



COOLFLOW ICE

Secondary Refrigerant Antifreeze

Industrial Grade Secondary Refrigerant Antifreeze, based on Ethylene Glycol and BS6580 & ASTM D1384 proven Corrosion, Scale and Biological Inhibitors.



Antifreeze



Optimum Flow



Protection



Biodegradable



Quality Assured

Performance Properties:

CoolFlow ICE has been especially formulated from Ethylene Glycol for use as an Industrial Grade Secondary Refrigerant Antifreeze for use in Process Cooling, Refrigeration and Air Conditioning systems, where toxicity is not an issue.

Antifreeze: **CoolFlow ICE** is miscible with water in all proportions and can protect RAC systems down to -50°C depending on concentration. **CoolFlow ICE** exhibits super-cooling characteristics and mixtures containing in excess of 55% by volume do not freeze solid, alleviating any concern over possible expansion and burst damage.

Optimum Flow: **CoolFlow ICE** 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 ICE** 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 ICE** also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.

Biodegradable: **CoolFlow ICE** 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

Physical Properties:

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

Density: 1.08 -1.2 g/cm³ 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 a should be minimized. A pressurised system is best.

Determine the total system volume and add **CoolFlow IGE** to the system according to the minimum operating temperature required (see table). The minimum dose of **CoolFlow IGE** should not be less than 25% 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 IGE** 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 IGE can also be supplied as a Ready-To-Use solution.

Frost Protection °C	v/v of CoolFlow IGE	Refractive Index
-10	20%	1.349
-15	27%	1.355
-20	32%	1.359
-25	37%	1.363
-30	41%	1.366
-35	45%	1.369



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.