



Syncon® FG Hydraulic Fluid

Phillips 66® Syncon FG Hydraulic Fluid is a premium quality, synthetic, food-grade anti-wear hydraulic fluid developed for use in the hydraulic systems of machinery found in food processing plants and beverage bottling plants, where incidental food contact may occur. It is also recommended for use in rotary screw and rotary vane air compressors in food and beverage plants.

Syncon FG Hydraulic Fluid is formulated with synthetic polyalphaolefin (PAO) base oils and an ashless (zinc-free) additive package to provide excellent service in hydraulic system applications. It provides excellent wear protection for hydraulic pumps and motors, and protects hydraulic system components against rust and corrosion. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life. It also has excellent low-temperature properties for cold start-ups. It has good water-separating properties to minimize the formation of emulsions, and is resistant to excessive foaming that can cause poor or sluggish hydraulic system response.

Syncon FG Hydraulic Fluid meets FDA requirements and former 1998 USDA H1 guidelines for incidental food contact, and is registered by NSF International as an H1 lubricant. It meets the performance requirements of all major hydraulic pump manufacturers, and is recommended for use in all types of high-pressure, high-speed hydraulic pumps.

Applications

- Bottling and canning machines
- Plastic injection blow-molding machines in food packaging plants
- Rotary screw and rotary vane air compressors
- Chain drives for conveyor belts
- Electric motor bearings
- Machinery operating in freezers used to store packaged food

Syncon FG Hydraulic Fluid meets the requirements of the following government and industry specifications:

- FDA 21 CFR 178.3570 for incidental food contact
- NSF International and former 1998 USDA H1 guidelines for incidental food contact

Features/Benefits

- Excellent wear protection for hydraulic pumps and motors
- Outstanding oxidation resistance to minimize sludge and varnish formation
- Protects against rust and corrosion
- Good water-separating properties
- Good foam resistance
- Excellent low-temperature properties for cold start-ups

Synthetic PAO-Based, Food-Grade Hydraulic Fluid





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Typical Properties			
ISO Grade	46	68	100
Specific Gravity @ 60°F	0.831	0.837	0.844
Density, lbs/gal @ 60°F	6.92	6.97	7.03
Color, ASTM D1500	0.5	0.5	0.5
Flash Point (COC), °C (°F)	248 (478)	252 (486)	254 (489)
Pour Point, °C (°F)	-57 (-71)	-48 (-54)	-45 (-49)
Viscosity			
cSt @ 40°C	46.8	64.2	98.0
cSt @ 100°C	7.8	9.7	12.9
SUS @ 100°F	217	329	506
SUS @ 210°F	51.8	59.0	71.1
Viscosity Index	135	133	128
Acid Number, ASTM D974, mg KOH/g	0.67	0.67	0.67
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1a	1a	1a
Demulsibility, ASTM D1401, minutes to pass	10	10	10
Foam Test, ASTM D892	Pass	Pass	Pass
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.35	0.37	0.38
FZG Scuffing Test, ASTM D5182, Failure Load Stage	11	11	11
Oxidation Stability, RPVOT, ASTM D2272, minutes	>1,700	>1,700	>1,700
Rust Test, ASTM D665 A&B	Pass	Pass	Pass

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/EN/products/Pages/MSDS.aspx>.