



INDUSTRIAL HIGH-PERFORMANCE GEAR OILS

ADDINOL ECO GEAR 150 W, 220 W, 320 W, 460 W

PRODUCT DESCRIPTION

ADDINOL Eco Gear... W series is based on the innovative Advantec technology combining the advantages of carefully selected synthetic and shear stable base components of base oil group IV and V with powerful additives.

The performance level of ADDINOL Eco Gear ... W enables maximum oxidation stability, effective wear and ageing protection, extended oil change intervals as well as friction reduction between the friction partners at the same time. This ensures an improvement of gear efficiency at nearly all operating conditions in the drive train – from slow to maximum speed.

Temperature range from -35°C (ISO VG 460 from -30°C) up to +120°C, short term temperature peaks up to +150°C.

APPLICATION

- Especially developed for the lubrication and protection of gears of wind turbines
- Particularly recommended at highest specific loads of friction pairings, at dynamically varying loads as well as at critical thermal conditions in bearings and tothing
- Usable in enclosed industrial gears of different types
- High suitability for the lubrication in circulating systems, if other lubricants of base oil group I to IV are insufficient

CHARACTERISTICS

- Fully-synthetic base oil components, free of polymers
- Maximum viscosity index for a stable viscosity as well as a stable lubrication film thickness
- Outstanding low-temperature behaviour – very low pour point
- Highest wear protection combined with novel friction reduction and ageing protection
- Reliable corrosion protection for steel and non-ferrous metals
- Zinc-free additivation, compatible with components of the drive train
- Developed in co-operation with gear manufacturers

SPECIFICATIONS

Meets and exceeds the requirements according to:

- DIN 51517-3
- ISO 12925-1
- AGMA 9005-E02

DELIVERY

Delivery preferable in IBCs, drums and 20L cans.

PLEASE NOTE

The applied viscosity depends on the particular applications, operating conditions and the manufacturer's instructions for a given application.

ADVANTAGES AND BENEFITS

- **Maximum shear stability**
- **Lower gear power loss**
- **Ensures pumpability at extremely low temperatures**
- **Reduces temperatures**
- **Increases the efficiency**
- **Extended oil operating time, prevents rust**
- **Neutral behaviour towards all plastics**
- **High performance for future challenges!**





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SPECIFICATIONS AND TYPICAL PARAMETERS

Feature	Test condition / unit		150 W	220 W	320 W	460 W	Method acc. to
ISO viscosity grade			150	220	320	460	DIN ISO 3448
Application temperature		°C	-35 up to +120			-30 up to +120	
Density	at 15°C	kg/m ³	852	854	854	855	DIN 51757
Viscosity	at 40°C	mm ² /s	155	225	302	455	ASTM D 7042
	at 100°C	mm ² /s	22.6	30.6	38,5	55.5	
Viscosity index			174	178	181	190	DIN ISO 2909
Flash point	COC	°C min.	> 240				DIN EN ISO 2592
Pour point		°C max.	-55	-51		-48	ASTM D 7346
FE8 roller bearing lubricant test	wear of roller bearing	mg	m _{w50} < 5				DIN 51819
Corrosion protection on steel	Method A		passed				DIN ISO 7120
Corrosivity on copper	at 100°C, 3h	corr.level	1				DIN ISO 2160
Micropitting test	at 60°C / 90°C	load stage	≥ 10 (high)				FVA Nr. 54
FZG test A/8.3/90 FZG test A/16.6/120		load stage	≥ 12 *				ISO 14635-1
			* for verification FZG test A/8.3/90 load stage ≥ 14 tested				
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				
Dynamic cold viscosity, Brookfield	at - 30 °C	mPa*s	20,800	38,200	45,000	85,000	DIN 51398
Relative viscosity decrease KRL/100h	Delta V ₄₀	%	1.0	0.8		2.2	DIN 51350-6

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.