



# COOLER-PROTECTING AGENT ADDINOL ANTIFREEZE EXTRA

## PRODUCT DESCRIPTION

ADDINOL Antifreeze Extra is a high-quality and environmentally friendly cooler-protecting agent based on ethylene glycol and an additive package based on OA technology.

## APPLICATION

- Preferred application as protecting agent against freezing, corrosion and cavitations for cooling systems in combustion engines
- Particularly suitable for the application in cooling circuits of high-performance engines made of aluminium which require a special protection at higher temperatures
- Highly fit for the application in cooling circuits of all modern gasoline and diesel engines

Cooler-protecting concentrate must be diluted with water before use (see page 2), preferably with softened water. Please follow the regulations and instructions of equipment manufacturers.

## DELIVERY

Delivery preferable in drums and 1.5L cans.

## STORAGE

In closed containers at least 8 years. Storage at room temperature (max 35 °C). Do not expose to direct sunlight.

## SPECIFICATIONS / APPROVALS

Meets the requirements according to:

- ASTM D 3306 / D 4985 / D 6210
- SAE J 1034
- Ö standard V5123
- Nato S-759

Approved by:

- MWM 0199-99-2091
- MAN 324 type SNF
- GE Jenbacher TR 1000-0200
- Tedom 61-0-0257

Complies with the requirements of:

- VW/AUDI/SEAT/SKODA TL 774-D/F (G12, G12+)
- MB approval 325.3
- Deutz 0199-99-1115
- Ford WSS-M 97B44-D
- MTU MTL 5048
- Detroit Diesel Power Cool Plus
- GM 6277 M
- Wärtsilä 32-9011
- John Deere JDMH 5
- Komatsu 07.892
- Liebherr MD1-36-130
- Mazda, Isuzu
- Volvo VCS 418-0001 (different colour)
- Yanmar
- DAF 74002
- Cummins CES 14603

## CHARACTERISTICS

- High chemical stability
- Concentrate – miscible with water
- Outstanding corrosion protection
- Long lifetime
- Neutral to rubber and plastics
- Free of silicate, amine, nitrite, borate and phosphor
- Low tendency of foam formation

## ADVANTAGES AND BENEFITS

- Long lifetime
- Specific application of required antifreeze protection possible, economical use
- Protection of all metals in the unit, e.g. aluminium, cast iron, copper
- All-season application, also usable for extended change intervals
- Improved protection against leakages
- No formation of deposits
- Reliable in practical application





# ADDINOL ANTIFREEZE EXTRA

## SPECIFICATIONS AND TYPICAL PARAMETERS

Feature	Test condition / unit		Antifreeze Extra	Method acc. to
Appearance			clear fluid	visual
Colour			reddish-violet	visual
Basis			ethylene glycol	
Antifreeze down to (at 69 % ANTIFREEZE EXTRA)	max.	°C	-68	
Density	at 20°C	kg/m <sup>3</sup>	1,113	DIN 51757
Refraction index	at 20°C		1,430	DIN 51423-2
Flash point	PM	°C	> 122	DIN EN ISO 2719
Initial boiling point		°C	180	
pH value in water	at 33 vol%		8.5	similar to DIN 51369
Reserve alkalinity	0.1 M HCl	ml	5.9	

ADDINOL Antifreeze Extra is a cooler-protecting concentrate, which has to be diluted before application according to the mixing chart below. It must not be used as pure concentrate. It is miscible with water in any ratio. Please follow recommended ratios:

Mixing ratio (Vol %)		Antifreeze up to
Antifreeze Extra	Water	
35	65	-18°C
40	60	-25°C
50	50	-36°C

**No sufficient anticorrosive effect below a concentration of 33% Antifreeze Extra!**

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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.