

# IGE: Ethylene Glycol Antifreeze

## For Process Cooling & AC systems

### Performance Properties

IGE: Ethylene Glycol Antifreeze has been especially formulated 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.

### Optimum Flow

IGE 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

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

### Diluting Concentrate

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

Frost Protection °C	v/v of IGE %	Refractive Index
-10	20.0	1.35190
-15	27.0	1.35860
-20	32.0	1.36350
-25	37.0	1.36830
-30	41.0	1.37210
-35	45.0	1.37600



### Physical Properties

#### Frost Protection

-35°C depending on concentration.

#### Density

1.09 - 1.14g/cm<sup>3</sup> depending on inhibitors.

#### 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

IGE 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.