

## Antifreeze 48

### ANTI-FREEZE AND COOLANT

Antifreeze 48 is an antifreeze/coolant on the basis of ethylene glycol, free from nitrite, phosphate and amine.

The selected inhibitors and additives ensure effective protection against corrosion on all metals and alloys that are used in the cooling circuits of combustion engines.

#### Properties

- Free from nitrite, phosphate and amine.
- Increased corrosion protection on aluminum and efficient protection on steel, copper, brass, solder and alloys.
- Increased boiling point.
- It protects against deposits that can impair heat transmission.
- The contained inhibitors protect against foam formation, cavitation and overheating.
- Very good compatibility with all commercially available cooling connections and seals.
- High chemical stability in hard water.

#### Application

Antifreeze/coolant for modern aluminum and conventional combustion engines

To be applied in cars, commercial vehicles, buses and stationary systems.

The product is a concentrate.

Mix with water before use: a mixing ratio of 50% is recommended to ensure better corrosion protection and freeze protection up to -40°C. Under no circumstances should the minimum concentration of 33% (1/3 antifreeze + 2/3 water) be reduced.

Antifreeze concentrations above 60% are not recommended.

When selecting a product, the manufacturer's specifications must be observed.

#### How to mix

Protection against cold	[°C]	- 20°	- 40°
Antifreeze 48	[% Vol.]	33%	50%
Water*	[% Vol.]	67%	50%

\* The water must not be harder than 20°GdH\*\* (degree of German water hardness), or according to manufacturer specifications. Often, but not always, drinking water meets the desired requirements. If the water is very hard, we recommend mixing tap water with distilled or desalinated water.

\*\* Water hardness: 0 bis 20°GdH (0 - 3,6 mmol/l)  
 Chloride content: max 100 mg/l  
 Sulfate content: max 100 mg/l

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### Service life

It is recommended to change the filling after 3 years at the latest, or according to the manufacturer's instructions.

The system should be rinsed thoroughly on this occasion.

### Miscibility with other antifreezes and coolants

Usually easily miscible with standard commercial products based on ethylene glycol.

### Spezifikationen

VW (Audi, Porsche, Seat, Skoda)	TL 774 C (G11)
BMW / Mini	GS 94000
CHRYSLER	MS-7170
Daimler/Mercedes Benz	MB 325.0 (DBL 7700.20 - PKW, NFZ, Industriemotoren)
Deutz	DQC CA-14
FIAT	9.55523
FORD	ESD-M97B49-A
IVECO	Standard 18-1830
Jl Case	JIC-501
MAN	MAN 324-NF
MTU	MTL 5048
OPEL/GM	GME L1301
TOYOTA	1WW/2WW engines
VOLVO Cars	128 6083 / 002
VOLVO Trucks & Construction	Models produced before 2005

### Typische Kennwerte

### Prüfmethode

Farbe	blau	
Dichte bei 20°C	1,123 g/cm <sup>3</sup>	ASTM D 1122
Viskosität bei 20°C	24-28 mm <sup>2</sup> /s	DIN 51562
Siedepunkt	170 °C	ASTM D 1120
Flammpunkt C.O.C.	>120 °C	DIN ISO 2592
pH-Wert bei 50% Vol. Wasser	8,0	ASTM D 1287
Reservealkalität	14,5 ml HCl 0,1N	ASTM D 1121
Wassergehalt	2.9% max	DIN 51777

Mischbarkeit mit Wasser: in jedem Verhältnis mischbar (Einsatzvorschriften sind zu beachten).

### Bemerkungen

ADR / SDR : Kein Gefahrgut

VeVA-COde: 16 01 14