



# Glysofor

## Glycogard HT - Specification

### Product features

Glycogard HT is an environmentally friendly anticorrosive concentrate for the production of frost protection agents and cooling brines.

A frost protection agent produced with Glycogard HT can be universally used as a frost protection agent, anticorrosive agent and as a heat carrier medium or cooling brine in heating or cooling systems.

A frost protection agent produced with Glycogard HT optimally prevents frost damage, corrosion, debris, accumulation of mud or biofilms.

Glycogard HT is free of nitrites, phosphates, amines, silicates and borates. It is biodegradable and environmentally friendly.

Glycogard HT is classified in the lowest water hazard class (1).

It does not contain compounds of the water hazard classes 2 and 3.

Anticorrosive concentrate for the production of frost protection agents and cooling brines

Free of nitrites, phosphates, amines, silicates and borates

Operating temperature: -40 to +150 °C

Optimized corrosion protection for multi-metal Installations

OA – Technology

A frost protection agent produced with Glycogard HT is resistant in the long-term against putrescence and microbiological degradation and therefore precipitations and the accumulation of mud are prevented.

## Product data

Chemical name	Combination of corrosion inhibitors, dissolved
Appearance	Yellowish liquid
Packaging	Canisters / barrels / IBCs / tank vehicles
ADR	KI 0 number
WHC	1
Labelling	-
Applied concentration:	10% in MEG or MPG
Operating temperature range:	-40 to +150 °C
Areas of application:	Heating systems, cooling and freezing systems, air conditioners, biogas plants, solar plants, block heating stations, heat recovery plants, heat carrier media in industrial and production plants, frost protection agents and anticorrosive agents in water and heating circuits, heat carrier media in the area of geothermal energy etc. □
Density (20 °C)	1,135 – 1,155 g/cm <sup>3</sup>
pH-value	7,0 - 8,5
Boiling point (1013 mbar)	from 100 °C
Form	Liquid
Colour	Yellowish

## Corrosion protection

Glycogard HT contains a complex combination of corrosion inhibitors which optimally protect metals from corrosion. This anticorrosive protection can be used for all important metals which are generally used for the construction of heating and cooling systems and industrial plants. Installations made of copper, brass, solder, grey iron, aluminium, steel and iron are optimally protected from corrosion even if they are used in multi-metal installations.

## Application

Glycogard HT is delivered in liquid form and can therefore be very easily diluted in monoethylene glycol, propylene glycol and other glycols.

Glycogard HT is concentrated as follows:

- 10% Glycogard HT
- 90% glycol (monoethylene glycol or propylene glycol)

As an option, a colourant can be added.

A product produced according to the above-mentioned formulation is used in the end application in diluted form (between 33 and 60% in water). The product can be universally used as a frost protection agent, anticorrosive agent, heat carrier medium, cooling brine etc.

#### Frost protection values of a MEG-based product

MEG product – Active content (Volume)	Frost protection up to °C
33%	-20
44%	-30
52%	-40

#### Frost protection values of a MPG-based product

MPG product – Active content (Volume)	Frost protection up to °C
33%	-14
40%	-20
50%	-30

## Application guidelines for MEG and MPG based products

Galvanised components are to be avoided, as zinc is generally volatile with glycol and products which contain glycol. The water that is used for producing the solution should have a maximum hardness of 25 °dH and a maximum chloride content of 100 mg/l. Generally, tap water fulfils these requirements. Pipe connections are to be made of hard solder and chloride-containing flux materials are to be avoided or are to be removed completely by flushing after usage. Scalings on copper components, metal swarf and contaminations are to be removed completely before the plant is filled. The operated plant must not be in contact with any external electrical potential. When installing the plant, it must be ensured that the future operation is not interrupted by circulatory disturbances caused by air cushions or debris. Plants that are operated with Glycogard HT must be installed as closed systems and are to be filled completely and vented directly after the pressure test is carried out. Gas and air cushions are to be removed immediately. Breathers are to be applied in such a way that they keep the system free from air and oxygen at all times and that, in the case of low pressure, no air can be sucked in. If an existing plant is to be filled, the corrosion status should be checked beforehand. Before a system that is damaged by corrosion is filled, it must be completely reconstructed.

## Other

Pure water/glycol mixtures have very distinctive corrosive properties. You must therefore never use pure water/glycol mixtures without inhibitor equipment. For applications in connection with food, refrigeration or heating of food and for pharmaceutical and cosmetic areas of application, we recommend formulating a product based on propylene glycol (MPG).

## Packaging sizes

- 10 kg canister
- 25 kg canister
- 30 kg canister
- 220 kg barrel
- 1.000 kg IBC
- 24.000 kg tank vehicle

*This data relates to the correct and appropriate application of our products, with due consideration of the professional standards and regulations of the area of application. It is for informational purposes only and does not absolve the obligation to carry out the due materials testing upon arrival. The data is based on our current state of knowledge and is not meant to guarantee specific properties. No general or legally binding statement on certain features, in a concrete application, can be derived from the above data. It is meant to describe our products with regard to their composition and offer application advice. Any industrial property rights of third parties and the suitability for a special application purpose are to be observed and verified by the user.*



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