

Glacelf Cartech

Coolant Concentrate • P - O.A.T.



DESCRIPTION

Glacelf Cartech is a “very-long-life” premium glycol-based engine antifreeze containing cutting-edge phosphate inhibitor technology backed by a robust organic backbone (P-OAT - Phosphated Organic Additive Technology). The high temperature stability combined with flux passivation properties makes this coolant an excellent and future proof choice for today’s and tomorrow’s engine cooling systems.

Glacelf Cartech provides year-round frost and excellent corrosion, freeze and boil protection in light vehicles and heavy-duty applications.

Glacelf Cartech is exempt from potentially harmful additives such as nitrites, borates and amines, leading to a safer environment. Glacelf Cartech is also free of silicates, which excludes any possible issues caused by instable silicate gel or silicate dropout.

SPECIFICATIONS

The antifreeze used in **Glacelf Cartech** meets the **international specifications** for antifreezes:

- ASTM D3306-20
- ASTM D6210-17
- JIS K2234-2018
- KS M 2142:2014
- GB 29743-2013
- UNE 26-361-88/1
- GB 27943.1-2022

The antifreeze used in **Glacelf Cartech** is **officially approved** by the following manufacturers:

- RNES-B-00014 v2.1*
- RN 41-01-001 -V*
- Renault RTCS-E

The antifreeze used in **Glacelf Cartech** **meets the requirements** of:

- PSA B 71 1111
- Stellantis MS.50203
- WSS-M97B57-A1
- Fiat 9,55523
- Opel
- Vauxhall
- Alpine

The antifreeze used in **Glacelf Cartech** is **recommended** by the following manufacturers:

- Toyota
- Honda
- Hyundai
- Suzuki
- Mazda
- Kia
- Subaru
- Kubota

*Type E and retro-compatible with Type D. Except for B4A and B4D engines.



TotalEnergies

TotalEnergies Lubrifiants
Immeuble Spazio
562, avenue du Parc de l'île
92029 Nanterre cedex France

Glacelf Cartech | Sheet updated: 09/2024

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CHARACTERISTICS

COLOUR	-	DARK BLUE - GREEN
Density at 20°C	ASTMD5931	1.120
pH	ASTMD1287	8.3
Alkalinity reserve (PH 5.5)	ASTMD1121	8.65 ml HCl 0.1N
Temperature at which the first ice crystals occur (50% vol.)	ASTMD1177	-36.4°C
Boiling Temperature	ASTMD1120	163°C

The typical characteristics mentioned represent mean values

APPLICATION

PROTECTION ALL YEAR ROUND

Glacelf Cartech ensures long-lasting protection thanks to the P-OAT backbone with virtually non-depleting organic corrosion inhibitors.

Suitable for use in combustion engines in passenger car and heavy-duty applications.

CONCENTRATED PRODUCT

Glacelf Cartech antifreeze is recommended to be diluted with deionised or distilled water to prepare the ready-to-use dilutions for optimal performance and controlled quality. It is recommended to use at least 30 vol. % of the antifreeze in the final coolant solution. This provides a freeze point of -16°C. Typical mixture is 50/50, offering a freeze point down to -37°C. Concentrations higher than 70 vol.% are not recommended as the maximum frost protection is reached.

MULTI-MATERIAL COMPATIBILITY

Glacelf Cartech may be used with confidence in engines manufactured from cast iron, aluminium or combinations of the two metals, and in cooling systems made of aluminium or copper alloys.

LIFETIME

Recommended coolant change interval*:
• 500 000 km/4 years when used in trucks
• 250 000 km/5 years when used in cars.

% Volume of Glacelf Cartech	30%	40%	50%
Freezing Protection	-16°C	-25°C	-37°C
Boiling Point	108°C min.	110°C min.	113°C min.

**It is recommended to refer to the vehicle's maintenance manual.*



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CUSTOMER BENEFITS

VERY LONG-TERM PROTECTION AGAINST METALS 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 Cartech** give the coolant:

- Chemical neutrality (pH 8.0 - 8.6)
- A reserve of alkalinity to neutralize the acids resulting from the combustion gases
- Resistance to foaming
- Excellent hard water stability with a unique matrix of hard water stabilisers & sequestrants.

COST SAVING RELIABILITY

Prevents the formation of gels or deposits in the cooling system.

ENVIRONMENT

Maintenance free coolant with depletion-free and stable inhibitors.

Carefully selected additives to reduce environmental impact

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) ¹					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
ASTM D3306 LIMITS	10	30	10	10	10	30
Glacelf Cartech	1	1	0	1	1	2

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

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

	WEIGHT LOSS(MG/CM²/WEEK) ¹
ASTM D3306 LIMITS	1.0
Glacelf Cartech	-0.1

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

DYNAMIC CORROSION TEST CEC-C23-T-99 (Cast Iron 1400W / Aluminium 1000W, 72 Hrs)

	WEIGHT CHANGE in MG/COUPON		
	Cast Iron	Aluminium	
		Before chemical treatment	After chemical treatment
Glacelf Cartech (20% vol.)	2	-3	-11

JIS K2234-2018 Circulating Corrosion Properties (88°C/1000 Hrs)

	WEIGHT CHANGE in MG/CM²					
	Brass	Copper	Solder	Steel	Cast Iron	Aluminium
JIS K2234-2018	±0.30	±0.30	±0.60	±0.30	±0.30	±0.60
Glacelf Cartech (30% vol.)	0.04	0.02	-0.16	-0.09	-0.11	-0.04

pH	JIS K2234-2018	Glacelf Cartech
After test	6.5 to 11	8.1
Change	+/- 1.0	0.1

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



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