

## Cavitation Erosion Corrosion Test

ASTM D 2809	Rating	ASTM D 3306 limit	Rating
Aluminum water pump	9	8 min	

## Quality Control

The above-listed data represent average values at the time of going to press of this Data Sheet. They are intended as a guide to facilitate handling and cannot be regarded as specified data. Specified product data are issued as a separate product specification.

## Handling

- Minor spills should be soaked up with oil absorbent granules, sand or dirt. The spillage site should then be washed with soapy water and dried.
- Wash off any spillage on paintwork immediately.
- Avoid contact with galvanised equipment when storing or dispensing this product, as this will prompt a corrosive reaction.

## Shelf Life

- 5 years from date of manufacture when tightly sealed within the original packaging, at a maximum storage temperature of 30°C..
- All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be exposed to hot sun or freezing conditions.
- Manufacture date can be identified from an eight digit code printed on the bottle. YYYY.MM.DD.

## Color

Glystantin G48 is supplied in blue-green.

## Safety

When using this product, the information and advice given in our Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

## Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

# Mobil™ Antifreeze Extra

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# Mobil™ Antifreeze Extra

## Data Sheets



## Mobil Antifreeze Extra - Concentrate

### Product Description

Glystantin® G48® is an engine coolant concentrate based on ethylene glycol that needs to be diluted with water before use. Glystantin G48 contains a corrosion inhibitor package based on salts of organic acids and silicates (Hybrid Coolant). Glystantin G48 is free of nitrites, amines and phosphates.

### Properties

Glystantin G48 was developed to protect engines against corrosion, overheating and frost damage. It gives a high degree of corrosion protection to engine components such as radiators, cylinder blocks/heads, water pumps and heat exchangers, and avoids deposits. Glystantin G48 fulfills the requirements of the following coolant standards: AS 2108-2004, ASTM D 3306, ASTM D 4985, SAE J1034, AFNOR NF R 15-601, ÖNORM V 5123, CLUNA NC 956-16, JIS K 2234:2006, SANS 1251:2005, China GB 29743-2013 and BS 6580:2010.

Furthermore Glystantin® G48® is officially approved by:

• BMW	BMW GS 94000
• Mini (BMW)	BMW GS94000
• Rolls-Royce (built as from 1998)	BMW GS94000
• Deutz	DQC CA-14
• Jenbacher	TA-Nr. 1000-0201
• Liebherr	Minimum LH-00-COL3A
• MAN (Until 11/2011)	MAN 324-NF
• MAN Diesel & Turbo	Liste 3.3.7
• Maybach	MB-Approval 325.0
• MTU	MTL 5048
• Mini Cooper D vehicles built between 2007 and 2010	
• MWM	0199-99-2091 DE
• Opel / Vauxhall (built up to 2005)	B 040 0240
• Mercedes Benz (Built up until 2013)	MB-Approval 325.0
• Porsche (Built up to until 1995)	for 924, 928, 944, 968
• Saab	6901599
• Same Deutz Fahr Group	
• Smart (built up until 2013)	
• Tesla	
• Van Hool	
• Volvo Truck (built up until 2005)	
• Zastava	
• VW / Audi / Seat / Skoda	TL 774-C

### Miscibility

Since the special advantages of Glystantin G48 will only be achieved when Glystantin G48 is used exclusively, mixing Glystantin G48 with other Glystantin coolants or products from other producers is not recommended. Glystantin G48 should be blended with water in a concentration amongst 33 to 60% by volume prior to infilling. The usage of a 50/50 ratio for the mixture of water and Glystantin is generally advisable. For preparation of the coolant it is recommended to use distilled or deionized water. In most cases tap water is also appropriate. Analysis values of the water may not exceed the following threshold values:

Water hardness:	0 – 2.7 mmol/l
Chloride content:	max. 100 ppm
Sulphate content:	max. 100 ppm



# Mobil™ Antifreeze Extra

## Chemical nature

Ethylene glycol with corrosion inhibitors

## Appearance

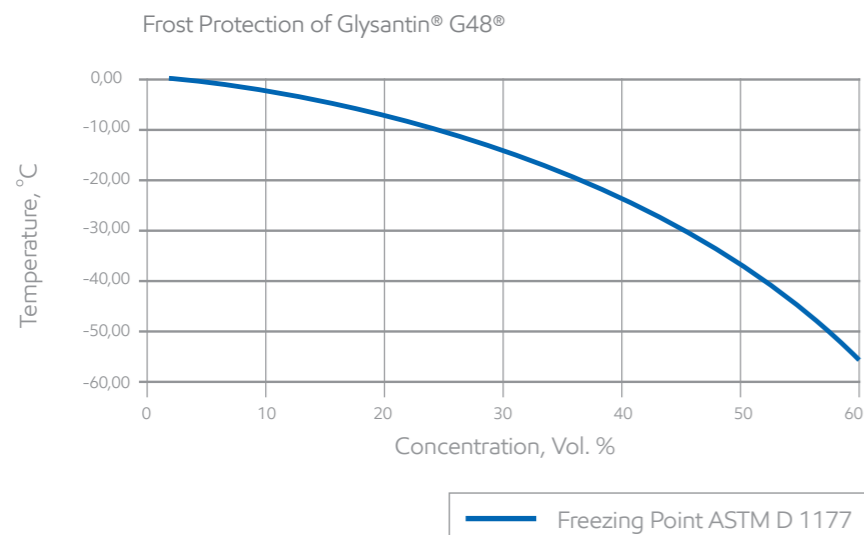
Clear liquid

## Physical data

Density, 20 °C	1.121 – 1.123 g/cm <sup>3</sup>	DIN 51 757-4
Viscosity, 20 °C	24 – 28 mm <sup>2</sup> /s	DIN 51 562
Refractive index, 20 °C	1.432 – 1.434	DIN 51 423-2
Boiling point	>165 °C	ASTM D 1120
Flash point	>120 °C	DIN EN ISO 2592
pH value	7.1 – 7.3	ASTM D 1287
Reserve alkalinity	13 – 15 ml	ASTM D 1121
Ash content	max. 1.5 %	ASTM D 1119
Water content	max. 3.5 %	DIN 51 777-1

## Frost protection

Freezing point		ASTM D 1177
50 vol % solution	below -38 °C	
33 vol % solution	below -18 °C	



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## Foaming characteristics

33 vol % solution	max. 50 ml / 3 s	ASTM D 1881
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## Electrical conductivity

30-50 vol % solution	approx. 4 mS/cm, at 23 °C	ASTM D 1125
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## Glassware Corrosion Test

ASTM D 1384

Metal coupons	typical weight loss mg/coupon	ASTM D 3306 limit mg/coupon
Copper	0.1	10 max
Solder	0.3	30 max
Brass	0.2	10 max
Steel	-0.2 *)	10 max
Cast iron	-1.0 *)	10 max
Cast aluminum	-1.1 *)	30 max

\*) remark: negative values mean a weight gain

## Heat Transfer Corrosion Test

ASTM D 4340	typical corrosion rate mg/cm <sup>2</sup> /week	ASTM D 3306 limit mg/cm <sup>2</sup> /week
Cast aluminum	-0.07 *)	1.0 max

## Simulated Service Corrosion Test

ASTM D 2570

Metal coupons	typical weight loss mg/coupon	ASTM D 3306 limit mg/coupon
Copper	8.8	20 max
Solder	0.0	60 max
Brass	10.7	20 max
Steel	0.1	20 max
Cast iron	-1.1 *)	20 max
Cast aluminum	-1.2 *)	60 max

\*) remark: negative values mean a weight gain