ASTM D1298)	0.92	g/cm ³	
Acid Number (ASTM D974)	1.5	mg KOH/g	
Pour Point (ASTM D97)	<-30 / <-22	°C/°F	
Foam Test at 25°C (ASTM D892) Sequence I	50-0	ml-ml	
Corrosion Protection ISO 4404-2/ ASTM D665 A / ASTM D130	Pass / Pass / 1a		
Flash Point (ASTM D92)	304 / 579	°C/°F	
Fire Point (ASTM D92)	360 / 680	°C/°F	
Auto Ignition Temperature (DIN 51794)	>400 / >752	°C/°F	
Air Release (ASTM D3427)	7	min	
Vane Pump Test (ASTM D2882)	<5	mg wear	
Gear Lubrication (DIN 51354-2)	>12 FZG load stage		
Water Separability (ASTM D1401)	41-39-0 (30)	ml-ml-ml (min.)	
Fire Resistance (FM Approvals)	Approved		



QUINTOLUBRIC® 888-68 NSB

FIRE RESISTANT HYDRAULIC FLUID

Compatibility

Metals

QUINTOLUBRIC® 888-68 NSB is compatible with iron and steel alloys and most non-ferrous metals and their alloys. It is not compatible with lead, cadmium, zinc, and alloys containing high levels of these metals. Suitable substitutes for these materials are available and should be used.

Paints and Coatings

QUINTOLUBRIC® 888-68 NSB 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 Houghton.

Fluids

QUINTOLUBRIC® 888-68 NSB 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 Houghton.

The following chart contains our recommendations regarding the use of QUINTOLUBRIC® 888-68 NSB with commonly used elastomers. The elastomer applications listed are "Static," which refers to trapped nonmoving seals such as O-rings in valve sub-plates and rigid, low pressure hose connections; "Mild-Dynamic," whose applications include accumulator bladders and hose linings where the hoses are exposed to high pressure and light flexing; and "Dynamic," which refers to cylinder rod seals, pump shaft seals and constantly flexing hydraulic hose.

Elastomers

ISO 1629	DESCRIPTION	S*	MD*	D*
NBR	Medium to High Nitrile Rubber (Buna N, >30% acrylonitrile)	C	C	C
FPM	Flouroelastomer (Viton®)	C	C	C
PU	Polyurethane	C	C	C
CR	Neoprene	S	S	S
IIR	Butyl rubber	S	N	N
EPDM	Ethylene Propylene Rubber	N	N	N
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

Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

All reasonable care has been taken to ensure this publication is accurate upon issue. Such information may be affected by changes subsequent to issue. This Technical Data Sheet is to be used solely for this product. Prior to any use, consult the Safety Data Sheet (SDS) for information on hazard risks and product use parameters. All liability and all warranties express or implied are hereby excluded as to product performance results, the accuracy of these data including any warranty of merchantability or fitness for any purpose. 014676

