



# LUBRICANTS

## Syncon® AW Hydraulic Fluid

Phillips 66® SynconAW Hydraulic Fluid is a premium quality, synthetic antiwear

hydraulic fluid developed for use in industrial and mobile equipment operating at extreme temperatures. It is particularly recommended for use in applications where operating conditions may be unfavorable or too severe for conventional mineral oil-based hydraulic oils.

Syncon AW Hydraulic Fluid is formulated with synthetic polyalphaolefin (PAO) base oils and an ashless (zinc-free) 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 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 excellent water-separating properties to minimize the formation of emulsions, and is resistant to excessive foaming that can cause poor or sluggish hydraulic system response. It has a high dielectric strength for use as an insulating oil in electrical service bucket trucks.

Syncon AW 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

- Industrial and mobile equipment operating under extreme-temperature conditions
- Automated machine tools
- Bucket trucks (cherry pickers) used for servicing electrical power lines or for tree trimming
- Hydraulic hoists and service station lifts
- Mobile construction equipment
- Chain drives
- Electric motor bearings

Syncon AW Hydraulic Fluid meets the requirements of the following industry specifications:

- DIN 51524 Part 2, Anti-wear Hydraulic Oils, Type HLP
- ISO 11158:1997, Family H (Hydraulic Systems), Type HM
- U. S. Steel 127

Synthetic PAO-  
Based, Antiwear  
Hydraulic Fluid





## Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- Outstanding pumpability at low temperatures
- Excellent wear protection for hydraulic pumps and motors
- Protects against rust and corrosion
- Separates rapidly from water
- Good foam resistance
- High dielectric strength<sup>(1)</sup>
- Compatible with conventional mineral oils and commonly used seals

<sup>(1)</sup>**Note:** In order to maintain its high dielectric strength for use as an electrical insulating oil, the oil must be kept clean and dry. Contamination with water will significantly decrease dielectric strength.

## Syncon® AW Hydraulic Fluid

Typical Properties		
ISO Grade	22	32
Specific Gravity @ 60°F	0.821	0.853
Density, lbs/gal @ 60°F	6.84	7.10
Color, ASTM D1500	0.5	0.5
Flash Point (COC), °C (°F)	218 (424)	240 (464)
Pour Point, °C (°F)	-66 (-87)	-60 (-76)
Viscosity		
cSt @ 40°C	22.0	32.0
cSt @ 100°C	4.6	5.8
SUS @ 100°F	115	164
SUS @ 210°F	41.7	45.7
Viscosity Index	127	125
Acid Number, ASTM D974, mg KOH/g	0.17	0.17
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1a	1a
Demulsibility, ASTM D1401, minutes to pass	10	10
Dielectric Strength, ASTM D877, kV(2)	35	35
Foam Test, ASTM D892	Pass	Pass
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.47	0.47
FZG Scuffing Test, ASTM D5182, Failure Load Stage	11	12
Oxidation Stability, RPVOT, ASTM D2272, minutes	2,000	2,000
Rust Test, ASTM D665 A&B	Pass	Pass

<sup>(2)</sup> At point of manufacture

## 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>.

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