

GLACELF AUTO SUPRA



GLACELF AUTO SUPRA is a “very long life” antifreeze based on high purity monoethylene glycol and organic corrosion inhibitors.

GLACELF AUTO SUPRA 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.

In accordance with French Decree No. 95-326 of 20th March 1995 concerning the distribution of certain substances containing monoethylene glycol, **GLACELF AUTO SUPRA** contains a **bittering agent to give it a bitter taste** as a guarantee against accidental ingestion by children or users.

In our range of antifreezes, **GLACELF AUTO SUPRA** is the **top-of-the-range** product.

APPLICATIONS

Dilution in demineralised or softened water

Minimum 33%

GLACELF AUTO SUPRA is diluted in demineralised water (< 8°F) to form a **permanent coolant** that can be used throughout the year.

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 AUTO SUPRA** in the water.

% volume of GLACELF AUTO SUPRA	33	40	50
Freezing Point, °C (temperature at which first crystals appear)	-20	-26	-37
Boiling Point, °C	105	107	110

These are mean values provided for indicative purposes only

It is recommended that **at least 33%** of the final solution should be GLACELF AUTO SUPRA. **Do not use in proportions above 70%**

Longer life

GLACELF AUTO SUPRA is entirely safe to use in all cast iron or aluminium engines and in cooling systems containing aluminium or copper alloy radiators.

Environment

Recommended oil change interval:

- **650,000 km/8000 hours/5 years** when used in trucks
- **250,000 km/5 years** when used in cars.

All antifreezes and coolants based upon monoethylene glycol are regarded as special industrial wastes and must be disposed of in approved centres for environmental reasons.

CUSTOMER BENEFITS

**Very long-term protection
against metals corrosion**

**No formation of deposits
leave surfaces clean**

**High temperature
protection of aluminium**

Excellent protection against corrosion, erosion, and cavitation, for aluminium water pumps.

Heat transfer remains optimised: **fully organic additives allow avoiding any formation of deposits and leave surfaces clean.**

The additives in **GLACELF AUTO SUPRA** give to the coolant:

- **Chemical neutrality** (pH 7-8.5),
- **A reserve of alkalinity** to neutralise the acids resulting from the combustion gases,
- **Resistance to foaming** (mainly instability of the foam that might form)
- **Compatibility with hard water (maximum 40°F).**

GLACELF AUTO SUPRA contains no silicates, phosphates, chromates, nitrites or boron.

The coolant fluids obtained by diluting **GLACELF AUTO SUPRA** are also inert to elastomeric seals and paints.

SPECIFICATIONS

**AFNOR NFR 15-601
ASTM D 3306
ASTM D4656
ASTM D4985
BS 6580**

GLACELF AUTO SUPRA meets the international specifications for antifreezes as well as those of major manufacturers.

GLACELF AUTO SUPRA is officially approved by the following manufacturers:

- AUDI /SEAT /SKODA / VW TL 774 D/F (G12/12+)
- MB-Approval 325.3
- FORD WSS-M97B44-D/E
- OPEL / GM 6277M
- MAN 324 Typ SNF
- DEUTZ 0199-99-1115
- DEUTZ MWM 0199-99-2091
- MTU MTL 5048
- LIEBHERR MD1-36-130

GLACELF AUTO SUPRA has been acknowledged as satisfactory for use in their engines by the following manufacturers:

- RENAULT VI
- DAF 74002
- SCANIA (up to Euro IV)
- VOLVO 128 6083 / 002
- JENBACHER TA 1000-0201
- ISUZU
- LEYLAND TRUCKS DW03245403
- KOMATSU 07.892 (2009)
- JAGUAR WSS-M97B44-D

CHARACTERISTICS OF GLACELF AUTO SUPRA

Colour		Pink to fluorescent orange
Specific gravity at 15 °C	ASTM D1122	1.112
PH, dilution 50% by vol.	ASTM D1287	8.6
Alcalinity reserve(pH 5.5)	GFC Pr L-110-03	6.2ml HCl 0.1N
Temperature at which crystal appear, 50% dilution by volume	ASTM D1177	-38°C
Boiling point(undiluted)	ASTM D1120	180°C
Boiling point(50% diluted)	ASTM D1120	110°C

The typical characteristics mentioned represent mean values

PERFORMANCES OF GLACELF AUTO SUPRA

• ASTM D1384 : Glassware Corrosion Test (336hrs / 88°C / 33%vol)

	Weight loss (mg/coupon)					
	copper	solder	brass	steel	cast iron	aluminium
ASTM D3306 limits	10	30	10	10	10	30
Glacelf Auto Supra	1.9	0.3	1.6	-0.5	-1.4	4.6

• ASTM D4340: Aluminium Heat Rejection Test (25% vol)

	Weight loss (mg/cm ² /week)
ASTM D3306 limits	1.0
Glacelf Auto Supra	< 0.2

• ASTM D2570: Simulated Service Test

	Weight loss (mg/coupon)					
	copper	solder	brass	steel	cast iron	aluminium
ASTM D3306 limits	20	60	20	20	20	60
Glacelf Auto Supra	2.0	1.0	2.0	1.0	-3.0	1.0

• AGING TEST: very severe corrosion test

Test Conditions	Typical Conditions	Severe Conditions
Test duration	169 h	504 h
Fluid Content	5.0 l	6.0 l
Pressure	1.5 bar	2.5 bar
Flow	3.0 l/min	3.5 l/min
Heat input	5500 W	5000 W
Temperature in heating vessel	95°C	115°C
Temperature in cooling vessel	75°C	95°C
Concentration of coolant in water	40% vol	20% vol

	Weight loss (g/m ²)						
	Al (SAE 329)	AlMn	Cast Iron	Steel	Cu	CuZn	Solder CB
Reference Coolant							
After initial cleaning	82.10	64.02	-2.19	-1.68	3.62	2.90	21.45
After final cleaning	125.01	94.33	-0.36	0.11	4.99	5.66	25.83
Glacelf Auto Supra							
After initial cleaning	9.77	0.71	-0.07	0.17	1.44	1.62	0.43
After final cleaning	23.58	4.14	0.0	0.24	2.63	2.53	0.55