GLACELF ECO BS

Coolant Concentrate

GLACELF ECO BS is an organic antifreeze based on mono ethylene glycol and selected organic inhibitors, and contains no borax, amines, nitrites or phosphates.

GLACELF ECO BS, antifreeze, when mixed with an appropriate quantity of water, becomes a coolant fluid recommended for all internal combustion engines in cars and vans, trucks, construction machinery and agricultural tractors.

RECOMMENDATION: Drain the existing coolant and flush the cooling system with de-mineralised water before filling with GLACELF ECO BS based coolant. Please see the flushing procedure at the end of the document.

APPLICATIONS

Dilution in demineralised water	GLACELF ECO BS needs to be diluted in demineralised water (< 8°f) to form a permanent coolant that can be used throughout the year.
Minimum 33%	To obtain a coolant perfectly mixed, it is recommended to mix mechanically the antifreeze with the water. Protection against freezing depends upon the proportions of GLACELF ECO BS in the water.
Environment	GLACELF ECO BS is entirely safe to use in all cast iron or aluminium engines and in cooling systems containing aluminium or copper alloy radiators. All antifreezes and coolants based upon monoethylene glycol are regarded as special industrial wastes and must be disposed of following the local regulations.

% by vol. of GLACELF ECO BS	33	40	50
Freezing Point (Temperature at which crystals first appear, °C) 102)	-17	-24	-34
Boiling Point	105	107	110

CUSTOMER BENEFITS

Excellent Performance	GLACELF ECO BS performs well in the corrosion tests specifications. Very good Reserve Alkalinity (capacity to neutralise the acids resulting from the combustion gases) Excellent resistance to Foaming Chemical neutrality, inert to elastomeric seals and paints
No deposits	The organic additives prevent deposit formation, keep the surface clean and optimise the heat transfer.

SPECIFICATIONS

BS 6580: 1992 and BS 6580 : 2010

CHARACTERISTICS

Colour	Visual	Blue
Specific Gravity at 20°C, kg/L	ASTM D1122	1.131
pH dilution (33% vol)	ASTM D1287	8.3
pH dilution (50% vol)	ASTM D1287	8.4
Alkalinity reserve (pH=5.5)	ASTM D1121	3.0
Temperature at which Crystal will appear with 50% Dilution by volume, °C	ASTM D1177	-34
Temperature at which Crystal will appear with 33% Dilution by volume, °C	ASTM D1177	-17
Boiling Point (Undiluted), °C	ASTM D1120	155
Boiling Point (33% Dilution by volume), °C	ASTM D1120	105
Boiling Point (50% Dilution by volume), °C	ASTM D1120	110

The typical characteristics mentioned above represent mean values

Protection against Corrosion
Hot immersion glassware corrosion test -BS 5117

	Weight loss in mg/coupon					
	Brass	Copper	Solder	Steel	Cast Iron	Aluminum
ASTM D3306 Limits	10	10	30	10	10	30
BS 6580 1992 (limits)	10	10	15	10	10	15
GLACELF ECO BS (typical)	0.2	0.3	1.2	0.3	0.3	5.0

Aluminum Heat Transfer Test- ASTM D4340

	Weight loss in mg/coupon
ASTM D3306 Limits	1.0
BS 6580 Limits	1.0
GLACELF ECO BS (typical)	-0.2

Weight loss AFTER chemical cleaning acc. to ASTM procedure. Weight gain is indicated by a - sign

FLUSHING PROCEDURE

For first time use of **COOLELF ECO BS** :

- Keep the engine running for 5 mins to circulate the earlier coolant
- Drain the earlier coolant completely
- fill the cooling system with minimum quantity of **Coolelf Eco BS** enough for circulation
- run the engine for minimum 10 mins
- completely drain the **Coolelf Eco BS**
- Fill the radiator with complete charge of **Coolelf Eco BS**

STORAGE GUIDELINES

The product should be stored indoors at ambient temperatures and periods of exposure to temperatures above 35°C should be minimized. It is strongly advised not to expose the coolant to direct sunlight and humidity. Use of galvanized steel is not recommended for the pipes or the components of the cooling system. This leads to deposit formation and there by affect the heat transfer properties of the coolant. Please refer to the Material Safety data sheet for further safety information.