



HYDRAULIC OILS

ADDINOL HYDRAULIC OIL HL 10, 32, 46, 68

PRODUCT DESCRIPTION

ADDINOL Hydraulic oils HL are high-quality mineral oil raffinates containing additives to enhance ageing stability and protection against corrosion.

APPLICATION

- Excellent suitability in hydraulic devices, their pumps and hydraulic systems which need a hydraulic oil HL
- Highly suitable for the lubrication of sliding and roller bearings as well as gears according to manufacturers instructions
- Fit for general lubrication purposes

SPECIFICATIONS

Meets the classification of:

- DIN 51524-1 (HL)
- DIN 51517-2 (CL)
- DIN EN ISO 6743-4 (HL)

Viscosity grade corresponds to:

- ISO classification 3448
- DIN 51519

DELIVERY

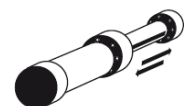
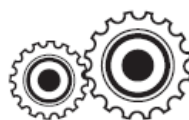
Delivery preferable in drums and 20 l cans.

CHARACTERISTICS

- Improved oxidation properties
- Excellent corrosion protection properties
- Good air separation ability
- Very good demulsifying ability

ADVANTAGES AND BENEFITS

- Minimal oil ageing with extended oil change intervals
- Very good protection of the machine parts with low maintenance and repair costs
- Stable hydraulic pressure
- Protection against infiltrated water





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SPECIFICATIONS AND TYPICAL PARAMETERS

Feature	Test conditions / unit		HL 10	HL 32	HL 46	HL 68	Method acc. to
ISO viscosity grade			10	32	46	68	DIN 51519
Density	at 15°C	kg/m ³	870	875	875	880	DIN 51757
Viscosity	at 0°C	mm ² /s	90	420	780	1400	DIN 51562-1
	at 40°C	mm ² /s	10	32	46	68	
	at 100°C	mm ² /s	2.4	5.0	6.1	7.8	
Viscosity index							DIN ISO 2909
Flash point	COC	°C	175	215	220	240	DIN EN 2592
Pour point		°C	-33	-20	-18	-15	DIN ISO 3016
Air separation ability	at 50°C	min	1	4	6	8	ISO 9120
Ageing behaviour Increase of NN	after 1000 h	mg KOH/g	< 2.0				DIN EN ISO 4263-1
Corrosion protection on steel	method A		passed				DIN ISO 7120
Corrosivity on copper	100°C, 3h	corr.level	1				DIN EN ISO 2160
Foaming characteristics	at 24°C	ml/ml	< 50 / 0				ASTM D 892
	at 93.5°C	ml/ml	< 50 / 0				
	at 24°C after 93.5°C	ml/ml	< 50 / 0				
Demulsifying properties	at 54°C	min	8	12	14	17	DIN ISO 6614

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 70 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.