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# User Guide

## *CoolFlo IGE-25*

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### **Ethylene Glycol Antifreeze**

Industrial Grade Secondary Refrigerant Antifreeze for process cooling & AC systems. Based on Ethylene Glycol and ASTM D1384 proven Corrosion, Scale and Biological Inhibitors.



**Antifreeze**



**Optimum Flow**



**Protection**



**Biodegradable**



**Quality Assured**

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## Performance Properties

**CoolFlo IGE-25** 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: CoolFlo IGE-25** is miscible with water in all proportions and can protect RAC systems down to  $-50^{\circ}\text{C}$  depending on concentration. **CoolFlo IGE-25** 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: CoolFlo IGE-25** 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: CoolFlo IGE-25** 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.

**CoolFlo IGE-25** also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.

**Biodegradable: CoolFlow IGE-25** 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-25** 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/cm<sup>3</sup> 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 minimize corrosion air ingress should be minimized.

A pressurized system is best.

Determine the total system volume and add **CoolFlo IGE-25** to the system according to the minimum operating temperature required (see table). The minimum dose of **CoolFlo IGE-25** should not be less than 25% of the system volume and the maximum does not normally exceed 60%. We recommend the use of deionized, distilled or UltraPure™ water for this dilution. Avoid water containing high levels of calcium salts or Chlorides [Cl-].

**Health & Safety:** Please refer to the associated Safety Data Sheet. Available here:

[IGE-25 MSDS](#)

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



**Available in:** 25, 205 & 1000 liter containers and bulk tanks.



### **Diluting Concentrate:**

When measuring the percentage concentration of **CoolFlo IGE-25** in solution we recommend the use of a recently calibrated refractometer.

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



## Change log

<b>Date of change</b>	<b>Change</b>	<b>Version</b>
29-10-2019	New design	001