



## ECO2: Vegetable Based Antifreeze



Ecologically and environmentally friendly non toxic Antifreeze and secondary refrigerant for Process Cooling & AC systems. Based on refined vegetable extracts and ASTM D1384 proven corrosion, scale and biological inhibitors.

### Performance Properties

ECO2: Vegetable Based Antifreeze has been especially formulated to provide Refrigeration and AC plant operators with a secondary refrigerant Antifreeze that is 100% renewable i.e. not derived from non-renewable crude oil.



#### Antifreeze

ECO2: Vegetable Based Antifreeze is miscible with water in all proportions and can protect RAC systems down to -50 °C depending on concentration. ECO2: Vegetable Based Antifreeze exhibits super-cooling characteristics and mixtures containing in excess of 50% by volume do not freeze solid, alleviating any concern over possible expansion and burst damage.



#### Non Toxic & Renewable

ECO2: Vegetable Based Antifreeze is based on sustainable refined vegetable extracts that are non toxic, biodegradable and more thermally efficient than Propylene Glycol based coolants. Subsequently ECO2: Vegetable Based Antifreeze could be considered the most ecologically friendly antifreeze available.



#### Protection



ECO2: Vegetable Based Antifreeze 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. ECO2: Vegetable Based Antifreeze also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.



#### Biodegradable

ECO2: Vegetable Based Antifreeze is capable of being decomposed in to its constituent elements by natural processes i.e. the product will not remain in the environment after it has been broken down. The approximate time of decomposition can be found in the product Safety Data Sheet.



#### Quality Assured

All BDIC Glycol products are manufactured in accordance with certified ISO 9001-2008 procedures.

For further information about this product please email: [info@bdicooling.com](mailto:info@bdicooling.com)





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## Physical Properties

ECO2: Vegetable Based Antifreeze is a clear, slightly viscous liquid and mildly sweet to the taste. It is non-pungent however it does have a characteristic aroma.

Density: 1.02 - 1.26 g/cm<sup>3</sup>  
 pH: 7.5 - 10.5 depending on inhibitors  
 Boiling Point: >100 °C

## Application

As per BSRIA guide BG 29/2012 all pipework 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 ECO2: Vegetable Based Antifreeze to the system according to the minimum operating temperature required (see table to the right).

The minimum dose of ECO2: Vegetable Based Antifreeze 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 ECO2: Vegetable Based Antifreeze in solution we recommend the use of a recently calibrated refractometer.

## Health & Safety

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

## Shelf Life

3 years when stored in sealed containers out of direct sunlight.

## Available in

25, 205 & 1000 Litre IBC's and bulk tankers.

ECO2: Vegetable Based Antifreeze can also be supplied as a ready-to-use solution.

Frost Protection °C	V/V of ECO2: VB Antifreeze	Refractive Index
-10	25%	1.355
-15	33%	1.362
-20	38%	1.367
-25	43%	1.372
-30	48%	1.377
-35	52%	1.380

## Support Services

BDIC strive to ensure end users and distributors receive the full benefit of working with a specialist supplier that offers:

- ✦ Expert Technical advice on all aspects of fluid selection, including Environmental impact Assessments, Thermal Performance etc.
- ✦ Fluid Maintenance Programs for the proactive verification of fluid and system condition.
- ✦ A vast stock inventory facilitating same day dispatch and delivery.
- ✦ Bespoke formulations for specialist applications.

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