

Sentinel FrostCheck Test Kit

For Installation Validation Checks and Ongoing Monitoring

Introduction

The Sentinel **FrostCheck Test Kit** is designed for use during both installation and maintenance of Ground Source or Air Source Heat Pump systems using glycol-based heat transfer (thermal) fluid. After installation the test kit will allow you to confirm the level of antifreeze present in the thermal fluid. During routine service visits it is important to continue to monitor the condition of the antifreeze/thermal fluid for degradation.

Progressive degradation will occur after several years in the system and the fluid will eventually need replacing. The test kit allows you to determine exactly when the replacement is required.

The kit also allows the performance of the system to be measured. A FrostCheck Survey Sheet is available on the Sentinel web site allowing you to record relevant information during ongoing maintenance. A copy of the completed report form can then be left with your customer.

Specification

The FrostCheck Test Kit is supplied in a compact, durable plastic case and contains the following items:

- Pack of pH papers (Range 6.0 – 10.0)
- Mini Infra Red (IR) Thermometer
- Refractometer
- Sample bottle
- Plastic dropper

The test kit is also supplied with a CD that contains full user instructions.



Method of Use

At system installation, the refractometer is used to confirm that the correct level of antifreeze is present in the thermal fluid.

During ongoing maintenance, the performance of the system can be measured by taking temperatures from the heat pump using the Mini Infra Red Thermometer.

A sample of thermal fluid is taken and the appearance noted, the pH measured using the supplied pH papers and the level of antifreeze in the thermal fluid measured using the refractometer. After a number of years the thermal fluid is likely to need replacing and by comparing the results from the assessment of the sample with the guideline figures provided in the kit instructions and on the FrostCheck Survey Sheet, a reliable decision can be made as to whether thermal fluid needs to be replaced.

System Treatment

If the thermal fluid needs to be replaced then Sentinel recommend **Sentinel R500** for Ground Source and **Sentinel R600** for Air Source systems. These products provide satisfactory levels of antifreeze, excellent corrosion inhibition, resistance to degradation and an extended lifespan in the system.