

N-ET GEO L

Cold and corrosion protection for all ground-source heat pump systems

Art.-No. 32090

Description

Mixture of corrosion inhibitors and monopropylene glycol (toxicologically harmless). According to the latest Organic Acid Technology (OAT).

Specifications

Complies with all international specifications for antifreeze systems in terms of material compatibility, temperatures, long-term use, corrosion, etc.

Usage

Especially in ground source heat pump systems, N-ET GEO L is used as a heat transfer fluid in external circuits, where the N-ET GEO L water mixture transfers the heat to the internal circuit of the heat pump. Serves as cold protection as well as corrosion protection of the whole piping system. In ground collectors in connection with heat pumps, frost protection has proven to be sufficient for a temperature range of -10 to -15°C.

Features

N-ET GEO L contains very effective rust-inhibiting inhibitors and is especially characterized by its hard water resistance (no riveting, no precipitation, no flocculation) and the excellent, all-round corrosion protection on all materials. It guarantees the best frost resistance and is thus an excellent long-term protection for all piping systems that are endangered by outside temperatures. For reasons of corrosion and cold protection safety, we recommend a minimum application concentration of 25 % v/v N-ET GEO L (corresponds to a frost resistance of -10°C).

Technical data

| Vol. % | 20 | 25 | 30 | 35 | 40 | 50 |
|------------------------------------|-------|------|--------|------|--------|--------|
| Freeze protection °C Ice crystals* | - 7.5 | - 10 | - 13 | - 16 | - 22 | - 33 |
| Antifreeze °C Crystal mush | - 8 | - 12 | - 14.5 | - 18 | - 24.5 | - 37.5 |
| pour point °C | - 9 | - 13 | - 17 | - 21 | - 27.5 | - 44 |

* Reading Refractometer Frost protection

Note

For optimum performance and controlled quality, we recommend the use of deionized, distilled or tap water that does not exceed the following limits for the preparation of the ready-to-use dilutions:

- Hardness of max. 3.6 mmol/l
- Chlorides max. 500 ppm
- sulfates max. 500 ppm

Transport

ADR/SDR No dangerous goods

Disposal

LVA VeVA / EAK: 16 01 15

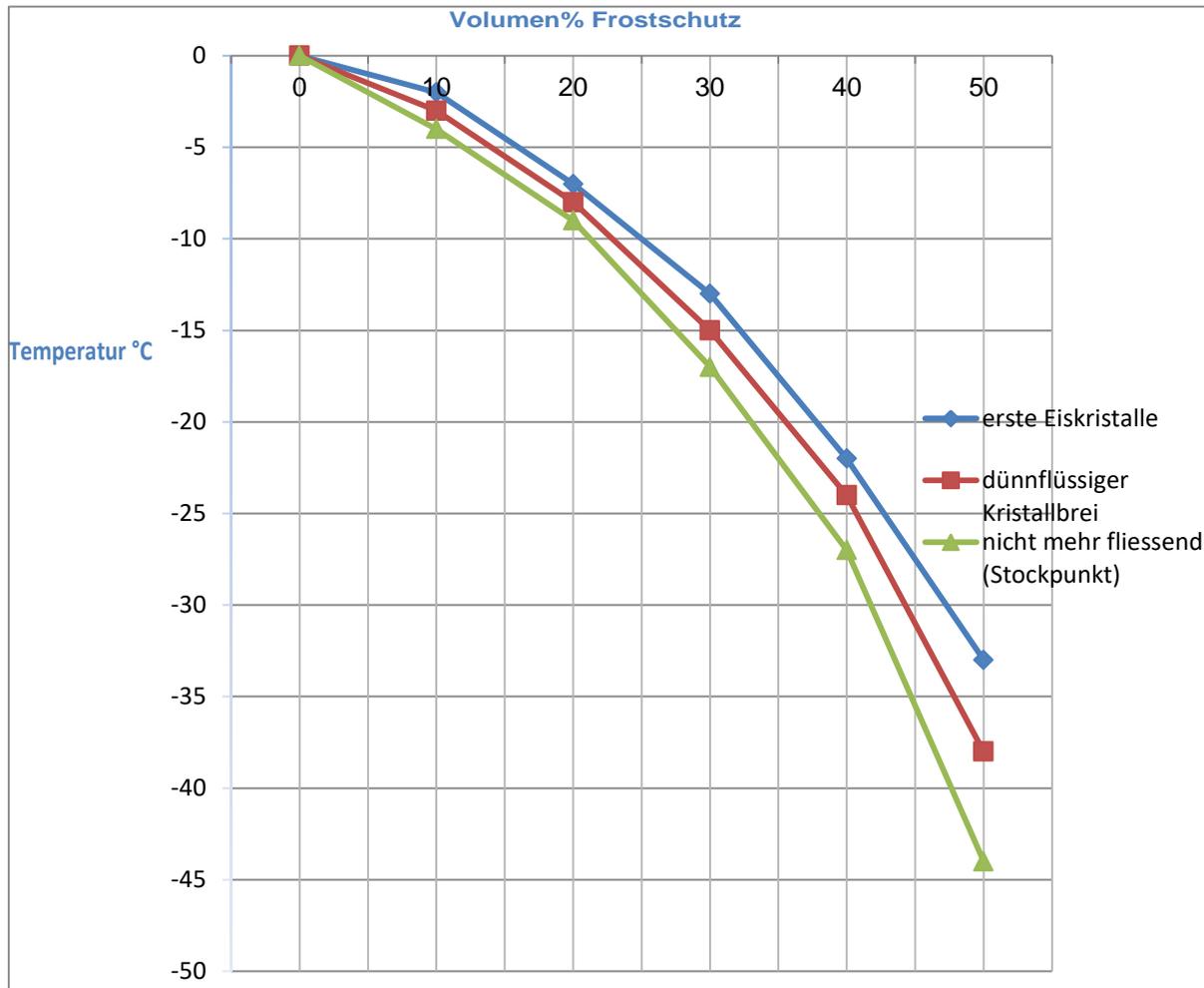
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General information on the frost protection effect of N-ET GEO L water mixtures

N-ET GEO L (based on propylene glycol), when mixed with water, lower its freezing point to < 40 °C, depending on the concentration used. The ice flake point, colloquially usually referred to as "antifreeze", is a measure of the antifreeze effect of antifreeze agents. The ice flake point is the temperature at which the first ice crystals form when a glycol-water mixture cools. This results in an ice slurry that has no explosive effect. Further temperature reduction causes this ice mush to become thicker and thicker until it solidifies at the pour point. Only below this temperature is there a danger of the system bursting. The arithmetic mean value of the ice flake point and the pour point is referred to as the cold protection.

Refractometers are available from Strub for determining frost resistance.

Freezing behavior of N-ET GEO L dilutions:



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