

Sentinel R500

Ready-to-use heat-transfer fluid for Ground Source Heat Pumps

Features and Benefits

- Ready to use - no need for dilution
- Provides effective corrosion and scale protection for system metals.
- Effective frost protection
- Chemically & thermally stable components
- Resistant to degradation
- Contains biocide
- Improved cost of operation of the Ground Source Heat Pump system
- Non-toxic and biodegradable

Properties

Sentinel R500 is a clear blue liquid based on propylene glycol solution. It has been designed for use as a highly efficient thermal transfer fluid in ground source heat pump ground loop circuits. Sentinel R500 is also optimised to provide frost protection to -22°C.

The inhibitors contained in Sentinel R500 provide superior protection against corrosion, scale and deposits and protect the metals commonly found in heat collector circuits. Sentinel R500 prevents fouling of the surfaces of heat exchangers and maintains thermal efficiency. The product is especially formulated to resist degradation by biological organisms and so provide extended fluid life.

The efficient thermal transfer properties and superior stability of Sentinel R500 help towards reduced cost of system operation.

Description and Use

Sentinel R500 is designed for use in Ground Source Heat Pump equipment to provide frost protection and minimise corrosion, scale and deposition.

Sentinel R500 is formulated to minimise biological growth that can occur during static conditions after the ground loop has been filled and before the system is commissioned. The presence of biological organisms may lead to the decomposition of the glycol. This process, which is indicated by darkening and thickening of the thermal fluid, will reduce both the thermal efficiency of the system and the lifetime of the fluid.

Sentinel R500 must not be mixed with other heat transfer fluids and must not be diluted with water. The heat transfer fluid in the system must only be replenished with Sentinel R500.

Chemical Composition

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|---------------------|------------------------|
| • Appearance | clear, blue liquid |
| • Density (20 °C) | 1.02 g/cm ³ |
| • pH value (approx) | 7,7 |
| • Frost protection | -22°C |

Materials Compatibility

Sentinel R500 does not attack the sealant materials normally used in Ground Source Heat Pump systems.

Packaging

Sentinel R500 is supplied in 20 litre and 200 litre non-returnable plastic containers

Safety Precautions

The information provided overleaf enables compliance with the Control of Substances Hazardous to Health Regulations. A Safety Data Sheet is available upon request.

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Heat transfer fluid for Ground Source Heat Pump circuits	An aqueous solution of propylene glycol containing corrosion and scale inhibitors.
Health Hazards	Not considered hazardous to health.
Handling	Avoid contact with skin and eyes. Keep out of reach of children and animals. Wash out empty container thoroughly with water before disposal.
Storage	Keep container tightly closed. Store in cool, well ventilated area.
Spillage	Flush spillage with plenty of water and wash to waste.
Fire/Explosion Risks	Non-flammable
First Aid	Skin Exposure : Wash immediately with plenty of water. If irritation develops, seek medical attention. Eye Exposure : Flush immediately with plenty of running water. Keep eyelids apart. Seek medical advice. Ingestion : Rinse mouth with water. Do NOT induce vomiting! Seek medical advice.