



# Glysofor

## Glysofor E – Specification

### Product features

Glysofor E is an environmentally friendly antifreeze and heat transfer medium based on bioethanol in combination with corrosion inhibitors and stabilizers.

Due to its excellent thermo-dynamic properties, Glysofor E is widely used in geothermal and heat pump systems, and in cooling and heating systems and thus represents a very efficient alternative to glycolic heat transfer media.

Glysofor E ideally prevents frost damage, corrosion, deposits, sludge accumulation, and biofilms.

Glysofor E is supplied ready to fill with an antifreeze value of -10 degrees Celsius.

Glysofor E is produced from renewable raw materials, is biodegradable and environmentally friendly.

Glysofor E is free of nitrite, amine, phosphate, silicate and borate.

Environmentally friendly antifreeze and heat transfer medium based on denatured bioethanol

Areas of application: geothermal and heat pump systems, cooling and heating systems

Optimum viscosity

Ready-to-use

Frost protection -10 °C

Installations made of copper, brass, solder, grey iron, aluminium, steel and iron are optimally protected, even if they are used in multi-metal installations.

Glysofor E does not attack sealing materials.

## Product data

Chemical name	Ethanol, Aqua Dest.
Appearance	Green liquid
Packaging	Canisters / barrels / IBCs / tank vehicles
ADR	KI 0 number
EG-No.	200-578-6
CAS-No.	64-17-5
WHC	1
Flash point	< 100 °C
Boiling point	< 103 °C
Density	0,97 g/cm <sup>3</sup>
pH-value	7,5 – 8,5
Frost protection	- 10 °C
Viscosity (20 °C)	1,9 mPas
Specific heat (20 °C)	approx. 4,3 kJ/kgK

## Thermodynamic properties

Glysofor E		at -5 °C	at 0 °C	at 5 °C	at 10 °C	at 20 °C
Density	[kg/m <sup>3</sup> ]	980.6	979.9	978.9	977.9	974.8
Heat capacity	[kJ/kgK]	3.795	3.822	3.851	3.884	3.953
Thermal conductivity	[W/mK]	0.455	0.4614	0.4677	0.4749	0.4899
Dynamic viscosity	[mPas]	5.328	4.306	3.421	2.782	1.934

## Application

**Preparation:** Before the plant is filled for the first time, it should be tested for leaks. For this purpose, the plant should initially be filled with chloride-free water in the amount specified by the plant manufacturer, so that if any leakage occurs, no cooling brine will be released accidentally. If it is not possible to test the plant using water (e.g. due to low temperatures), the plant should be observed during the filling process as far as possible.

**Filling:** Glysofor E is ready to be filled in upon delivery and can be incorporated directly into the plant that is to be filled in.

**Refilling:** If the system needs to be refilled, this must be done using solely Glysofor E. Glysofor E cannot be mixed with other antifreeze agents.


## Miscellaneous

Glysofor E is not classified as a dangerous good pursuant to special provision 144 (3.3.1 ADR). As per L.2., there is no further flammability up to 60 °C.

## 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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