



GLACELF AUTO SUPRA

Coolant to dilute • O.A.T.



DESCRIPTION

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

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.

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



SPECIFICATIONS

GLACELF AUTO SUPRA meets the **international specifications** for antifreezes:

- AFNOR NFR15-601
- ASTM D3306
- ASTM D4656
- ASTM D4985
- ASTM D6210
- BS 6580
- JIS K2234
- SAE J1034
- NATOS-759

GLACELF AUTO SUPRA is based on a **technology officially approved** by the following manufacturers:

- VW SEAT AUDI SKODA PORSCHE:
VW TL 774 D / F (G12/G12+)
- DAIMLER MB 325.3
- FORD WSS-M97B44-D
- MAZDA MEZ MN 121D
- JAGUAR STJLR 651.5003
- MAN 324 TypSNF
- DEUTZ DQCCB-14
- DAF 74002
- GMW 3420
- JENBACHER TA1000-0200
- MWM 0199-99-2091/12
- WARTSILA 32-9011
- CUMMINS IS series uN14
- CUMMINS CES 14439
- LIEBHERR MD1-36-130
- MTU MTL 5048
- VALTRA
- SAAB B 040 1065
- LEYLAND TRUCKS DW03245403

GLACELF AUTO SUPRA **meets the requirements** of:

- RENAULT RNUR 41-01-001/- -S Type D
- CASE NEW HOLLAND MAT 3624
- FENDT
- KOMATSU 07.892 (2009)
- CUMMINS CES14603
- ASTON MARTIN
- FIAT 9,55523
- CLAAS
- JOHN DEERE JDM H5

CHARACTERISTICS

COLOUR		PINK TO FLUORESCENT ORANGE
SPECIFIC GRAVITY AT 15 °C	ASTMD1122	1.113
PH, DILUTION 50% BY VOL.	ASTMD1287	8.7
ALKALINITY RESERVE (PH 5.5)	ASTM D1121	6.2ML HCl 0.1N
TEMPERATURE AT WHICH CRYSTAL APPEAR, 50% DILUTION BY VOLUME	ASTMD1177	-38°C
BOILING POINT (UNDILUTED)	ASTMD1120	175°C
BOILING POINT (50% DILUTED)	ASTMD1120	110°C

The typical characteristics mentioned represent mean values

TOTAL LUBRIFIANTS
Immeuble Spazio
562, avenue du Parc de l'île
92029 Nanterre cedex France

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Sheet updated: 01/21



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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%

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.

LIFETIME

Recommended interval of use:

- **500,000 km/4 years** when used in trucks
- **250,000 km/5 years** when used in cars.

CUSTOMER BENEFITS

VERY LONG-TERM PROTECTION AGAINST METAL CORROSION

Organic technology ensures a long-term action to offer maximum protection against any type of corrosion, erosion and cavitation, even at high temperatures.

MAXIMUM HEAT TRANSFER

The organic 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,
- + Compatibility with hard water (maximum 40°F).

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

HSE

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.

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PERFORMANCES

■ ASTM D1384: GLASSWARE CORROSION TEST (336H/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/CM²/WEEK)	
ASTM D3306 LIMITS	1.0	
GLACELF AUTOSUPRA	<0.2	

■ ASTM D2570: SIMULATED SERVICE TEST

	WEIGHT LOSS(MG/CM²)					
	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

■ ASTM D6210: HEAVY DUTY ENGINE COOLANTS

As stated in latest revision of ASTM D6210: "coolants that have completed the Test Method D7583 (test method to demonstrate coolant cavitation protection performance) with a maximum pit count of 200 are regarded as passing ASTM D6210"

ASTM D7583 JOHN DEERE DIESEL ENGINE COOLANT CAVITATION TEST RESULT:

LINER NUMBER	1	2	3	4	5	6	TOTAL
PIT COUNT GLACELF AUTO SUPRA	31	38	18	16	19	9	131
D7583 REQUIREMENT							<200

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PERFORMANCES

AGING TEST: VERY SEVERE CORROSION TEST

TEST CONDITIONS	TYPICAL CONDITIONS 169	SEVERE CONDITIONS 504
TEST DURATION	H	H
FLUID CONTENT	5.0L	6.0L
PRESSURE	1.5 BAR	2.5 BAR
FLOW	3.0L/MIN	3.5L/MIN
HEAT INPUT	5500W	5000W
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

	AL (SAE329)	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

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