

# SOLAR S1

- **An inhibited heat transfer fluid for all solar thermal applications**
- **Frost protection to -28°C**
- **Volatile corrosion inhibitor for protection in gas and liquid phases**
- **Stable pH across the range of operational temperatures**
- **Compatible with all makes and models of solar panels**
- **Benchmarked against market leading products**



Fernox Solar S1 is a clear, orange liquid with a distinct, faint odour. It has been specifically formulated for use as a heat transfer fluid within solar thermal heating systems at elevated temperatures.

Fernox Solar S1 employs volatile corrosion inhibitors that will protect the installation when the heat transfer fluid is in either a gaseous or liquid state at temperatures in excess of 180°C.

## Application

Fernox Solar S1 is suitable for use within solar thermal installations that conform to BS EN 12976 and BS 5918.

Fernox Solar S1 is ready to use and should not be mixed with other heat transfer fluids or diluted with water or glycol. If other heat transfer fluids have been previously used, drain the system completely and rinse with Fernox Solar S1 before filling.

Fernox Solar S1 is suitable for use in solar applications with stagnation temperatures in excess of 360°C provided that the solar thermal system is correctly installed and dimensioned to allow the Fernox Solar S1 to withdraw completely through vaporisation from the collectors when the maximum static temperature is reached.

Fernox Solar S1 should not be exposed to temperatures of 180°C or higher for prolonged periods. Temperatures in excess of 200°C causes slow degradation of the fluid which can lead to a reduction in product life.

## Corrosion Protection

The corrosion protection offered by Fernox Solar S1 is equivalent to that provided by Fernox Protector F1 within central heating systems, for all metals commonly found within solar thermal installations.

## Compatibility with non-metallic's

Fernox Solar S1 is compatible with all non-metallic's commonly found in solar thermal installations.

## Heat Transfer

Fernox Solar S1 has been benchmarked against other leading solar thermal heat transfer fluids and has shown to have excellent heat transfer properties.

<b>Composition:</b>	An aqueous solution of monopropylene glycol, and specifically formulated high temperature inhibitors
Appearance	Clear, orange liquid
Density	1.04 g/cm <sup>3</sup>
Refractive Index	1.381-1.385
pH	9.0 – 10.5
Alkalinity	6,300 – 6,500 ppm as CaCO <sub>3</sub>
Viscosity (20°C)	8.5 – 8.7 cPs (Brookfield 100 rpm)
Boiling point	102 – 105°C
Flash point	none
Water content	55 – 58%
Freezing point	< -28°C

## Packaging, Handling and Storage

Fernox Protector Solar S1 is supplied as a ready-to-use premix in 10, 20 and 25 litre sizes. The formulation should not be diluted prior to use.

Fernox Solar S1 is classified as non-hazardous and non-irritant, but as with all chemicals, keep out of the reach of children. Do not take internally. In case of contact with eyes or skin, rinse immediately with plenty of water.

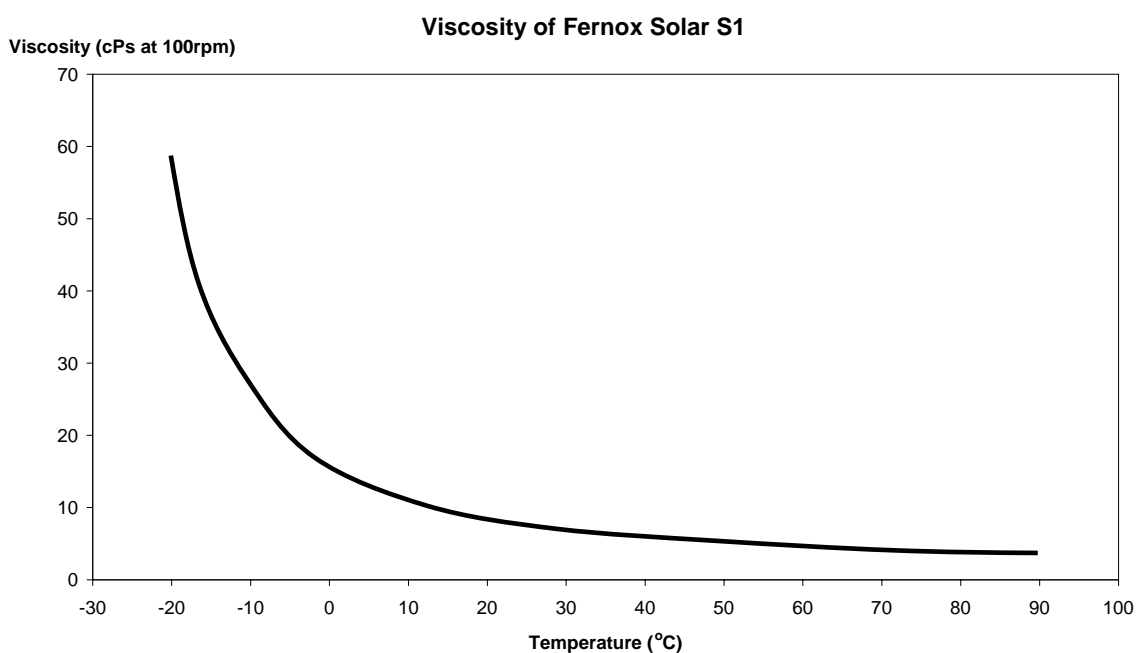
Refer to Fernox Solar S1 Material Safety Data Sheet (MSDS) for further information.

Item numbers

10L - 57675

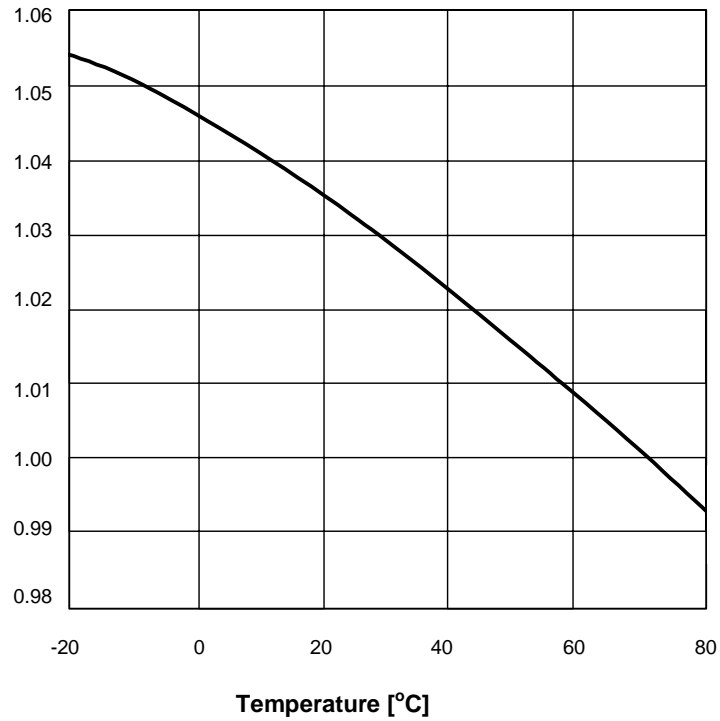
20L - 57673

25L - 57674

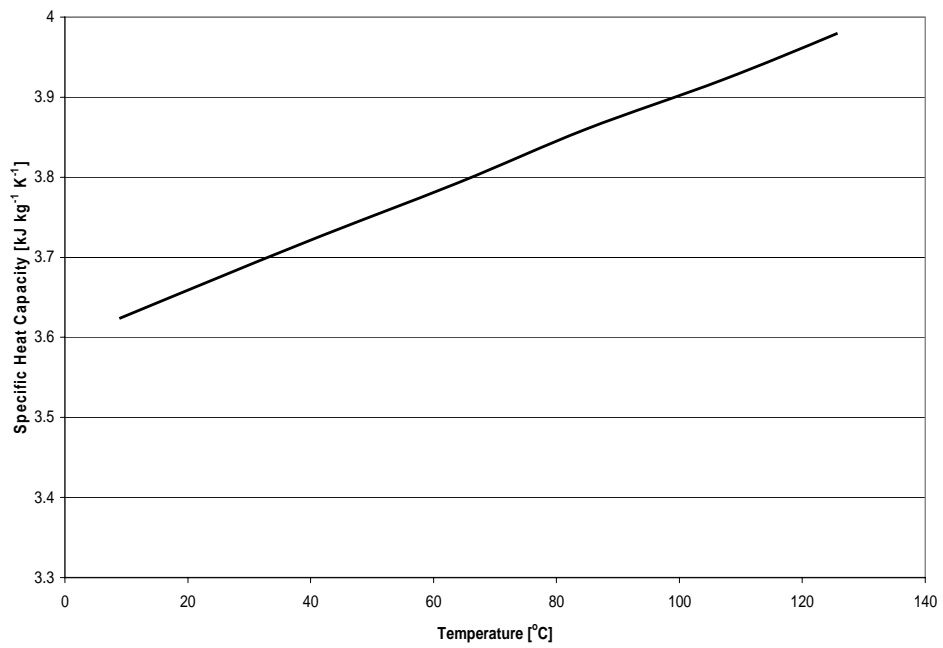


## Density of Fernox Solar S1

Density  $\text{g cm}^{-3}$



## Specific Heat Capacity of Fernox Solar S1



Thermal Conductivity of Fernox Solar S1

