



Synterra[®] Hydraulic Fluid

Synterra Hydraulic Fluid is premium quality, synthetic antiwear hydraulic fluid specifically developed for use in industrial and mobile equipment operating in environmentally sensitive areas. It is readily biodegradable for reduced environmental impact in case of leaks or spills. It is particularly recommended for use in hydraulic equipment operating in national parks and wildlife refuges, around lakes and streams, and in other recreational areas.

Synterra Hydraulic Fluid is formulated with synthetic polyol ester (POE) base oil and an ashless (zinc-free) antiwear additive package to provide excellent performance over a wide temperature range. It provides excellent wear protection for hydraulic pumps and motors, and protects hydraulic system components against rust and corrosion. It has good oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life. This product is nontoxic to the environment and is readily biodegradable. It exceeds all requirements for biodegradability as defined by the EPA 40 CFR Part 792, OECD 301B and USTC PRO/BIO-BP 111-9 test methods. It passes the visual "no sheen" requirements of the U.S. EPA Static Sheen Test.

Synterra Hydraulic Fluid 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

- Mobile and stationary equipment operating in environmentally sensitive areas
- Boat lifts
- Chain drives
- Electrical service bucket trucks (cherry pickers)
- Farm implements
- Forestry and logging equipment
- Marine and offshore equipment
- Mining equipment
- Mobile construction equipment
- Pivots in irrigation systems
- Ski lifts

Synthetic Polyol Ester, Antiwear Hydraulic Fluid; Readily Biodegradable

Contact Information

U.S. Customer Service:
1-800-822-6457

Technical Hot Line:
1-800-766-0050

International Customer Service:
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Synterra Hydraulic Fluid meets the requirements of the following industry and OEM specifications:

- Bosch Rexroth RE 90 220
- Denison Hydraulics HF-0, HF-1, HF-2
- DIN 51524 Part 2, Antiwear Hydraulic Oils, Type HLP
- German Steel Industry SEB 181222
- ISO 11158:1997, Family H (Hydraulic Systems), Type HM
- U.S. EPA/U.S. Coast Guard Static Sheen Test, Federal Register Vol. 58, No. 41
- U.S. Steel 127
- Vickers (Eaton) M-2950-S, I-286-S

Features/Benefits

- Nontoxic
- Readily biodegradable for reduced environmental impact in case of leaks or spills
- Excellent wear protection for hydraulic pumps and motors
- Good oxidation resistance and thermal stability
- Protects against rust and corrosion
- Excellent storage stability
- Good foam resistance
- Excellent low-temperature properties for cold start-ups

Note: For information on compatibility with seals, paints and plastics, please call our Technical Support Hot Line.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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Synterra® Hydraulic Fluid

Typical Properties

ISO Grade	32	46	68
Specific Gravity @ 60°F	0.872	0.887	0.901
Density, lbs/gal @ 60°F	7.26	7.39	7.50
Color, ASTM D1500	2.0	2.0	2.0
Flash Point (COC), °C (°F)	191 (376)	199 (390)	207 (405)
Pour Point, °C (°F)	-37 (-35)	-37 (-35)	-37 (-35)
Viscosity,			
cSt @ 40°C	32.5	47.7	67.9
cSt @ 100°C	6.8	9.2	12.0
SUS @ 100°F	165	241	344
SUS @ 210°F	48.9	57.2	67.5
Viscosity Index	174	178	176
Acid Number, ASTM D974, mg KOH/g	0.30	0.40	0.50
Copper Corrosion, ASTM D130	1b	1b	1b
Four-Ball Wear, ASTM D4172, Scar Diameter, mm	0.52	0.50	0.50
FZG Scuffing Test, ASTM D5182, Failure Load Stage	>12	>12	>12
Oxidation Stability, RPVOT, ASTM D2272, minutes	200	200	200
Rust Test, ASTM D665 A&B	Pass	Pass	Pass
Aerobic Aquatic Biodegradation, ASTM D5864-05, %	>60	>60	>60
Aquatic Toxicity, Fresh & Saltwater Fish,			
OECD 203 1-12, 5000 mg/l, 96 hours, LC ₅₀	Nontoxic	Nontoxic	Nontoxic

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

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