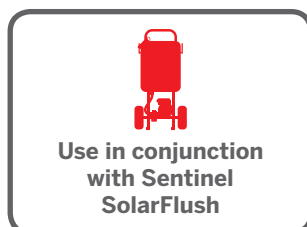
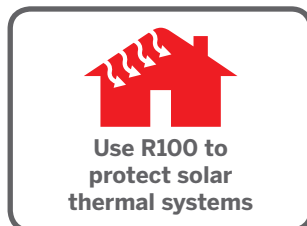


Sentinel R200 Solar System Cleaner

Ready-to-use heat cleaner for solar thermal systems

To remove sludge and deposits from degraded thermal material and to restore optimum performance, solar thermal systems should be cleaned with R200 Solar System Cleaner.

- **Specially formulated, mildly alkaline cleaner**
Effectively removes sludge and deposits from degraded thermal fluid with only a 20 minute circulation.
- **Compatible with common materials used in solar thermal systems**
Can be safely used with all types of solar thermal systems for complete peace of mind.
- **Effective at low or room temperature**
Ideal where no heat is available during the cleaning process.
- **Non-toxic and biodegradable**
No neutralisation required. Safe to discharge and drain.



The Sentinel System

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



CLEAN



PROTECT



MAINTAIN

Application

Sentinel R200 Solar Cleaner Fluid is a specially formulated, mildly alkaline product used to clean solar thermal systems circuits containing either flat plate or vacuum tube collectors. The thermal fluid used in solar thermal systems can be prone to degradation over time due to prolonged exposure to elevated temperatures. Degraded thermal fluid has a number of adverse effects such as reducing heat transfer capability, increasing viscosity and freezing point, reducing pH and causing blockages. This reduces efficiency and increases lifetime costs. Sentinel R200 does not attack the sealant materials normally used in solar thermal systems.

Dosing

Thermal fluid changes: Thermal fluid that is cloudy, dark brown, or has a pH less than 7.0, denotes the liquid is degraded and needs to be changed. Drain the thermal fluid from the system's lowest point. If no suitable drain point is available, SolarFlush flushing machine can be used to pump degraded thermal fluid from the system. Always drain into a suitable container for correct disposal.

System cleanse: Connect the SolarFlush unit across the solar system pump. The discharge from the SolarFlush unit is connected to the discharge side of the solar system pump and the return to the SolarFlush tank is connected to the suction side of the solar system pump. Ensure that the valve to the system pump is closed. Drain the system of thermal fluid. Fill the SolarFlush tank with R200, ensure there is enough cleaner available in the tank once the circulation has started.

Guide: Fill the tank with an amount equal to the solar system volume plus 5 litres. Circulate through the system for 15 - 20 minutes.

Drain cleaning solution: Pump the spent cleaner into a suitable container for correct disposal. Flush the SolarFlush tank with mains water and clean the mesh filter. Fill the SolarFlush tank with mains water and circulate around the system for 5 - 10 minutes. After flushing with mains water measure the pH of the final flushing water, ensuring it is the same as the mains water. If the pH is higher than the mains water, drain the tank and refill with fresh mains water and repeat the flushing procedure. When the flushing procedures are complete drain the tank and rinse it out, ensuring that all pipes are drained.

NOTE: Always dispose of old, degraded thermal fluids and spent cleaning solution according to local regulations.

Refilling with thermal fluid: When the system has been flushed and the SolarFlush tank rinsed out, fill the tank with Sentinel R100 Solar Thermal Fluid. Ensure there is enough thermal fluid available in the tank once the circulation has started.

Guide: Fill the tank with an amount equal to the solar system volume plus 5 litres. On initial circulation, R100 may appear cloudy due to entrained air that must be removed. Circulate the R100 until the fluid is a crystal clear blue colour. Bleed air vents in the solar circuit, then the system can be pressurised and operated as normal. Return system to its original settings to ensure efficient operation of the system.

Physical Properties

Appearance:	Clear colourless liquid
Specific gravity (20°C):	1.0 g/cm ³ (approx)
pH:	12.9

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.

Description	Cleaner for solar thermal systems An alkaline aqueous solution of organic and inorganic compounds.
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.
First aid	Skin Exposure: Wash immediately with plenty of water. Eye Exposure: Flush immediately with plenty of running water. Seek medical advice. Ingestion: Rinse mouth with water. Do NOT induce vomiting! Seek medical advice.
Additional	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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