

# Glacelf SI-OAT

Coolant concentrate to be diluted • SI-OAT

## DESCRIPTION

GLACELF SI-OAT is a "very long life" antifreeze made of monoethylene glycol.

GLACELF SI-OAT has fast, effective protective properties. It provides a high level of protection against damage caused by freezing, cavitation, corrosion and overheating.

GLACELF SI-OAT antifreeze must be mixed with a suitable quantity and quality of water to be used as a coolant. This product is especially recommended for certain ICEs both for light vehicles (MB and VW group Euro 6 engines), heavy vehicles (MB, MAN, Scania and Cummins EURO 6 engines), public works machinery (Liebherr Euro 6 engines) and agricultural tractors (MTU Claas engines).

## SPECIFICATIONS

Glacelf SI-OAT meets the international standards on coolants:

- AFNOR NFR 15-601
- ASTM D 3306
- ASTM D 4985
- BS 6580 : 2010
- SAE J1034
- CUNA NC 956-16

Glacelf SI-OAT is approved by the following manufacturers:

- VW / AUDI / SEAT / SKODA / LAMBORGHINI/ BENTLEY/ PORSCHE / BUGATTI : VW TL 774-G (G12++)
- DAIMLER / MERCEDES-BENZ : - MB 325.6 - DTRF 29C120 (former MB 325.5)
- MAN 324 Type SI-OAT
- CUMMINS CES 14603
- DEUTZ DQC CC-14
- MTU MTL 5048
- MAN CW 175D

Glacelf SI-OAT meets the requirements of:

- Scania TB1451
- Liebherr LH-01-COL3A
- Claas
- Irizar
- Deutz-Fahr
- Wrightbus



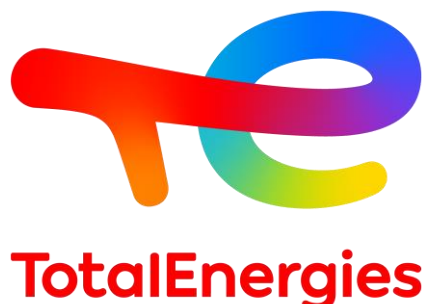
ANTI-FREEZING



ANTI-BOILING



ANTI-CORROSION



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This coolant used in accordance with our recommendations and for the application for which it is intended does not represent a special hazard. A safety data file conforming to the requirements of current EC legislation is available from your local trade consultant.

## CHARACTERISTICS

Appearance		VISUAL	Clear liquid
Colour		VISUAL	Pink
Density at 20°C	KG/L	ASTM D1122	1.125
Refractive Index at 20°C		ASTM D1218	1.4331
Reserve Alkalinity	mL HCl 0.1N	ASTM D1121	9.7
pH at 20°C		ASTM D1287	8.4

Typical values given for information purposes.



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## APPLICATION

### MIXING

We strongly advise against mixing Glacelf SI-OAT with any other coolant technologies. If the manufacturer permits SI-OAT technology, any changes in technology must take place further to rinsing the whole cooling system.

### DILUTION OF THE PRODUCT

GLACELF SI-OAT, when diluted in demineralised water, is a coolant that can be used year-round. It is essential to mechanically mix the antifreeze product with the dilution water to guarantee a consistent mixture. Protection against freezing depends on the proportion of GLACELF SI-OAT in the water.

It is recommended that a 33% volume of GLACELF SI-OAT be used in the final solution, and a maximum volume of 60%.

% Volume of Glacelf SI-OAT	33%	40%	50%
Freezing Protection (ASTM D1177)	-20°C	-26°C	-37°C
Boiling Point (ASTM D1120)	105°C min.	107°C min.	110°C min.

### YEAR-ROUND PROTECTION

It guarantees optimum protection against freezing, down to -37° at 50% dilution.

### LONGER SERVICE LIFE

Recommended change interval:

- **Professional: from 3 to 5 years** depending on the manufacturer's recommendations (refer to the vehicle's maintenance manual)
- **Light vehicles: up to 250,000 km**, depending on the manufacturer's recommendations (refer to the vehicle's maintenance manual).

### RETRO-APPLICABILITY

Glacelf SI-OAT has been specifically designed to meet the most demanding mechanics of certain EURO 6 engines in various business areas, for both professionals and individuals.

Unless there are indications to the contrary from the manufacturer (see vehicle maintenance manual), the product is retro-applicable for generations prior to Euro 6, taking the necessary precautions, i.e. mandatory rinsing before the transition to Si-OAT technology.

Glacelf SI-OAT is MAN 324 (Si-OAT type) approved, and can be used on vehicles requiring MAN 324 type NF and type SNF approvals.

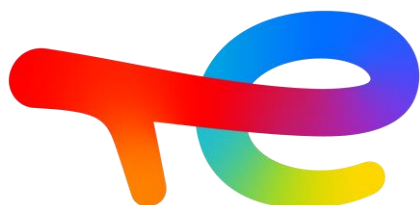
Glacelf SI-OAT is VW TL 774-G approved, and can be used on vehicles requiring VW TL 774-C, 774-D, 774-F, and 774-J approvals.

Glacelf SI-OAT is MB 325.6 and DTFR 29C120 approved and can be used on vehicles requiring MB 325.0 and MB 325.3 approvals.

Glacelf SI-OAT is not recommended for OM 300 and 400 engines on MB Trucks (non-exhaustive list).

## HSE

Any antifreeze made with monoethylene glycol is considered to be special industrial waste, and, to respect the environment, must be disposed of in certified centres.



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## CUSTOMER BENEFITS

### EXCELLENT PROTECTION AGAINST METAL CORROSION, CAVITATION AND THE FORMATION OF DEPOSITS

**Glacelf SI-OAT** protects against all forms of corrosion, overheating and freezing. Protects aluminium water pumps against corrosion, erosion and cavitation, prevents the formation of deposits and leaves surfaces clean.

## PERFORMANCES

### GLASSWARE CORROSION TEST

	WEIGHT LOSS (mg/COUPON)					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
Glacelf SI-OAT	0.1	0.1	-0.4	-0.1	-0.1	-0.4
VW TL 774-G LIMIT	3	3	3	3	3	2

### DIN 51 360-2

	CORROSION INDEX	
	20% vol % dilution	40% vol % dilution
Glacelf SI-OAT	4	2
VW TL 774-G LIMIT	4	2

### FOAMING CHARACTERISTICS (33% VOL DILUTION)

	Volume (ml)	Break time (s)
	Glacelf SI-OAT	5
VW TL 774-G LIMIT	20	5
ASTM D1881 (PART OF ASTM D3306)	Max 150 ml	Max 5 sec

### ASTM D4340: ALUMINIUM HEAT REJECTION TEST (25%VOL)

	WEIGHT LOSS(MG/CM <sup>2</sup> /WEEK) <sup>1</sup>
ASTM D3306 LIMITS	1.0
Glacelf SI-OAT	-0.1

<sup>1</sup> Weight loss AFTER chemical cleaning according to ASTM procedure. Weight gain is indicated by a (-) sign.

Glacelf SI-OAT trade name on tables represent either concentrated antifreeze or different dilutions of the concentrated product as per official test parameters.



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