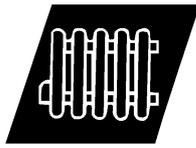


GLACELF SUPRA



Antifreeze

GLACELF SUPRA is a «long life» antifreeze formulated from an extremely pure monoethylene glycol base and containing organic corrosion inhibitors. Its unique environment friendly formula is completely free from phosphates, amines, nitrites and boron.

APPLICATIONS

Engine cooling

- Industrial Diesel and gas engines cooling requiring a freezing protection from -18°C to -50°C according to the dilution (see table below). It's preferable to use a « light hardness » water even if laboratory tests results were obtained with a 20 °TH hardness water.
- Before refilling a circuit that previously contained another fluid, it is strongly recommended to rinse the circuit to avoid altering the properties of the product. It is essential to blend mechanically the antifreeze with the water to ensure a perfect mixing.
- **GLACELF SUPRA** should be diluted in water before use to provide a permanent fluid that can be employed all year round. The proportion of **GLACELF SUPRA** can be adjusted to obtain the desired protection against frost:

% by volume of GLACELF SUPRA	35	40	50	60
Freezing point °C, ASTM D 1177	- 21	- 26	- 37	-50

Characteristics of this chart are indicative typical values.

SPECIFICATIONS

International specifications

- **GLACELF SUPRA** complies with the following specifications :
 - ASTM D 3306 - D 4985
 - SAE J 1034
 - BS 6580 - BS 5117
 - AFNOR NF R 15-601

Engines manufacturers

- **GLACELF SUPRA** is approved by the following manufacturers :
 - CUMMINS
 - DIESEL RICERCHE
 - GE JENBACHER
 - GE Oil & Gas Nuovo Pignone
 - MAN
 - MTU
 - MWM
 - PERKINS
 - ROLLS ROYCE
 - SEMT PIELSTICK
 - WÄRTSILÄ

**ADVANTAGES****Improved corrosion and cavitation protection**

- Thanks to its specific organic formulation, **GLACELF SUPRA** gives a cavitation protection higher than this provided by the current antifreezes. The corrosion protection is also better almost for the aluminium parts present in the modern engines.

No deposit formation risks in the cooling circuit

- The **GLACELF SUPRA** exceptional thermal stability eliminates the risks of minerals deposits particularly near the hot parts: liners top, cylinder heads, heat exchanger tubes, heating resistance. This ensure:
 - heat transfer conservation
 - fluid performances conservation
 - piping erosion risks (due to hard deposits circulation) suppression
 - circuit cleanliness
 - extended temperature sensitive components life time.

Cost reduction

- The long life property of the **GLACELF SUPRA** allows by extended drain intervals the reduction of the coolant recycling costs.

TYPICAL CHARACTERISTICS	METHODS	UNITS	GLACELF SUPRA
Colour			Fluorescent yellow
Density at 15°C	ISO 3676	kg/m ³	1.114
Alkalinity reserve at equivalence point	GFC PrL-111-03	cm ³ HCl 0.1 N	37.5
pH, dilution 50 % vol.	ASTM D 1287		8.3
Freezing temperature, dilution 50 % vol.	ASTM D 1177	°C	- 37
Boiling point	ASTM D 1120	°C	179

Above characteristics are mean values given as an information.

UTILISATION

Facilities that contain deposits arising from construction (new installations) or corrosion (facilities already in service) must be thoroughly flushed.

Procedure:

1. Circulate the used fluid for at least 1 hour to put any deposits in suspension.
2. Empty the water circuits completely (flush out any low points or retention zones).
3. Check the heating tubes and the expansion tank and clean out if any deposits are found.
4. Rinse with pure water (twice), circulating water throughout the circuit.
Empty and check that the filters are not blocked by deposits.
5. Drain the circuit completely.
6. Refill with **GLACELF SUPRA** to the concentration defined for the particular facility (35 % minimum).