

# Glysantin<sup>®</sup> G 70

**Glysantin G 70 is an engine coolant concentrate based on ethylene glycol. It contains a corrosion inhibitor package based on salts of organic acids and phosphates. Glysantin G 70 does not contain nitrites, amines, silicates and borates.**

## Properties

**Glysantin G 70** was developed to protect car, truck and bus engines of both ferrous and aluminium construction against corrosion and frost damage. It contains a blend of inhibitors designed to give a very high degree of corrosion protection to engines and cooling system components such as radiators, cylinder blocks/heads and water pumps.

**Glysantin G 70** was developed to meet the requirements of Toyota's coolant standard TSK2601G. It is approved by Toyota Motor Corporation (TMC) as long life coolant (Class 8A). Glysantin G 70 provides excellent corrosion protection even after travel for a distance of 160,000 km.

Furthermore **Glysantin G 70** meets the requirements of national coolant standards like JIS K 2234-1994, ASTM D 3306, BS 6580:1992 and many others.

## Miscibility

**Glysantin G 70** can be mixed with other silicate free engine coolants like Glysantin G 30, G 33 and G 34 if necessary.

It should possibly not be mixed with silicate containing engine coolants like Glysantin G 05 and G 48 as precipitates could occur.

**Glysantin G 70 must be diluted with water before use. It is hard water compatible and can be mixed with tap water\* before filling into the cooling system to give solutions in the concentration range of 30 to 65 % by volume.**

\* For preparation of the coolant use clean, not overly hard water. Waste water from mining, sea water, brackish water, brine, industrial waste water are all unsuitable.

The analysis of the water should not exceed the following limits:

Water hardness	0 to 20°dGH (0 – 3.6 mmol/l)
Chloride content	max. 100 ppm
Sulphate content	max. 100 ppm

Should the analysis of the water exceed the approved limits, then it has to be suitably treated, for example by mixing with pure, distilled or deionized water. Excessive chloride or sulphate levels can be corrected in this way.

## Glystantin G 70

Chemical nature	Ethylene glycol with inhibitors		
Appearance	Clear liquid, no precipitates		
Colour	Pink		
Technical data	Density at 20 °C	1.128 – 1.132 g/cm³	DIN 51 757/4
	Boiling Point	159 - 169 °C	ASTM D 1120
	Flash point	110 - 135 °C	DIN ISO 2592
	pH at 25 °C, 30 vol%	7.2 – 7.9	ASTM D 1287
	Reserve alkalinity n/10 HCl	10.0 – 16.0 ml	ASTM D 1121
	Ash content	2.8 – 3.6 wt%	ASTM D 1119
	Water content	4.0 – 5.0 wt%	ASTM D 1123
Solubility	Miscibility with water	miscible in all proportions	
Freezing Point	50 vol%	–35.0 to –37.0 °C	ASTM D 1177
	30 vol%	–14.5 to –16.5 °C	
Foaming characteristic	30 vol%	0 - 2 ml	TSK2601G, section 5.6
Rubber compatibility	at 80 °C / 168 hr	0 to +3 % volume change	
	50 vol%	for typical SBR and EPDM qualities in the same order of magnitude as that for pure water	

## Corrosion Performance

### Metal Corrosion Prevention in Glassware

TSK2601G, section 5.12, 30 vol%

	typical	requirements TSK2601G
Mass change, mg/cm <sup>2</sup>		
Cast aluminium	+0.01	within ±0.15
Cast iron	+0.01	within ±0.15
Steel	-0.03	within ±0.10
Brass	-0.03	within ±0.10
Solder	-0.04	within ±0.30
Copper	+0.03	within ±0.10
Liquid properties after test		
pH	7.6	7.0 – 8.0
pH change	+0.1	within ±0.5
Reserve alkalinity change rate, %	-2.4	within ±15.0
Precipitation, vol%	<0.05	0 – 0.1

### Pressurized Heating Surface Corrosion Prevention

TSK2601G, section 5.19, 25 vol%

	typical	requirements TSK2601G
Method A (135 °C)		
Al mass change, mg/cm <sup>2</sup>	-0.18	max. 1.0
pH change	0.0	within ±1.0
Method B (160 °C)		
Al mass change, mg/cm <sup>2</sup>	-0.19	max. 5.0
pH change	0.0	within ±1.0

### Service Life Evaluation Test

TSK2601G, section 5.44, 30 vol%

	typical	requirements TSK2601G
Metal test piece corrosion rate, mg/cm <sup>2</sup> /168 hr		
Aluminium radiator parts	0.01*	
Cast aluminium	0.03*	
Cast iron	0.05*	max. 0.1
Steel	0.02*	within 672 hr
Brass	0.01*	
Copper	0.03*	

\* corrosion rate between 504 hr and 672 hr

**Quality control**

The above data represent average values at the time of going to press of this data sheet. They cannot be regarded as specified data. Specified product data are issued as a separate product specification.

**Storage stability**

Glysantin G 70 has a shelf life of at least three years when stored in originally closed, airtight containers at temperatures of maximum 30 °C. Do not use galvanized containers for storage because they may corrode

**Colour**

Glysantin G 70 is available in the following colour:

Glysantin G 70-51      pink

**Safety Data Sheet**

A Safety Data Sheet is available for Glysantin G 70.

**Handling**

The usual precautions for handling chemicals together with the information and advice contained in our Safety Data Sheet should be observed for Glysantin G 70.

Avoid contact with skin.

**Note**

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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