



Technical Data Sheet (TDS) MD Oils Hydraulic Oil AW-46 Premium Anti-Wear Hydraulic Oil

DESCRIPTION

MD Oils Hydraulic Oil AW-46 is a premium high-performance anti-wear hydraulic fluid formulated with high-quality base oils and advanced additive technology. It is designed for use in high-pressure hydraulic systems operating under moderate to severe service conditions in industrial and mobile equipment applications.

APPLICATIONS

MD Oils Hydraulic Oil AW-46 is recommended for use in a wide range of hydraulic systems operating under moderate ambient temperature conditions requiring ISO VG 46 viscosity grade. It is suitable for standard industrial plant equipment, injection molding machines, and heavy-duty mobile equipment such as excavators, cranes, and loaders. The product is also suitable for hydraulic vane, piston, and gear pumps, industrial hydraulic systems, machine tools, hydraulic presses, construction equipment, agricultural machinery, and other mobile hydraulic applications requiring reliable anti-wear protection and consistent performance.

Performance Features and Benefits

- Exceptional anti-wear protection provided by advanced additives forming a durable protective film, extending the service life of high-pressure pumps and critical components while reducing wear.
- Outstanding thermal and oxidation stability, preventing sludge and deposit formation and supporting extended oil service life and drain intervals.
- Superior water separation (Demulsibility), effectively protecting against rust, emulsion formation, and valve sticking in humid operating conditions.

- Excellent air release and foam resistance, ensuring smooth and efficient hydraulic operation while preventing cavitation and pump damage.
- Excellent filterability even under minor contamination, helping maintain system cleanliness and reduce maintenance downtime.
- Effective corrosion protection for both ferrous and non-ferrous metals, ensuring reliable and consistent system performance under demanding conditions.
- Consistent hydraulic performance, maintaining high efficiency and stable operation under severe and continuous working conditions.

Recommendations / Specifications: Meets or exceeds the requirements of:

- DIN 51524-2 (HM); DIN 51524-3 (HV); ISO 11158 (HM, HV); ASTM D6158 (HM, HV); GB 11118.1-2011 (L-HL, L-HM, L-HV, L-HS); SAE MS 1004
- Bosch Rexroth RDE 90235; Parker (formerly Denison) HF-0, HF-1, HF-2 (HM, HV); Eaton E-FDGN-TB002-E; Fives P68, P69, P70 (HM, HV)
- AIST 126, 127; SEB 181222; GM LS-2
- JCMAS PO41 HK Hydraulic specification

Typical Characteristics

Properties	Unit	Test Method	Typical Values
ISO Viscosity Grade	-	ISO 3448	46
Appearance	-	Visual	Bright & Clear
Density @ 15°C	g/cm ³	ASTM D4052	0.882
Kinematic Viscosity @ 40°C	mm ² /s	ASTM D445	46.88
Kinematic Viscosity @ 100°C	mm ² /s	ASTM D445	6.99
Viscosity Index	-	ASTM D2270	105
Flash Point (COC)	°C	ASTM D92	226
Pour Point	°C	ASTM D97	-28
Demulsibility @ 54 °C	min	ASTM D1401	40-40-0 (12min)
Foaming Characteristics Sequence I	mL	ASTM D892	0/0
Copper strip corrosion, 3 hrs @ 100°C	-	ASTM D130	1B
Rust protection (Procedure B)	-	ASTM D665	PASS

- **Note:** The typical characteristics shown in this document are representative of current production. While future production will conform to MD Oils specifications, variations in these characteristics may occur within normal manufacturing tolerances.
- **Health & Safety:** Based on available information, this product is not expected to cause adverse health effects when used for its intended application and in accordance with the recommendations provided in the Safety Data Sheet (SDS). SDS are available on request through your local sales office or via our website.
- This product should not be used for applications other than its intended purpose. When disposing of used product, take care to protect the environment and comply with local regulations.

