

Core Technical Information for CoolFlow FXC2

Product	: Non-Toxic Renewable Heat Transfer Fluid
Appearance	: Various colours, depending on inhibitors and dyes used.
Density	: 1.12 –1.3 depending on inhibitors and dyes used.
PH	: 7.5 – 9.5 depending on inhibitors.
Boiling point	: >120° C

Properties

CoolFlow FXC2 is a clear, viscous, virtually odourless liquid. It is based on a proprietary blend of refined vegetable extracts and has a very low order of oral toxicity. Being vegetable based CoolFlow FXC2 is readily biodegradable (85% over 30 days) and thus will not remain in the environment or pollute aquifers in the event of a pipe failure. CoolFlow FXC2 can be used in a wide range of applications where pollution and/or oral toxicity are issues, such as Geothermal Heat Recovery Systems (GHRs), food & beverage cooling and water purification. CoolFlow FXC2 contains non-toxic corrosion and scale inhibitors to protect all metals commonly found in GHRs, chillers and HVAC systems, thus ensuring a long operating life and high thermal efficiency. CoolFlow FXC2 is miscible with water in all proportions and can protect systems down to –40°C depending on the concentration of the mix with water. Solutions containing in excess of 50% CoolFlow FXC2 exhibit super-cooling characteristics and do not freeze solid, alleviating the concern over possible expansion and burst damage.

Application of CoolFlow FXC2

Firstly determine the total system volume. Dose the CoolFlow FXC2 to the system according to the minimum operating or ambient temperature (Fig.1 guide below) and the system volume. The minimum dose of CoolFlow FXC2 should not be less than 25% of the system volume and the maximum does not normally exceed 55%. We recommend the use of deionised, distilled or CoolFlow UltraPure water for this dilution. Avoid water containing high levels of calcium salts or Chlorides.

Fig 1. Dilution Guide for CoolFlow FXC2

Freezing Point* ° C	% v/v of CoolFlow FXC2 in the system	Refractive Index
-10	25%	1.355
-15	32%	1.362
-20	38%	1.367
-25	43%	1.372
-30	48%	1.380

When measuring the percentage of CoolFlow FXC2 in the system, we recommend the use of a refractometer. Hydrometers can be difficult to read and are affected by total dissolved solids, inhibitors etc.

Safety: CoolFlow FXC2 is not a potential water pollutant and is biodegradable. Please refer to the material safety data sheet for more information about the product and its handling.

Shelf Life: CoolFlow FXC2 has a shelf life of up to 2 years when stored in airtight containers.

Availability: CoolFlow FXC2 is available in 25, 205 & 1000 litre containers.