

# Tech Talk

tips / techniques / training

## Is there a "one size fits all" antifreeze & coolant?

Due to the huge number of applications and the increasing move to manufacturer specific coolant specifications, it is impossible to know which product is required for your car without further details about the vehicle. This is being driven by changes in engine technology that are the result of increasingly demanding environmental legislation. Newer, more modern engines require modern, high performance coolants. A single commodity product will no longer suffice.

## What does it do?

Coolant protects against freezing by lowering the freezing point, it protects against overheating by raising the boiling point and it protects against cooling system corrosion, but only when it is mixed correctly with water.

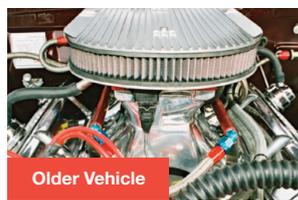
All ethylene glycol based coolant achieves the first two in a very similar way. It's only when we start to consider the additive package, the bit that handles corrosion protection, when we start to see the differences between modern coolants.

## I notice you have a lot of different coolant products, what are the differences?

As far as the European passenger car market goes there are 3 types of modern antifreeze: a silicate technology based product (Xstream G48), an OAT (Organic Additive Technology) based product (Xstream G30) and a silicated OAT based product (Xstream G40). For certain applications there is Xstream G05 which would typically be used in heavy duty vehicles. When compared with the more conventional coolants, as well as lasting longer they also protect better and are designed to be more compatible with all the different metals, plastics and rubbers you find in a modern cooling system. However, these high performance products use different additive technologies to protect the cooling system from corrosion. Different manufacturers have different requirements and to cover the vehicle parc we need 4 different antifreeze & coolant products.

Most importantly of all, the Xstream range of coolant products are OEM (Original Equipment Manufacturer) approved and cover a wide range of specifications. Commodity products like our Super Coldmaster or Super Longlife Red have no such approvals and meet only the industry minimum standard of BS6580: 2010.

## Engine Technology



Commodity



Manufacturer Approved



- Protects Against **Freezing**
  - Protects Against **Overheating**
  - Protects Against **Corrosion**
- ...when correctly mixed with water

Manufacturer Approved

Commodity

				
Silicate	OAT	SI-OAT	Hybrid	2 Year Life
3 Year Life	5 Year Life	5 Year Life	6000 Hours Life	No Approvals

# Tech Talk

tips / techniques / training

## The coolant in my car is red, so do I just use another red coolant?

It is always important that you check with the vehicle's handbook or on the Comma website that the right type of coolant is being used. The colour DOES NOT indicate that it's the correct type, it is a dye added during the manufacturing of the coolant so you can visually see it (for example when checking the level in the expansion tank). A coloured coolant will also aid in identifying where a leak may be occurring.

## What are the consequences of using the wrong product?

Different manufacturers use different metals, plastics and rubbers in their cooling systems. When they specify a coolant for their vehicles they select the type of coolant that is more compatible and able to provide better protection. If the right type of product is not used a variety of problems like overheating and corrosion issues can occur. These can significantly affect the performance of your vehicle's cooling system resulting in a variety of knock on effects ranging from failed water pumps or broken radiator pipes to seized engines. Also, OEMs treat coolants as part numbers nowadays and not using the recommended product can result in a void warranty claim.

## How to get it right?

To make this increasingly complicated choice a lot easier you can use the Comma Application Guide or our website, where you can select your vehicle using the VRN (Vehicle Registration Number) tool or by using the make and model search. You will then be presented with a printable full vehicle recommended product report including engine oil, antifreeze & coolant, transmission oils, brake fluid and greases if applicable.

## Can I mix different types of coolant?

Different types of coolant are based on different technologies that may not be compatible. Mixing different types of coolant could cause unpredictable results and potentially damage the cooling system. Like with any other car part, the advice here is to always follow the OEM's specification.

### Getting it wrong Bad choices lead to...



Image supplied thanks to BASF

**component failures!**

