



Secondary Refrigerant Antifreeze

High Efficiency Non-Toxic Secondary Refrigerant Antifreeze. Based on Ethylene Glycol blended with patented DeTox™ additive and BS6580 & ASTM D1384 proven Corrosion, Scale and Biological Inhibitors.



Antifreeze



Non-Toxic



Optimum Flow



Protection



Biodegradable



Quality Assured

Performance Properties:

CoolFlow DTX has been especially formulated for use in RAC systems to exploit the advantages Ethylene Glycol has over Propylene Glycol - whilst delivering a non-toxic solution. Specifically;

- More efficient heat transfer.
- Easier to pump, especially at low temperatures.
- Less volume for the same freeze protection.
- Cheaper per litre.

Antifreeze: **CoolFlow DTX** is miscible with water in all proportions and can protect RAC systems down to -50°C depending on concentration.

Non-Toxic: Although based on Ethylene Glycol, **CoolFlow DTX** has been tested and classified as Non-Toxic by an EPA certified laboratory. Previously Propylene Glycol was the only non-toxic glycol available, that is no longer the case. Hydratech in alliance with Evans Cooling Systems, Inc. have developed and patented the DeTox™ additive. DeTox™ prevents Ethylene Glycol from being metabolised (during digestion) into toxic by-products, which cause kidney failure, blindness and death. Tests carried out on **CoolFlow DTX** confirmed the toxicity was "so low that it was impossible to determine an LD50 value". The DeTox™ additive has very little effect on heat transfer

or antifreeze performance. In fact similar volumes of **CoolFlow DTX** or Ethylene Glycol are required to achieve a specific freeze protection.

Optimum Flow: **CoolFlow DTX** has improved heat transfer characteristics. Including lower Dynamic Viscosity and higher Thermal Conductivity. For detailed comparison please refer to the Fluid Performance Chart - available upon request.

Protection: **CoolFlow DTX** contains synergistic corrosion inhibitors to protect metals commonly found in such systems. It has been tested in accordance with BS5117 and found to meet BS6580 and ASTM D1384 corrosion standards. **CoolFlow DTX** also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.

Biodegradable: **CoolFlow DTX** mixtures are readily biodegradable (90% over ten days) and will not remain in the environment or bio-accumulate.

Quality Assured: All Hydratech products are manufactured in accordance with certified ISO9001-2008 procedures



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Physical Properties:

CoolFlow DTX is a clear, slightly viscous liquid. It is mildly sweet to the taste and has a non-pungent but characteristic aroma.

Density: 1.04 – 1.15 g/cm depending on inhibitors

pH: 7.5 – 10.5 depending on inhibitors

Boiling Point: >100°C

Application:

As per BSRIA guide BG 29/2012 all pipe-work systems should be clean and free from biological contamination and debris prior to commissioning.

To minimise corrosion air ingress should be minimized. A pressurised system is best.

Determine the total system volume and add **CoolFlow DTX** to the system according to the minimum operating temperature required (see table). The minimum dose of **CoolFlow DTX** should not be less than 22% of the system volume and the maximum does not normally exceed 60%. We recommend the use of deionised, distilled or UltraPure™ water for this dilution. Avoid water containing high levels of calcium salts or Chlorides [Cl-].

Diluting Concentrate:

When measuring the percentage concentration of **CoolFlow DTX** in solution we recommend the use of a recently calibrated refractometer.



Health & Safety: Please refer to the associated Safety Data Sheet. Available via Login or upon request.

Shelf Life: >3 years when stored in sealed containers out of direct sunlight.

Available in: 5, 10, 15, 20, 25, 205 & 1000 litre containers and bulk tankers.

CoolFlow DTX can be supplied as a Ready-To-Use solution.

Frost Protection °C	v/v of CoolFlow DTX	Refractive Index
-10	22%	1.356
-15	28%	1.362
-20	33%	1.367
-25	38%	1.372
-30	42%	1.376
-35	46%	1.380



SureFlow Support Services ensure that end users and distributors receive the full benefit of working with a specialist manufacturer.

- Expert technical advice on all aspects of fluid selection, including Environmental Impact Assessments, Thermal Performance etc.
- Fluid Maintenance Program; for the proactive verification of fluid and system condition.
- Huge stock inventory facilitating same day dispatch and delivery.
- Bespoke formulations for specialist applications.

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