

MOL Hydro HLPD 46 AL

ashless detergent hydraulic oil



MOL Hydro HLPD 46 AL is a hydraulic oil produced from high quality detergent and ash-free antiwear additives and carefully selected quality mineral base oils. It provides consistently high performance even in an environment affected by water and dust in industrial and mobile hydraulic systems working under heavy load conditions. It has an outstanding load carrying capacity, it provides excellent protection against wear even at high loads / low speeds (Brugger value >50 N/mm² DIN 51347-2). It ensures outstanding wear resistance. In the standard vane pump test (Vickers V104C), the wear is 80 % lower than the specified limit. Due to its high performance additive system, it has an excellent wear reducing performance, close to that of gear oils (FZG 12, DIN 51354-2). Its balanced additive system does not contain zinc, calcium or silicon compounds.

Application



Hydraulic systems operating at high pressures and under heavy operating conditions

Hydraulic equipment working in dusty and wet environment

Hydraulic systems of machine-tools

Hydraulic presses (e.g. Müller Weingarten)

Circulation systems

Hydraulic systems of earthmoving and forestry machines

Hydraulic systems of construction and mining machines

Features and benefits

Outstanding load-carrying ability

Excellent wear protection even under heavy load and low speed conditions (high Brugger value)

Outstanding wear protection

Reliable operation, even in equipment exposed to heavy loads at high pressures

Anti-wear performance close to that of gear oils (FZG 12)

Long equipment lifetime

Detergent-dispersant properties

Jamming of system elements can be prevented

Contaminants (water, emulsion, dust, wear particles) are finely distributed and can be removed by filtration

Ensures appropriate cleanliness of equipment

Ashless formulation

Low deposit formation

Outstanding thermal and hydrolytic stability

Provides stick-free operation of servo and control valves

Very low deposit formation tendency

Long oil drain intervals

Reliable operation, so reduced operational costs

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Features and benefits (continue)

Rapid air release together with low foaming	Stable balanced lubricating film between friction surfaces, giving long equipment lifetimes Reduced risk of cavitation
Excellent corrosion protection	Effective protection of steel and non-ferrous metal parts even in the presence of water Effectively contributes to potential reduction of maintenance costs
Zinc-free additive system	Reduced environmental impact when the product is ingressed into wastewater

Specifications and approvals

Viscosity grade: ISO VG 46
ISO 11158 HM
DIN 51524-2 (HLP)
DIN HLP-D
Mueller Weingarten

Properties

Properties	Typical values
Density at 15°C [g/cm ³]	0,875
Kinematic viscosity at 40°C [mm ² /s]	47,3
Kinematic viscosity at 100 °C [mm ² /s]	6,9
Viscosity index	100
Pour point [°C]	-21
Flash point (Cleveland) [°C]	230
Antiwear properties (FZG)	
- failure load stage	12

The characteristics in table are typical values of the product and do not constitute a specification.

Storage and handling instructions

Store in the original container in dry, properly ventilated area.

Keep away from direct flame and other sources of ignition.

Protect from direct sunlight.

During transport, storage and use of the product follow the work safety instructions and environmental regulations relating to mineral oil products.

For further details please read the Material Safety Data Sheet of the product.

In the original container under the recommended storage conditions: 48 months

Recommended storage temperature: max. 40°C