



# HYDRAULIC OIL

## HM ZF 46

### Product Description:

**HYDRAULIC OIL HM ZF 46** is a premium quality zinc free mineral oil with a high viscosity index for use in high pressure hydraulic systems, light duty gearboxes, bearings, and general lubrication. The oil is not suitable for turbine applications.

**HYDRAULIC OIL HM ZF 46** is formulated with high quality refined mineral base stocks in combination with a special additive technology to achieve the following performance:

- Good stability against oxidation.
- High Viscosity Index
- Very good protection against wear.
- Good water demulsibility.
- Very good foaming properties.
- Very effective to rust and corrosion.
- Good thermal stability.

**HYDRAULIC OIL HM ZF 46** exceeds the following performance criteria.:

**DIN 51524-2 HLP**      **ISO 11158 HM**      **ASTM D6158 HM**  
**AFNOR NF E 48-603 HM**      **Cincinnati P-70**      **Sauer Danfoss 520L0463**  
**Denison HF-0/HF-1/HF-2**      **Bosch Rexroth RE 90 220**      **Eaton Vickers M-2950-S / I-286**  
**General Motors LS-2**



Property	Unit	Test Method	Typical Value
ISO grade		ISO 3448	46
Density @15°C	kg/m <sup>3</sup>	ASTM D4052	880.3
Kin. Viscosity @40°C	mm <sup>2</sup> /s	ASTM D7042	46.9
Kin. Viscosity @100°C	mm <sup>2</sup> /s	ASTM D7042	6.9
Viscosity Index		ASTM D2270	101
Flash Point COC	°C	ASTM D92	>200
Pour Point	°C	ASTM D7346	-27
Air Release Value @50°C	Minutes	ASTM D3427	Pass
Demulsibility @54°C	Minutes	ASTM D1401	Pass

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