Coolants and anti-freeze

February 2019

UNIVERSAL RANGE

RESISTANCE TO EXTREME CONDITIONS



- 37°c if diluting the antifreeze
- 25°c with ready-for-use

PRODUCT ADVANTAGES

- → ***Universal organic coolant.***
- → ***Miscible with all glycol-based products on the market, including G12++/G13***
- → ***Made from new MEG (not recycled)***
- → ***Enhanced service life (> 2,000 hours).***

With **3 ready-for-use -25°c products** and **1 concentrated -70°c product,** the Eurorepar **universal** coolant range covers all the requirements of repair agents, regardless of whether it is for a top-up or a complete replacement after draining the circuit.

The concentrated product enables you to obtain different levels of protection against freezing whereas the ready-for-use product is easy to use while providing protection against mild freezing.

To offer you the best value for money, **our coolants boast technical characteristics approved by the PSA engineering department.**

TECHNICAL CHARACTERISTICS

There are **two types of Eurorepar coolant:**

- - 25°c (ready for use – do not dilute); packaging: 2 l, 5 l, 210 l
- - 70°c (concentrated, must be diluted); packaging: 2 l

°C	- 18°C	- 25°C	- 31°C	- 37°C
Antifreeze	33 %	40 %	45 %	50 %
Water	67 %	60 %	55 %	50 %

The Eurorepar coolant is an organic product (OAT).

The advantages are:

- non-consumption of protective additives,
- extended service life of the product,
- excellent protection of aluminium,
- no deterioration in the product performances when used as a top-up.

The yellow colour is obtained through the addition of colouring. It plays no technical role and corresponds more to a market choice. Each manufacturer has their own colour (pink, blue, etc.). The markets also have their own colour preferences.

PRODUCT REPLACEMENT

This must be carried out by draining the circuit completely in accordance with the manufacturer's recommendations. It should generally be done at least once every 4 years.

Two indicators enable you to check whether the coolant needs changing:

- A pH < 6 indicates that the initial reserve alkalinity has been consumed and that the product is no longer capable of protecting the metals from acid attacks.
- A brown colour indicates the presence of sludge and corrosion residue from the circuit.

DID YOU KNOW?

MEG, the main ingredient of the coolant, can be a recycled product. This in no way affects its performance.

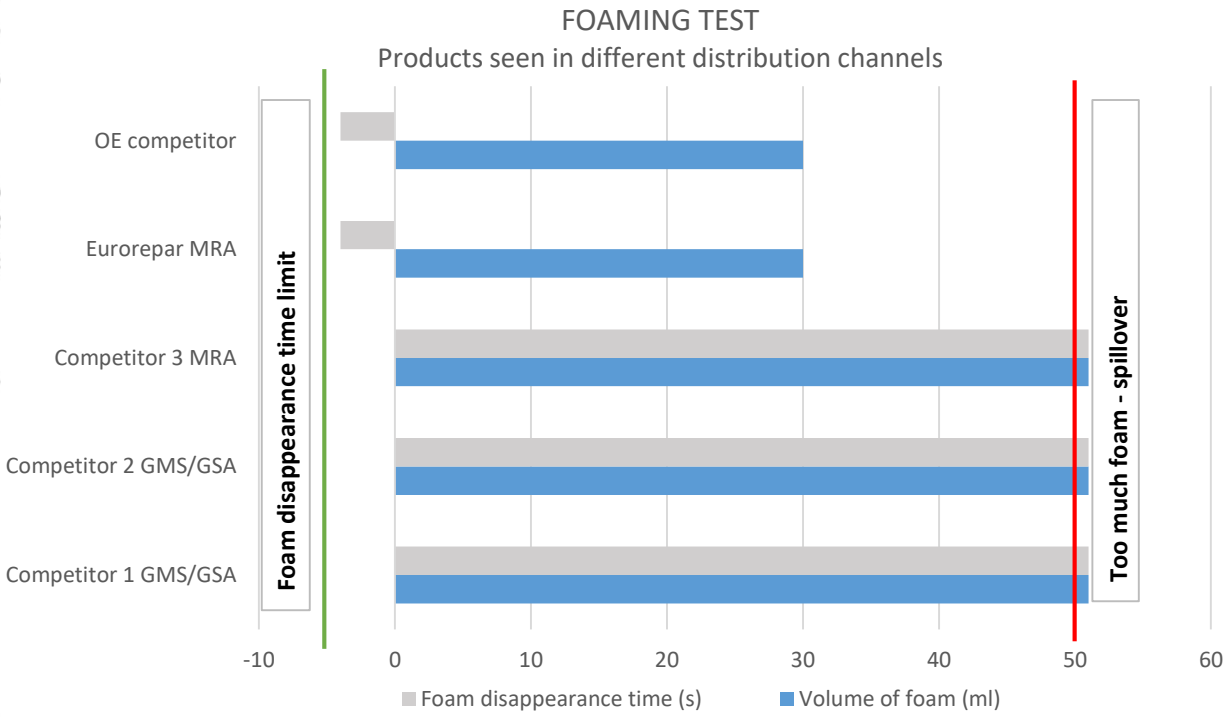


PROTECTION AGAINST CAVITATION - FOAMING TEST

The foaming test serves to characterise the aptitude of the coolant not to generate cavitation within the circuit.
A good coolant will create relatively little foam in this test (< 50 ml) and the total disappearance of the foam will be rapid at the end of the test (< 5 sec.).
This characterises a coolant which will remain in liquid form, despite being shaken when transiting via the water pump.



Pitting on the piston due to coolant cavitation phenomena.

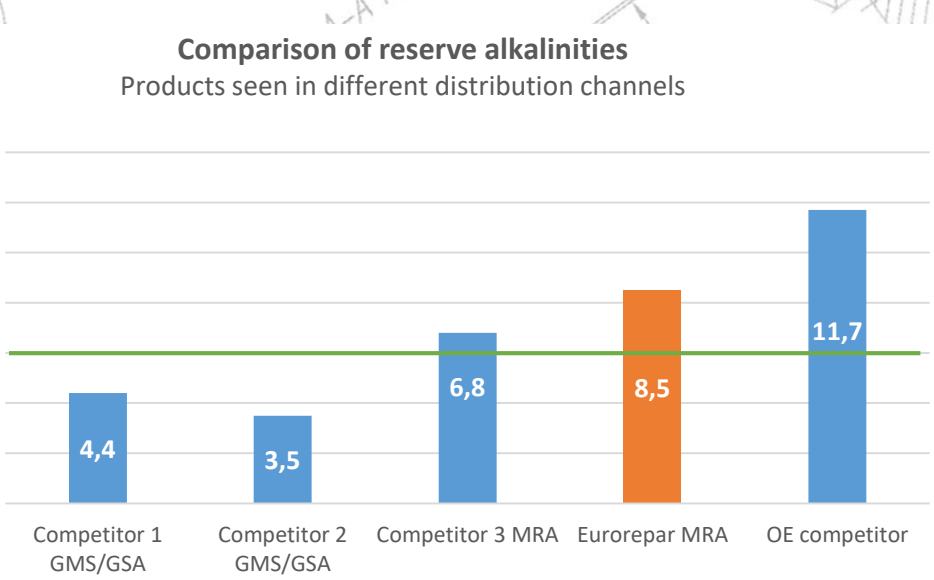


PROTECTION AGAINST ACID ATTACKS: RESERVE ALKALINITY

Anti-corrosion additives help prohibit acid attacks: **they neutralise the acids generated by combustion and thus prevent corrosion of the metals in the cooling circuit**.



Attack on aluminium (cylinder head, radiator) in an acid environment.



Below “6”, the quantity of additive present in the product does not provide sufficient protection against acid attacks.



www.eurorepar.com

EUROREPAR

THE FUNCTIONS AND TECHNOLOGIES ON THE MARKET

There are **3 main technologies:**
- Products with mineral additives (low-cost) - IAT
- Products with organic additives - OAT
- Hybrid products (mixtures of mineral and organic additives) - HOAT

Coolant serves to:
- Cool the engine
- Protect against freezing in winter and avoid overheating in summer.
- Protect the engine against corrosion
- Prevent foaming and cavitation

DID YOU KNOW?

A low-quality product or a product that is too old causes:
- acidity, which corrodes the circuit and engine parts;
- foaming, resulting in the erosion of sleeves and pistons by cavitation (pitting);
- the formation of scale, which blocks the pipes and prevents engine heat from being absorbed.

CHOOSING THE RIGHT COOLANT

- Check the required technology (mineral, organic, hybrid) in the service manual
- The colour of the product us an indicator of manufacturers' products but this is not always reliable for other products on the market.

/!\ The ready-for use -25°c product must not be diluted. It would become ineffective due to the protective additives becoming diluted.

Prioritise complete draining of the circuit to ensure maximum efficacy of the new product.

For very old vehicles which have only ever used IAT mineral coolant: do not change technology. Organic and similar liquids have detergent properties which would risk removing the mineral deposits accumulated in the pipes and thus cause a plug to form in the radiator.

Use as a top-up product

Thanks to its proven miscibility with other coolants, **including hybrid products (PSA, VW)**, **the Eurorepar product can be used as a top-up**, regardless of the product used previously. The mixture obtained will not have any harmful effects on the durability of the protection provided and will not cause any reactions between additives resulting in the formation of gels or sludge.

If it is not known which product is in the circuit, always favour an OAT product such as the Eurorepar coolant.

- No loss of "long-life" benefit if the original product is a long-life product.
- No risk of miscibility and the creation of gel in the circuit due to silicate precipitation of SI-OAT formulations (G12++ / G13).

