SENTINEL
Water & Energy Solutions

Sentinel R100

Ready-to-use heat-transfer fluid for solar heating systems

Features and Benefits

- Ready to use concentration - no need for dilution
- Effective frost protection down to minus 25°C
- Resistant to degradation.
- Provides effective corrosion protection for system metals.
- Chemically & thermally stable components
- Non-toxic and biodegradable
- Buffered pH
- Less frequent changing of the thermal fluid
- Improved cost of operation of the solar system

Properties

Sentinel R100 Solar Thermal Fluid is a clear blue liquid based on propylene glycol solution. It has been designed for use as a thermal fluid in solar heating equipment such as flat plate and vacuum tube collectors where it ensures highly efficient heat transfer between the solar collector and the thermal store. Sentinel R100 is also optimised to provide freeze protection of the circuit even to –25°C.

The special inhibitors contained in Sentinel R100 provide superior protection to the metals normally used in solar installations against corrosion and deposits. Sentinel R100 prevents the surfaces of heat exchangers fouling and maintains thermal efficiency. The product is especially formulated to resist thermal degradation and so extend fluid life.

The efficient thermal transfer properties and superior stability of Sentinel R100 help towards reduced cost of system operation.

Description and Use

Sentinel R100 is designed for use in solar heating equipment. During static conditions the solar collectors should be completely empty so that the thermal fluid is not exposed to extreme temperatures.

Exposure to temperatures greater than 200°C, even for short periods of time, may lead to a slow thermal decomposition of the propylene glycol. This process, which is indicated by a darkening of the fluid, will reduce the lifetime of the thermal fluid.

Sentinel R100 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 R100.

Chemical composition

• Appearance	clear, blue liquid
• Density (20 °C)	1.04 g/cm³
• pH value	8.35
• Viscosity (20 °C)	5.0 mm²/s
• Boiling point	103°C
• Frost protection	-25°C

Materials Compatibility

Sentinel R100 does not attack the sealant materials normally used in solar heating systems.

Packaging

Sentinel R100 is supplied in 10 and 20 litre non-returnable plastic containers.

SENTINEL PERFORMANCE SOLUTIONS LTD
www.sentinel-solutions.net
United Kingdom Tel 0800 389 4670 Fax 0800 389 4677
Ireland Tel 1800 882373 Fax 1800 882374

Sentinel R100

Heat transfer fluid for solar collector circuits	An aqueous solution of propylene glycol containing corrosion 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.