GAZPROMNEFT-LUBRICANTS
COOLANTS

GAZPROM NEFT | LUBRICANTS

www.gazpromneft-sm.com

About the company

Gazpromneft-Lubricants Ltd. was founded in 2007 and today is one of the leaders on the Russian market specializing in the production and sale of oils, greases and technical fluids.

The consumers of Gazpromneft-Lubricants products are such companies as Severstal, Sibur, Gazprom, Evraz, MMK, TMK, NLMK, Rusal, Alrosa, Russian Railways, MECHEL, Metalloinvest, SUEK, ILIM, SDS-Ugol, Polyus, Polymetal — large enterprises, leaders in their industries.

G-Energy Antifreeze

The use of additive packages on the basis of various technologies (OAT, Hybrid, Lobrid) allows G-Energy line of coolants based on ethylene glycol serving a wide fleet of vehicles, including the most modern ones.

Gazpromneft Antifreeze

The line of coolants based on ethylene glycol and various technologies (OAT, traditional) allows servicing vehicles from the most advanced ones to outdated Russian vehicles.

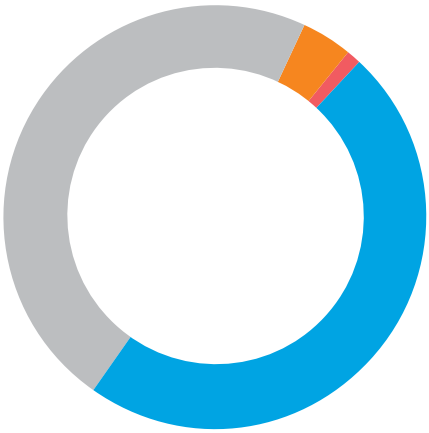
Coolants produced by Gazpromneft-Lubricants Ltd. are successfully applied in:

Commercial and special vehicles

Stationary engines

Passenger vehicles

Why the color of coolant does not matter



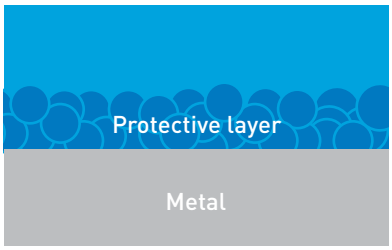
- Dye <0.002 %
- Additives 2 to 4%
- Water 45 to 60%
- Ethylene glycol 36 to 53%

Coolants are painted in different colors only to visually determine their level in the expansion tank and detect leakage.

Color does not affect coolant performance. The composition of coolant (namely, the type of additives) is responsible for those.

Coolant properties are determined by additive technology

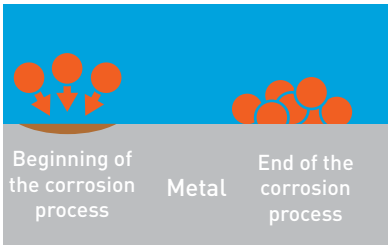
IAT



Features of Inorganic Acid Technology (IAT).
Coating the entire cooling system with a protective layer of considerable thickness (several microns), protection of the liners against corrosion.

- Inorganic corrosion inhibitors
- Organic corrosion inhibitors

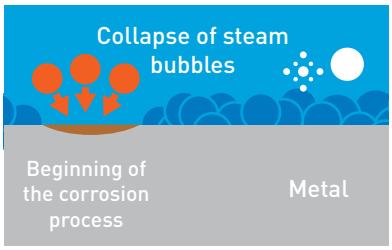
OAT



Features of Organic Acid Technology (OAT).
The formation of a protective layer only in the areas of corrosion, slow consumption of additives, increased service life.

- Inorganic corrosion inhibitors
- Organic corrosion inhibitors

Hybrid/Lobrid



Features of Hybrid organic acid technology (HOAT).
Inorganic additives protect the metal from cavitation, by forming a protective layer, and organic additives are activated at points of corrosion, thereby ensuring a reasonable consumption of corrosion inhibitors.

- Inorganic corrosion inhibitors
- Organic corrosion inhibitors

How to choose a coolant

Method 1

Operation Manual

The cooling system is first-filled with antifreeze (purple) according to the specifications of ASTM D6210 .

Selection is carried out according to the equipment owner's manual.

Method 2

If there is no such data, then you can contact the technical support service of Gazpromneft-Lubricants, indicating the brand, model, year of vehicle manufacturing, engine capacity and power.

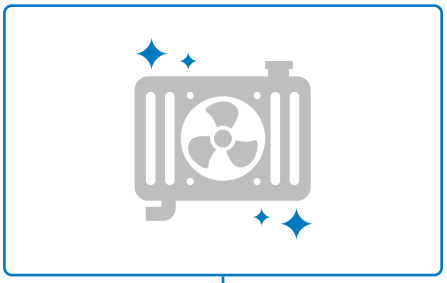
Our technical support e-mail:
techservice@gazprom-neft.ru

Or request form*:
http://new.g-energy.org/en/feedback

* The subject of the message is "Oil Selection/Contacting a Technical Specialist".

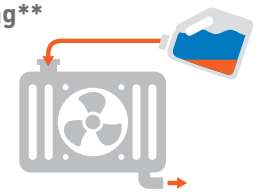
How to replace/ add coolant

Clean cooling system



Step 1

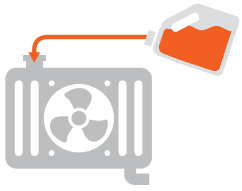
Flushing**



Water* 80% + ready-to-use 20% coolant

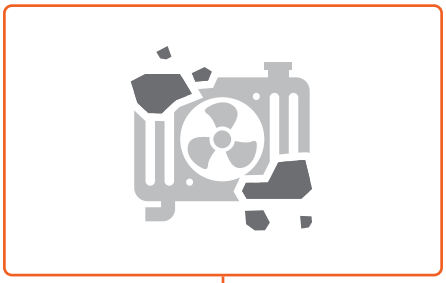
Step 2

Filling



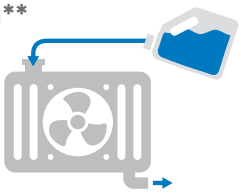
Ready-to-use coolant

Sludge in the cooling system



Step 1

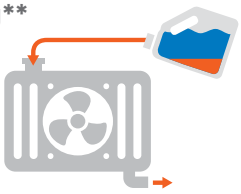
Flushing**



Water* 100%

Step 2

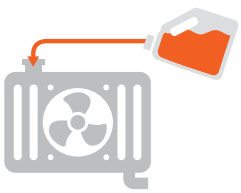
Flushing**



Water* 80% + ready-to-use 20% coolant

Step 3

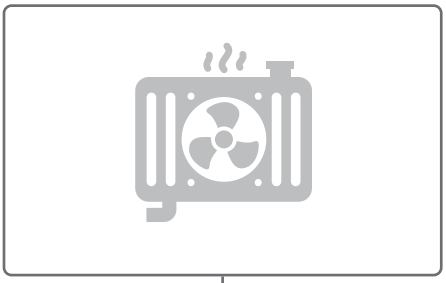
Filling



Ready-to-use coolant

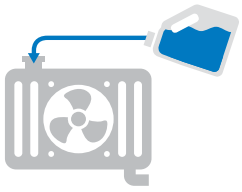
Low coolant

with hermetic cooling system



Step 1

Top-up



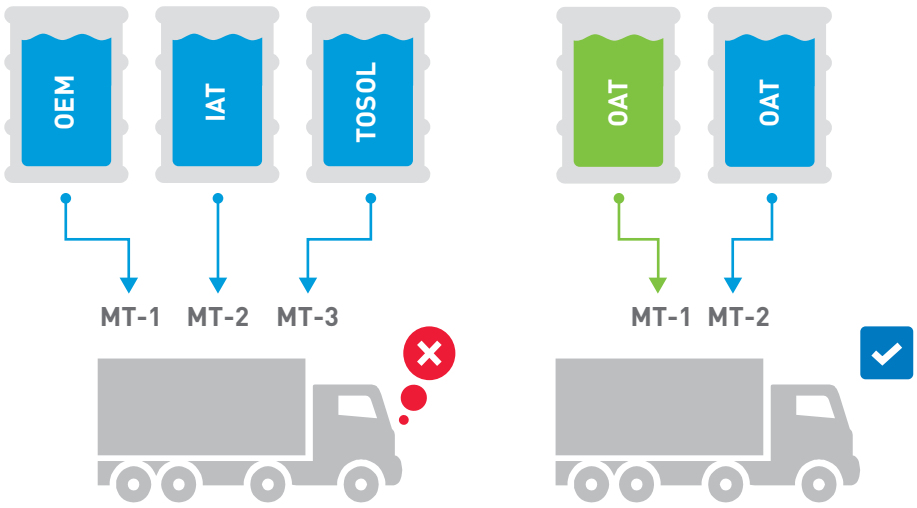
Water* 100%

* The use of distilled water is preferred.
** Flushing time — at least 10 minutes after the engine reaches operating temperature.

Same color does not mean equal quality

Color does not affect performance. Only the composition affects the properties (including the type of additives).

You can pour coolant of a different color into the cooling system, if it has the same composition.



Do not follow G11, G12, G13

The VW TL 774-C/D/F/G/J (G11, G 12, 12+, 12++, G13) classification is not universal and is only suitable for Volkswagen Group vehicles. Other automakers impose their requirements upon coolants, which are based on compatibility with construction materials of the engine and its operating mode. For example, Daimler/Mercedes-Benz Specification 325.3; MAN 324 Typ SNF; Caterpillar ELC (EC-1); MTU MTL 5048 etc.

Pay attention to requirements of your vehicle manufacturer!

Basic classification of coolants

ASTM D 3306

Coolant production technology corresponding to **ASTM D 3306**, can be any (OAT, IAT, Hybrid, Lobrid).

Engine load: ● ○ ○

ASTM D 4985

The technology for the production of coolants corresponding to **ASTM D 4985**, can be any. Supplements ASTM D 3306. Increased corrosion protection.

Engine load: ● ● ○

ASTM D 6210

The technology for the production of coolants corresponding to **ASTM D 6210**, can be any. Supplements ASTM D 4985. Mandatory increased protection against cavitation, which is especially important for a number of engines with wet liners.

Engine load: ● ● ●

+ additional protection for wet cylinder liners against cavitation

How the basic classification looks like

OEM approval/specifications = **ASTM D XXXX** + add. OEM requirements.

G-Energy Antifreeze Si-OAT
G-Energy Antifreeze Si-OAT 40

- Coolant concentrate
- Ready-to-use coolant
- Color — magenta
- Extended drain interval
- Lobrid organic acid technology
- Comprehensive corrosion protection

ASTM D 3306, ASTM D 4985

Key specifications:

MAN 324 Si-OAT; MB 325.5; MTU MTL 5048; Cummins CES 14603.

Official approvals: MAN 324 Si-OAT, MB 325.5.

Meets the following specifications: Cummins CES 14603; MTU MTL 5048; VW TL 774-G (G12++).

Conforms to industry standards: ASTM D 3306; ASTM D 4985; GOST 33591-2015.

G-Energy Antifreeze SNF
G-Energy Antifreeze SNF 40

- Coolant concentrate
- Ready-to-use coolant
- Color — red
- Extended drain interval
- Organic acid technology
- Improved heat transfer

ASTM D 3306, ASTM D 4985

Key specifications:

MAN 324 SNF; MB 325.3; MTU MTL 5048; Deutz DQC CB-14; Caterpillar; MWM; DAF MAT 74002.

Official approvals: MAN 324 Typ SNF; MB 325.3; MWM.

Meets the following specifications: Caterpillar; DAF MAT 74002; Deutz DQC CB-14; MTU MTL 5048; VW TL-774-F (G12+); Ford; Porsche; AVTOVAZ PJSC.

Conforms to industry standards: ASTM D 3306; ASTM D 4985; Afnor NF R15-601; ÖNORM V 5123; CUNA NC 956-16; SANS 1251:2005; BS 6580-2010; GOST 33591-2015.

Specifications are listed as of 2019. The up-to-date list of approvals and specifications and more complete information are available at g-energy.org.

G-Energy Antifreeze NF
G-Energy Antifreeze NF 40

- Coolant concentrate
- Ready-to-use coolant
- Color — blue green
- Extended drain interval
- Hybrid organic acid technology
- Comprehensive corrosion protection

ASTM D 3306, ASTM D 4985

Key specifications:

MAN 324 NF; MB 325.0; Deutz DQC CA-14.

Official approvals: MB 325.0; Deutz DQC CA-14; MAN 324 NF; Jenbacher TI 1000-0201.

Meets the following specifications: Jenbacher TA-Nr. 1000-0201; Liebherr Machines Bulle TLV 035; Liebherr Machines Bulle TLV 23009 A; Porsche 924, 928, 944, 968; Saab 6901599; General Motors B 040 0240; BMW N 600 69.0; Mercedes-Benz Daimler; Ford; General Motors; Iveco; VW TL 774-C (G-11).

Conforms to industry standards: ASTM D3306; ASTM D4985; AS 2108-2004; ÖNORM V 5123; CUNA NC 956-16; SANS 1251:2005; BS 6580-2010; GOST 33591-2015.

G-Energy Antifreeze HD
G-Energy Antifreeze HD 40

- Coolant concentrate
- Ready-to-use coolant
- Color — magenta
- Extended drain interval
- Lobrid organic acid technology
- Increased cavitation protection

ASTM D 3306, ASTM D 4985, ASTM D 6210

Key specifications:

Caterpillar EC-1; Cummins CES 90T8-4; Detroit Diesel 7SE298; Freightliner 48-22880.

Meets the following specifications: Caterpillar ELC (EC-1); Cummins CES 90T8-4; Detroit Diesel 7SE298; Freightliner 48-22880; General Motors 1825, 1899M, 6277M.

Conforms to industry standards: ASTM D3306; ASTM D4985; ASTM D6210; SAE J1034, 1038; TMC RP 329; GOST 33591-2015.

Specifications are listed as of 2019. The up-to-date list of approvals and specifications and more complete information are available at g-energy.org.

G-Energy Antifreeze
G-Energy Antifreeze 40
G-Energy Antifreeze 65

- Coolant concentrate
- Ready-to-use coolant
- Color — green
- Extended drain interval
- Organic acid technology
- Improved heat transfer

ASTM D 3306

Key specifications:
KAMAZ PJSC; Avtozavod GAZ LLC; Avtodizel (YaMZ) PJSC.

Meets the following specifications:
AVTOVAZ PJSC; Avtozavod GAZ LLC; KAMAZ PJSC; Avtodizel (YaMZ) PJSC.

Conforms to international standards:
ASTM D3306; BS 6580-1992;
GOST 33591-2015.

GAZPROMNEFT ANTIFREEZE SF12+
GAZPROMNEFT ANTIFREEZE SF12+ 40

- Coolant concentrate
- Ready-to-use coolant
- Color — red
- Extended drain interval
- Organic acid technology
- Improved heat transfer

ASTM D 3306, ASTM D 4985

Key specifications:
MAN 324 SNF; MB 325.3.

Official approvals: MAN 324 Typ SNF.

Meets the following specifications: MB 325.3; VW TL 774-F (G12+).

Conforms to industry standards: ASTM D3306; ASTM D4985; Afnor NF R15-601; BS 6580-2010; SAE J1034; GOST 33591-2015.

GAZPROMNEFT ANTIFREEZE
GAZPROMNEFT ANTIFREEZE 40
GAZPROMNEFT ANTIFREEZE Arctic*

Coolant concentrate

Ready-to-use coolant

Color — red

IAT — Inorganic acid technology (low-silicate)

Improved cavitation protection

*The frost protection temperature of Gazpromneft ANTIFREEZE Arctic is -55 °C.

ASTM D 3306, ASTM D 4985, ASTM D 6210

Key specifications:

KAMAZ PJSC; Caterpillar; New Holland 9-86; Cummins CES 14603; John Deere 8650-5; Detroit Diesel 7SE298; MMZ; Avtodizel (YaMZ) PJSC.

Official approvals: Minsk Motor Plant; Avtodizel (YaMZ) PJSC; KAMAZ PJSC.

Meets the following specifications: Cummins CES 14603; Caterpillar; Detroit Diesel 7SE298; General Motors 6038M; John Deere 8650-5; Case Corp. MS1710; New Holland 9-86; Navistar; Freightliner 48-22880; PACCAR; MACK; Waukesha 4-1974D; Avtozavod GAZ LLC; AVTOVAZ PJSC.

Conforms to industry standards: ASTM D3306; ASTM D4985; ASTM D6210; TMC RP329; SAE 1941; BS 6580-1992; GOST 33591-2015.

Specifications are listed as of 2019. The up-to-date list of approvals and specifications and more complete information are available at www.gazpromneft-oil.ru.

GAZPROMNEFT ANTIFREEZE BS
GAZPROMNEFT ANTIFREEZE BS 40

Coolant concentrate

IAT Inorganic acid technology

Ready-to-use coolant

Scale and sludge protection

Color — green

ASTM D 3306, ASTM D 4 985

Conforms to industry standards: ASTM D3306; ASTM D4985; GOST 33591-2015.

GAZPROMNEFT Tosol
GAZPROMNEFT Tosol 40
GAZPROMNEFT Tosol 65

Coolant concentrate

IAT Inorganic acid technology

Ready-to-use coolant

Color — blue

Conforms to industry standards: BS 6580-1992; GOST 33591-2015.

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Gazpromneft-Lubricants ltd.

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2020-05/1