



HYDRAULIC OILS

ADDINOL HYDRAULIC OIL HVLPD 46, 68

PRODUCT DESCRIPTION

ADDINOL Hydraulic oil HVLPD 46 and 68 are based on high-quality mineral oil raffinates combined with a special additive combination free from zinc, which improves ageing stability, corrosion-protective performance and wear-protection properties.

SPECIFICATIONS

Meets the requirements according to:

- **DIN 51524-3** (except demulsifying ability)
- **ISO 6743-4: HV** (except demulsifying ability)

APPLICATION

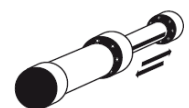
- Excellent suitability for high-pressure and low-pressure hydraulic systems in such industrial fields where water, dirt and abrasive rubbings can infiltrate the systems
- Highly suitable for all hydraulic systems with strongly changing ambient temperatures, e.g. for mobile applications (e.g. construction machines, vehicle fleets)

CHARACTERISTICS

- Outstanding cleansing effect
- Detergent characteristics
- Improved corrosion and wear protection
- Outstanding ageing stability
- Excellent viscosity-temperature behaviour

ADVANTAGES AND BENEFITS

- **Avoidance of dirt and abrasion at steering elements and controlling devices**
- **Application, where water can infiltrate the system**
- **Low quantities of water will be absorbed (2% of water will be absorbed)**
- **Faultless operation also in multi-metal systems**
- **Long service life**
- **Usable for applications with strongly changing ambient temperatures**





ADDINOL HYDRAULIC OIL HVLPD 46, 68

SPECIFICATIONS AND TYPICAL PARAMETERS

Feature	Test condition / unit		HVLPD 46	HVLPD 68	Method acc. to
ISO viscosity grade			46	68	DIN 51519
Density	at 15°C	kg / m ³	860	867	DIN 51757
Viscosity	at -20°C	mm ² /s	2110	6390	ASTM D 7042
	at 0°C	mm ² /s	314	665	
	at 40°C	mm ² /s	46	67,8	
	at 100°C	mm ² /s	8.8	11,9	
Viscosity index			175	173	DIN ISO 2909
Brookfield viscosity	at -30°C	mPas	6500	15.900	DIN 51398
Flash point	COC	°C	min. 230	min. 238	DIN EN ISO 2592
Pour point		°C	max. -42	max. -36	ASTM D 7346
Ageing behaviour	after 1000 h	mg KOH / g	< 1.5	< 1.5	DIN EN ISO 4263-1
Corrosion protection on steel	method A		passed	passed	DIN ISO 7120
Corrosivity on copper	3h, 100°C	corr. level	1	1	DIN ISO 2160
Mech. test in FZG machine A/8.3/90		scuffing load stage	12	12	ISO 14635-1
Air separation ability	at 50°C	min	< 8	< 10	ISO 9120
Mech. test in vane pump			passed	passed	DIN 51389-2
Brugger		N/mm ²	> 50	> 50	DIN 51347
Foaming characteristics	at 24°C	ml / ml	< 20 / 0	< 50 / 0	ASTM D 892
	at 93.5°C	ml / ml	< 20 / 0	< 50 / 0	
	at 24 after 93.5°C	ml / ml	< 20 / 0	< 50 / 0	

ADDINOL - The Experts for High-Performance Lubricants

We at ADDINOL develop and produce more than 600 high-performance lubricants of the new generation. Among these are automotive lubricants for highest demands and pioneering developments for industrial applications. Our customers all over the world benefit from the high and stable quality of our ADDINOL high-performance lubricants, our know-how and the individual customer advisory service of our competent experts. Our company has world wide activities. ADDINOL high-performance lubricants are distributed by more than 90 international partners.

The data given in this product sheet represent our current level of knowledge and experience. Due to the various specific application they do, however, not discharge the user from his own examination. The information provided herein may not be used to derive a legally binding warranty of specific properties or the suitability for a certain purpose of application. Detailed security-concerning and toxicological data as well as security instructions for each product can be taken from the corresponding Material Safety Data Sheets (MSDS). High-performance lubricants from ADDINOL are under continuous development. Therefore, ADDINOL Lube Oil GmbH keeps the right to change technical data in this product data sheet without notification. In case of doubt, please do not hesitate to contact our customers' advisory service.