

## Sentinel R100 Solar Thermal Fluid

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

For enhanced system performance and to provide protection against corrosion, solar thermal systems should be filled with R100 Solar Thermal Fluid.

- **Unique anti-corrosion formulation with vaporisable inhibitors**

Protects all common system metals against corrosion in both the liquid and vapour phase thereby prolonging lifespan and reducing lifetime costs.

- **Buffered pH**

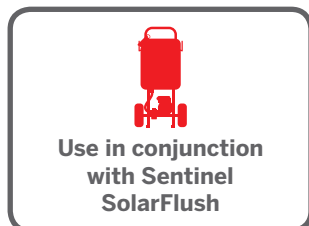
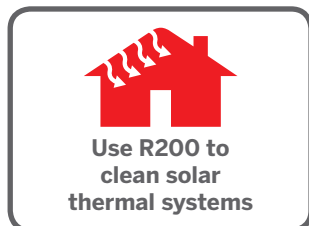
Protects large swings in pH which can cause corrosion in the valuable solar heating components.

- **Optimised to provide frost protection**

Provides freeze protection of the circuit down to -25°C, making it ideal for systems located in cold climates.

- **Resistant to degradation**

Increases lifespan of the thermal liquid whilst reducing system operation costs.



### The Sentinel System

Lifetime protection for heating and hot water systems using the best practice process of...



CLEAN



PROTECT



MAINTAIN

## Application

Sentinel R100 Solar Thermal Fluid is essential for the thermal efficiency and long-term protection of solar thermal systems including flat plate and vacuum tube collectors. The propylene glycol ensures highly efficient heat transfer between the solar collector and the thermal store and also freeze protection of the circuit even to  $-25^{\circ}\text{C}$ . The unique anti-corrosion formulation contains vaporisable inhibitors which protects all common system metals against corrosion thereby prolonging lifespan. The product is also especially formulated to resist thermal degradation and so extend fluid life. Sentinel R100 is compatible with materials commonly found in a typical solar system.

## Dosing

For best results, the system should be cleaned and flushed with R200 Solar System Cleaner before charging with R100. It is important that the system equipment manufacturers' instructions be carefully followed when filling, draining or cleaning a thermal heating system. R100 is ready to use. When the solar system is filled with R100 all the entrained air must be removed before the system is operated. This can be done by using Sentinel SolarFlush which is designed to transport air within the fluid; important when rinsing or evacuating the air from solar loops. R100 must not be mixed with other heat transfer fluids and must not be diluted with water. If losses occur the heat transfer liquid in the system must be replenished with R100. Sentinel R100 is designed for use in solar heating equipment operating up to  $200^{\circ}\text{C}$ .

**Before filling a new system:** Flush the system with clean water to remove all foreign matter such as swarf, fluxes, grease, oils etc. After flushing, ensure no unwanted materials or water remains before filling with R100.

**Before filling an existing system:** To judge when the existing solar system fluid needs to be replaced, periodically monitor the condition of the thermal fluid using Sentinel SolarCheck test kit. Take a sample of the thermal fluid and measure the antifreeze content; ideally it should be 35 - 40%. If less than 35%, dilution has occurred and the fluid must be replenished with R100. Measure the pH of the thermal fluid and replace it if the pH is not between 7.5 - 8.5. Replace the fluid if it is cloudy, contains deposits or has become more viscous than water.

## Physical Properties

<b>Appearance:</b>	Clear blue liquid
<b>Density (20°C):</b>	1.04 g/cm <sup>3</sup>
<b>pH value:</b>	8.35
<b>Viscosity:</b>	5.0 mm <sup>2</sup> /s

## Safety Information

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

<b>Description</b>	<b>Heat transfer fluid for solar thermal systems</b> An aqueous solution of propylene glycol containing corrosion inhibitors.
<b>Handling</b>	Avoid contact with skin and eyes. Keep out of reach of children and animals. Wash out empty container thoroughly with water before disposal.
<b>Storage</b>	Keep container tightly closed. Store in cool well ventilated area.
<b>Spillage</b>	Flush spillage with plenty of water and wash to waste.
<b>First aid</b>	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.
<b>Additional</b>	Not considered hazardous to health. Non-flammable.

The use of Sentinel water treatment is endorsed by the industry's major international manufacturing companies\*



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