

Glysacorr® G93® green

Diesel Engine Water Treatment Suitable for Aluminium, Alloys and Yellow Metals

Technical Information

Physical Data

Appearance:	Clear green liquid without solid contamination	
Density, 20°C:	1.092 – 1.095 g/cm ³	DIN 51 757-4
Refractive index, 20°C:	1.397 – 1.401	DIN 51 423-2
pH value:	9.3 – 9.7	ASTM D 1287
Reserve alkalinity of 5g:	11 – 14 ml	ASTM D 1121
Water content:	max. 50%	DIN 51 777-1

Chemical Nature

Mixture of water and monoethylene glycol with inhibitors.

Description

Glysacorr® G93® green is an inhibitor concentrate which is added to the cooling water of internal combustion engines in cases in which the engine does not need to be protected from freezing. Glysacorr® G93® green is phosphate-, nitrite- and amine-free.

Properties

At a concentration of 10 – 12% by volume, Glysacorr® G93® green affords excellent protection against cavitation and corrosion to all metals and alloys that are used in cooling systems, such as aluminum, ferrous and yellow metals. Glysacorr® G93® green also prolongs the normal working life of water pumps. It is especially appropriate for use in heavy-duty engines such as those used in trucks and on ships. Glysacorr® G93® green is approved by:

- ▶ Scania
- ▶ MAN Energy Solutions - 28/33 & Medium Speed
- ▶ MTU - MTL 504
- ▶ Deutsche Bahn
- ▶ Bundeswehr/German Navy

Miscibility

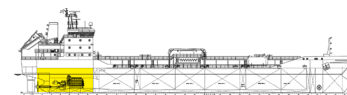
Glysacorr® G93® green must be diluted with water before use. It is hard water compatible and can be mixed with tap water* before use to give solutions in the concentration of 10 % by volume. *For preparation use clean, not overly hard water. Wastewater from mining, seawater, brackish water, brine and industrial waste-water are all unsuitable.

The analytical data of the water should not exceed the following limits:

- ▶ Water hardness 0 – 20°dH (0 – 3.6 mmol/l)
- ▶ Chloride content max. 100 ppm
- ▶ Sulphate content max. 100 ppm

Should the analysis of the water exceed the approval 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 this way.

USAGE AREAS



Water Treatment

PACKAGING



APPROVALS

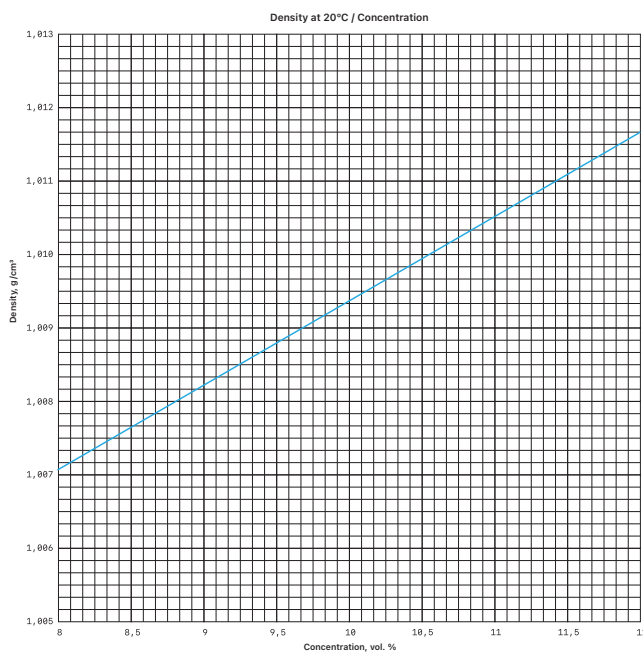
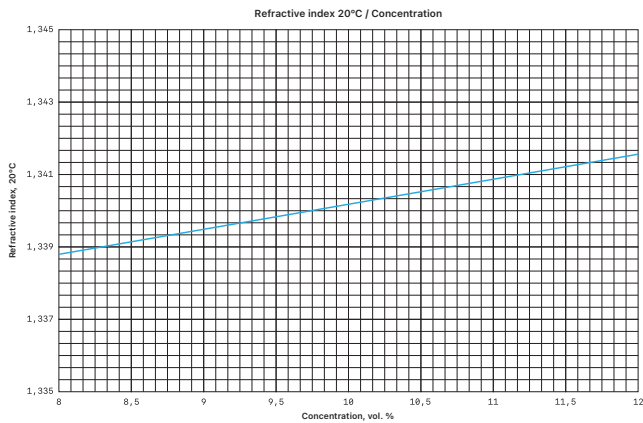


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Solubility

Miscibility with water: Miscible in all proportions.
Miscibility with hard water 10 vol.% solution: No precipitation.



Foaming characteristics

70ml max. / 5s max. ASTM D 1881

Swelling of rubber

For the SBR and EPDM qualities normally encountered on the market: 10 vol.% solution in water, 80°C/168h
0 – 3% (i.e. the roughly the same as when immersed in pure water)

Corrosion Performance

Glassware Corrosion Test

ASTM D 1384 10 vol.% solution in water

Metals - Alloy	Typical weight loss in mg/Coupon	limit ASTM D 3306
Copper	1.6	max. 10
solder	0.0	max. 30
Brass	0.8	max. 10
Steel	0.0	max. 10
Cast Iron	-0.2	max. 10
Cast Alluminium	0.3	max. 30

Heat Transfer Corrosion Test

ASTM D 1384 10 vol.% solution in water

	Corrosion rate in mg/cm²/week	limit ASTM D 3306
Cast Alluminium	-0.08	max. 1.0

Quality control

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

Storage stability

Glysacorr® G93® green has a shelf life of at least three years when stored in originally closed, air-tight containers at temperature of max. 30°C. Do not use galvanized containers for storage because they may corrode.

Color

Glysacorr® G93® is available in the following color:
Glysacorr® G93® green (previously known as Glysacorr G93-94).

® = registered trademark of BASF SE

Glysacorr® G93® green

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Safety and Environment (HSE)

Uniservice Unisafe Srl have carefully developed their products to minimize the safety risks and environmental impact of using their products. However, Uniservice advises that, prior to using its products, users should read in detail the accompanying Safety Data Sheet and ensure that its products are applied within the required HSE regulations of the country in which the user operates. Best practice and safety requirements should be followed which will likely include method statements and risk assessments, together with any specific requirements of the user's own company HSE requirements.

Important Notice

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, this information is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you do a test to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by Uniservice Unisafe Srl hereunder are given gratis, and Uniservice Unisafe Srl assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk. Product images are for reference purposes only.

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