G48® Data Sheet

D/EVO 017 e February 2013
Supersedes edition of June 2008

Glysantin® G48® is an engine coolant concentrate based on ethylene glycol that needs to be diluted with water before use.

Glysantin G48 contains a corrosion inhibitor package based on salts of organic acids and silicates (Hybrid Coolant).
Glysantin G48 is free of nitrites, amines and phosphates.

Properties

Glysantin 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.

Glysantin 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, CUNA NC 956-16, JIS K 2234:2006, SANS 1251:2005, SH 0521-1999 and BS 6580:2010.

Furthermore Glysantin® G48® is officially approved by:

• BMW	BMW N 600 69.0
• Bez. Reg. Arnsberg, Dept. of Mining and Energy	84.12.22.63-2001-2
• German Army	TL 6850-0038/1
• Daimler/Mercedes-Benz	Specification 325.0
• Deutz	H-LV 0161 0188
• Jenbacher	TA-Nr. 1000-0201
• Liebherr Machines Bulle	TLV 035, TLV 23009 A
• MAN	MAN 324-NF
• MTU	MTL 5048
• Opel/General Motors	B 040 0240
• Porsche	for 924, 928, 944, 968
• Saab	6901599
• VW/Audi/Seat/Skoda	TL 774-C

Miscibility

Since the special advantages of Glysantin G48 will only be achieved when Glysantin G48 is used exclusively, mixing Glysantin G48 with other Glysantin coolants or products from other producers is not recommended.

Glysantin 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 Glysantin 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

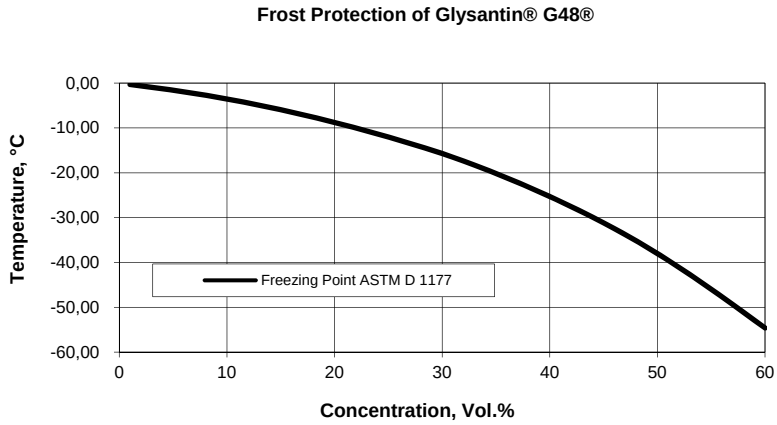
Chemical nature **Ethylene glycol with corrosion inhibitors**

Appearance Clear liquid

Physical data

Density, 20 °C	1.121 – 1.123 g/cm³	DIN 51 757-4
Viscosity, 20 °C	24 – 28 mm²/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	



Foaming characteristics	33 vol % solution	max. 50 ml / 3 s	ASTM D 1881
Electrical conductivity	30-50 vol % solution	approx. 4 mS/cm, at 23 °C	ASTM D 1125

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

Heat Transfer Corrosion Test

ASTM D 4340

	typical corrosion rate mg/cm²/week	ASTM D 3306 limit mg/cm²/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

*) negative means weight increase

Cavitation Erosion Corrosion Test

ASTM D 2809

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

*) remark: negative values mean a weight gain

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.

Storage Stability

Glysantin G 48 has a shelf life of at least three years when stored in originally closed, air-tight containers at temperatures of maximum 30 °C. Do not use galvanized containers for storage.

Color

Glysantin G48 is usually available in blue-green. Different colors may be seen in special cases.

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.

February 2013

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