REMEMBER...

Damaged cooling systems are the most common cause of vehicle failures. As much as 40% of truck engine failures and 20% of passenger car engine failures are attributed to damaged cooling systems. Presence of scaling and rust was detected in 7 out of 10 vehicles. As much as 60% of cooling system pump failures are due to the system leaks. A 0.6-mm layer of wall deposits may reduce the heat transfer by as much as 40%.

The most common causes of cooling system failures include:

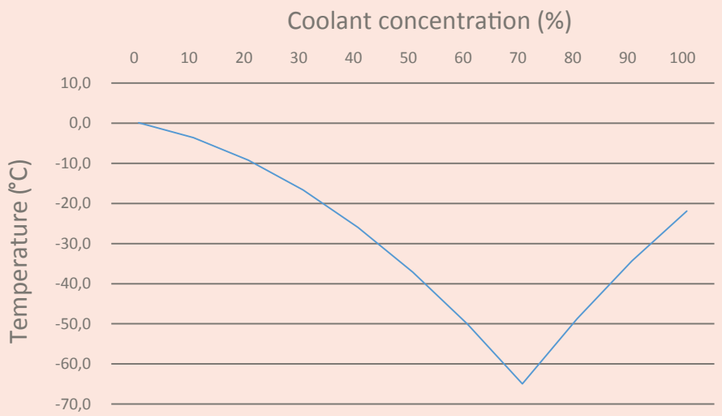
- low quality coolants
- coolant being inappropriate for the particular application
- worn out coolant
- concentrated coolant circulating within the system

COOLING SYSTEM PROTECTION AGENTS

Special inhibitor packs are contained within the engine coolants to protect the cooling systems from:

- corrosion – by forming protective layers on metal surfaces
- pitting (damage caused by the rapid local change in the state of the liquid)
- deposit formation – by preventing precipitation and the adherence of precipitates to metal surfaces

ANTI-FREEZING PROTECTION



Fluid dilution – Anti-freezing protection for:
coolant concentration of 33% – protection down to the temperature of -20°C; the minimum concentration required for proper protection against corrosion
coolant concentration of 40% – protection down to the temperature of -26°C
coolant concentration of 50% – protection down to the temperature of -37°C
coolant concentration of 68% – maximum anti-freezing protection down to the temperature of -69°C
Higher coolant concentrations are not recommended.

Suplier: Kemetyl Polska Sp. z o.o., Al. Jerozolimskie 146, 02-305 Warszawa
www.kemetyl.pl

Kemetyl

ENGINE COOLANTS GlycoCool PREMIUM

- Innovative products
- Adapted to state-of-the-art technological solutions
- Efficient protection of the cooling system
- Extended lifetime
- Lower maintenance costs

Technology that works for you

Do you need a reliable engine coolant for your car, delivery vehicle, agriculture or machinery?

Do you want it to prove useful in routine operation while maintaining the engine performance and protecting the cooling system?

We will advise you in selecting the appropriate coolant that matches the requirements as defined by the vehicle manufacturer.

WHY SHOULD I USE GLYCOCOOL PREMIUM COOLANTS?

The premium coolants are:

- the best-tested coolants on the market
- appropriate for use in state-of-the-art engines
- attested by the leading vehicle manufacturers
- compliant with the requirements of most car manufacturers

Our coolants are offered for sale with professional advice and support.

GLYCOCOOL PREMIUM COOLANTS:

- efficiently protect your engine from overheating or freezing
- effectively protect state-of-the-art cooling systems, particularly systems made of light metal alloys
- prevent ageing and cracking of rubber and plastic elements
- help optimise the maintenance costs

ENGINE COOLANTS FOR USE IN HEAVY DUTY VEHICLES

Heavy duty engines operate at the maximum rated power range, attain high mileage and are more prone to pitting corrosion. The cooling systems used in state-of-the-art heavy duty (HD) engines must meet higher specifications due to the:

- higher operating pressure and temperatures
- higher fluid flow rates.

When working in extreme conditions, the maintenance of high performance of vehicles and machinery is crucial for their efficiency. Therefore, it is important to use engine coolants containing special additives and suitable for use in heavy duty engines.

The advantages of HD engine coolants include:

- better protection against pitting corrosion of metals
- better protection of aluminium and solder alloys
- prevention of the precipitation of silicate gels and other deposits on metal alloys
- reduced pump leak rates

GUIDE TO ANTIFREEZE FLUIDS

PRODUCT	BASE	ADDITIVES	FREE OF	REPLACEMENT RECOMMENDED	COLOUR	MEETS STANDARDS	OEM APPROVALS
GlycoCool Premium Antifreeze G12 EVO	MEG	organic acids, silicates	nitrites, amines, phospates, silicates, borates, 2-EHA acids	4 years	pink	VW TL 774-L (G12evo); ASTM D 3306 D 4985; ASTM D 6210; BS6580:2010; UNA NC 956-16; IS K 2234:2006; SAE J1034; ÖNORM V 5123	G12EVO, G13, G12++, G12+, G11: Audi >1996; BMW >1988 onwards (LC-87); Mini and Rolls Royce; Bugatti >1998; Deutz DQC CC-14; John Deere >2011; Lamborghini >1998; Liebherr Minimum LH-01-COL3A; MAN Type Si-OAT; MB 325.0, 325.6 i 326.6; MTU MTL 5048; Perkins; Porsche >1996; Seat >1996; Skoda >1996; Steyr Motors; VW >1996; Volvo TR-31854114-002 & TR 1286083
GlycoCool Premium Longlife Plus 774 G (G12++)	MEG	organic acids, silicates	nitrites, amines, phospates, borates	5 years	red	SI-OAT BASED COOLANTS ARE COMPATIBLE WITH ALL MEG-BASED COOLANTS - THEY CAN BE MIXED SAFELY	**Volkswagen TL-774G (G12++)**; MAN 324 Si-OAT; Daimler MB 325.5
GlycoCool Premium Longlife 774 D-F (G12/G12+) for professional users	MEG	organic acids	nitrites, amines, phospates, silicates, borates	5 years	pink	ASTM D3306; ASTM D6210, BS 6580; PN-C-40007; ASTM D4656; ASTM D4985; NFR 15-601[1]; FVV Heft R443; JIS K2234, KSM 2142; BT-PS-606 A; DCSEA 615/C; E/L-1415b; FSD 8704[1]; NATO S759; Önorm V5123[1]; SAE J1034[1]; UNE 26-361-88/1	**Deutz DQC CB-14; MAN 324 Typ SNF; VW TL-774D i 774F; DAF 74002; MB 326.3;** AGCO: Fendt, Valtra; Caterpillar: GCM34, MAK, MWM 0199-99-2091/12; Cummins: IS series u N14, CES 14603, CES 14439; Frendt; Innio Jenbacher TA 1000-0200; John Deere JDM H5; Mitsubishi Heavy Industry (MHI); Paccar - Leyland Trucks DW03245403 (DAF trucks F54 i F55); MTU MTL 5048; Volvo: AB - Volvo Penta, AB - Mack 014 GS 17009, AB - Renault Trucks 41-01-001/-S Type D, AB Construction, Trucks; MAN B&W A/S
GlycoCool Premium Longlife Yellow 774 D-F (G12/G12+)	MEG	organic acids	nitrites, amines, phospates, borates, krzemianów	5 years	yellow	ASTM D3306; ASTM D6210, BS 6580; PN-C-40007; ASTM D4656; ASTM D4985; NFR 15-601[1]; FVV Heft R443; JIS K2234, KSM 2142; BT-PS-606 A; DCSEA 615/C; E/L-1415b; FSD 8704[1]; NATO S759; Önorm V5123[1]; SAE J1034[1]; UNE 26-361-88/1	AGCO: Fendt, Valtra; Deutz DQC CB-14; MAN 324 Typ SNF; VW TL-774D i 774F; DAF 74002; MB 326.3; Caterpillar: GCM34, MAK, MWM 0199-99-2091/12; Cummins: IS series u N14, CES 14603, CES 14439; Frendt; Innio Jenbacher TA 1000-0200; John Deere JDM H5; Mitsubishi Heavy Industry (MHI); Paccar - Leyland Trucks DW03245403 (DAF trucks F54 i F55); MTU MTL 5048; Volvo: AB - Penta, AB - Mack 014 GS 17009, AB - Renault Trucks 41-01-001/-S Type D, AB - Construction, AB - Trucks; MAN B&W A/S
GlycoCool Anti-Freeze Longlife Ultimate Protection	MEG	organic acids	nitrites, amines, phospates, silicates, borates, 2-EHA acids	5 years	pink	ASTM D3306; ASTM D4656; ASTM D4985; AFNOR NF R15-601; AS 2108; BS 6580:1992; CUNA NC 956-16; SAE J 1034; UNE 26361-88; FFV Heft R443; NATO S 759	Ford WSS-M97B44-D; MB 325.3; Renault 41-01-001; General Motors GM 6277M; VW VAG TL 774 D-F; MAN 324 SNF; Mazda MEZ MN 121 D; Volvo; Claas; Deutz 0199-99-115/6; John Deere JDMH5; Komatsu 07.892(2009); DAF 74002; Fiat – Lancia 9,55523; Jaguar CMR 8229
GlycoCool Premium 774 C/P (G11)	MEG	organic acids, silicates	nitrites, amines, phospates, silicates, borates	3 years	blue-green	ASTM D3306; ASTM D4985; BS 6580:2010; AFNOR NF R15-601; NATO S-759; SAE J 1034	Caterpillar-Perkins; CNH Industrial Iveco standard 18-1830; Cummins 8578-2; Daimler MB 325.0 & 325.2; Deutz DQC CA-14; Ford ESD M97E; GM-Saturn; Mahle Behr; PSA Opel/ Vauxhall GME L130; Rolls Royce Power Systems AG – MTU MTL 5048; Toyota Motor Company (1WW, 2WW motors); Volvo AB Volvo constructions/ Volvo Trucks (<10.2005); VW Audi; Skoda; Seat; VW TL 774C; MAN 324 NF; BMW GS 9400
GlycoCool G Premium (G11)	MEG	organic acids, silicates	nitrites, amines, phospates	4 years	blue-green	ASTM D3306; ASTM D4985; BS 6580; NF R15-601; SAE J1034; AFNOR; ONORM V5123; PN-C40007:2000; CUNA NC 956-16; JISK 2234:2006; SANS 1251:2005	VW TL 774 C; MB 325.0; MB 326.0; MWM TR2091; DEUTZ DQC CA-14; MTL 5048; MTL 5048; MAN 324 NF; SETRA (MB 3250); JENBACKER TA-NR 1000-0200; BMW LC-87

Comments: * -the vehicle manufacturer's instructions should be followed