

DTX: High Efficiency Non Toxic Glycol Antifreeze

For Process Cooling & AC Systems

Performance Properties

DTX has been especially formulated for use in Process Cooling, Refrigeration and HVAC 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.

Non-Toxic

Although based on Ethylene Glycol, DTX has been tested and classified as Non Toxic by an EPA certified laboratory. Previously Propylene Glycol was the only non toxic glycol available, however with the introduction of the patented DeTox[®] additive that is no longer the case. DeTox[®] prevents Ethylene Glycol from being metabolised (during digestion) into toxic by products, which cause kidney failure, blindness and death. Tests carried out on 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 DTX or Ethylene Glycol are required to achieve a specific freeze protection.

Optimum Flow

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

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. DTX also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.

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 minimised. A pressurised system is best. Determine the total system volume and add DTX to the system according to the minimum operating temperature required (see table). The minimum dose of 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-]. DTX can be supplied as a Ready-To-Use solution.

Diluting Concentrate

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

Frost Protection °C	v/v of DTX %	Refractive Index
-10	22.0	1.35590
-15	28.0	1.36240
-20	33.0	1.36780
-25	38.0	1.37310
-30	42.0	1.37740
-35	46.0	1.38160
-40	50.0	1.38570
-45	52.0	1.38770
-50	54.3	1.39000



Physical Properties

Frost Protection

-50°C depending on concentration.

Density

1.04 - 1.15g/cm³

pH

7.5 - 9.0 depending on inhibitors.

Boiling Point

>100°C

Characteristics

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

Biodegradability

DTX-HT mixtures are readily biodegradable (90% over ten days) and will not remain in the environment or bioaccumulate.

Container Sizes

Available in: 5, 10, 25, 205L drums & 1000L IBCs.

Storage & Shelf Life

At least 3 years when stored in sealed containers, below 40°C and out of direct sunlight.

Health & Safety

Please refer to the associated Safety Data Sheet which is available on request.