



## INDUSTRIAL GEAR OILS

# ADDINOL GEAR OIL CLP 68, 100, 150, 220, 320, 460, 680

### PRODUCT DESCRIPTION

ADDINOL Gear oils CLP are based on selected mineral oil raffinates and an ideally tailored, zinc-free additive combination.

Temperature range up to +100°C.

### APPLICATION

- Excellent suitability for almost all construction types of closed industrial operations with spur, bevel and worm gear teeth
- Particularly applicable for closed gears with immersion and circulation lubrication
- Very well usable for the lubrication of normally loaded roller and sliding bearings, joints and guide systems
- Applicable for simple hydraulic systems

### SPECIFICATIONS

Meets the requirements according to lube oils CLP:

- DIN 51517-3
- ISO 12925-1

CLP 68 and CLP 100 meets the requirements according to hydraulic oils HLP:

- DIN 51524-2

Viscosity grade corresponds to:

- ISO classification 3448 and/or DIN 51519

### DELIVERY

Delivery preferable in drums and 20L cans.

### CHARACTERISTICS

- Excellent scuffing load capacity and good wear protection behaviour
- High ageing stability
- Protection against rust and nonferrous metal corrosion
- Defoamer
- Good water separation ability

### ADVANTAGES AND BENEFITS

- Longer machine lifetime (reduced running costs)
- Long service life of the oil filling
- Very good protection of the machine parts
- Effective protection against foam formation in practical applications
- Contaminations with water can be separated quickly





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### SPECIFICATIONS AND TYPICAL PARAMETERS

Feature	Test conditions / unit		CLP 68	CLP 100	CLP 150	CLP 220	CLP 320	CLP 460	CLP 680	Method acc. to
ISO viscosity grade			68	100	150	220	320	460	680	DIN 51519
Density	at 15°C	kg/m <sup>3</sup>	870	877	885	890	895	902	905	DIN 51757
Viscosity	at 40°C	mm <sup>2</sup> /s	68	100	150	220	320	460	670	ASTM D 7042
	at 100°C	mm <sup>2</sup> /s	9.0	11.5	14.5	19.1	24.0	30.5	39.5	
Neutralisation number		mg KOH/g	0.5							DIN 51588-1
Flash point	COC	°C min.	240	270	265	270	280	290	280	DIN EN ISO 2592
Pour point		°C max.	-26	-30	-24	-27	-18	-18	-12	ASTM D 7346
Corrosion protection on steel			passed							DIN ISO 7120
Corrosivity on copper	at 100°C, 3h	corr. level	1							DIN ISO 2160
Ageing behaviour	increase of NN after 312 h	mg KOH/g	< 6.0							EN ISO4263-1
Demulsifying ability		min	< 30				< 60			DIN ISO 6614
FZG test A/8.3/90		load stage	> 12							ISO 14635-1
Brugger		N/mm <sup>2</sup>	> 50							DIN 51347
VKA welding load		N	2000	2200			2400			DIN 51350-2
VKA d 300		mm	0.37							
Foaming characteristics	at 24°C	ml/ml	0/0						ASTM D 892	
	at 93.5°C	ml/ml	0/0							
	at 24°C after 93.5°C	ml/ml	0/0							

### 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.