GAZPROMNEFT ANTIFREEZE SF12+

GAZPROMNEFT ANTIFREEZE SF12+ is a carboxylate coolant concentrate based on ethylene glycol for modern internal combustion engines, including automotive and stationary engines. Before use, dilute the concentrate with distilled water (see table). Do not use without dilution.

Application

- Cars and trucks.
- Stationary diesel engines.
- Special equipment, buses.
- Before use, the concentrate should be diluted with water from 40% to 60%.
- Concentrate is not used as a working coolant.
- The optimal coolant concentration is 50%.
- Use distilled or demineralized (filtered) water for dilution.

Advantages

- Meets the requirements of MAN 324 SNF and VW TL 774-F (G12+) specifications.
- Compatible with antifreezes of earlier VW G12 and G11 specifications (TL 774 C/D).
- The additive package is manufactured using silicate-free technology.
- Can be used in both cast iron and aluminum engines.
- Does not form deposits and scale.
- Reliably and long-term protects against corrosion.
- Prevents cavitation.
- Does not tend to form foam.

Typical physical and chemical properties

Parameters	Method	GAZPROMNEFT ANTIFREEZE SF12+
Appearance	Visually	Transparent homogeneous red liquid without visible foreign inclusions
Density at 20 °C, g/cm^3	ASTM D1122	1,116
Refractive index at 20 °C	GOST 18995.2	1,432
Boiling point, ˚C	ASTM D1120	163
Alkalinity reserve (50% dilution), ml	ASTM D1121	8,3
pH (50% dilution)	ASTM D1287	8,4
Foamability, 33% vol.	ASTM D1881	max 100 ml / 3 s
Chilling point, 50% vol., °C	ASTM D1177	-37

Specifications and standards

- VW TL 774-F (G12+), MB 325.3, FORD WSS-M97B44-D, John Deere, JIS K2234, Volvo Penta, Great Wall, Fiat, Case New Holland, Claas, NFR 15-601, Caterpillar, KSM 2142, JASO M325
- ASTM D3306, ASTM D4985, SAE J1034, BS 6580-2010, Afnor NF R15-601, GOST 33591-2015

Approvals

MAN 324 Typ SNF, PJSC Avtodizel (YaMZ)

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ASTM D1384. Corrosive effect on metals (corrosion in glass), 336 h, 88 °C

	Brass	Copper	Solder	Steel	Cast iron	Aluminum
	Average Plate Weight Change, mg					
ASTM D3306 standard (max)	10	10	30	10	10	30
GAZPROMNEFT ANTIFREEZE SF12+	0	-2,2	-1,5	0,5	2,1	0,8

ASTM D4340. Hot surface corrosion, 25% vol., 168 h, 135 °C

	Weight loss, mg/cm/week
ASTM D3306 standard (max)	1,0
GAZPROMNEFT ANTIFREEZE SF12+	0,38

GAZPROMNEFT ANTIFREEZE SF12+ – coolant concentrate. When pouring it into the car's cooling system, it must be diluted with demineralized (distilled or filtered) water in the following ratio*:

Coolant ratio		Frost protection temperature
Concentrate	**Water**	
2 parts	1 part	-65°C
1 part	1 part	-40°C

* Dilution with water above 70% is not recommended, since due to the low concentration of additives, effective corrosion protection is not achieved.

The company's management system is certified in accordance with the international standards

ISO 9001

ISO 14001

ISO 45001

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