

## How is renewable ethanol made?

Renewable ethanol is an alcohol produced sustainably from biomass feedstock. In Europe, renewable ethanol is produced from almost exclusively Europe-grown cereals and sugar-beets, processing residues and wastes. Renewable ethanol is certified as sustainable according to a set of criteria defined in a European Directive, which include minimum greenhouse gas reductions and minimum land-use impacts. In 2016, renewable ethanol was certified at 66% GHG savings compared to fossil petrol. Most petrol sold in Europe already contains ethanol, with E10 ethanol fuel popular in several countries.

## What is E10?

E10 is a petrol grade available in Belgium, Finland, France, Germany and the Netherlands. It contains up to 10% ethanol in volume. Its name comes from E for ethanol and 10 for a blend of maximum 10% ethanol. In Europe, E10 has been the reference grade for petrol<sup>1</sup> since 2013.

## What is the difference between E10 and regular 95 octane petrol?

More ethanol. Regular 95 octane petrol already contains up to 5% ethanol, but E10 contains a higher share with up to 10% ethanol.

## What are the benefits of increasing the share of ethanol in petrol?

Blending renewable ethanol into petrol reduces greenhouse gas emissions. With more renewable ethanol in its energy mix, Europe can decarbonise its transport sector and meet its 2020 targets:

- 20% GHG emissions reduction vs 1990
- 20% increase of energy efficiency
- 20% renewable energy in the European energy mix...
- ...including 10% of renewable energy in the transport sector

## Which vehicles are compatible with E10?

The full list of E10-compatible cars can be found on the European Automobile Manufacturers Association (ACEA) website. Many vehicle models manufactured since 2011 can even use blends up to 20% ethanol (E20), with some manufacturers planning to make all their new cars E20 compatible.<sup>2,3</sup>

For motorcycles, refer to the European Association of Motorcycle Manufacturers. In case of doubt, drivers are advised to contact their vehicle manufacturer.

## Can E10 fuel damage the engine of my vehicle?

E10 fuel does not damage compatible engines.

## If I fill up with E10 in a non-compatible petrol car, do I need to have the tank drained?

For non-compatible petrol vehicles, filling the tank once with E10 is not dangerous, as the vehicle will not break down. Nevertheless, the next filling should be made with petrol grades that are compatible with the car. In case of doubt, drivers are advised to contact their car manufacturer.

For sports vehicles and classic cars, motorists should immediately contact their car manufacturer.

## Will E10 have an impact on the petrol consumption of my vehicle?

Modern cars have been optimized to run on E10. From a driver's perspective, fuel consumption may increase by 1-2%. Nevertheless, other factors – such as vehicle maintenance or driving style – have a much greater impact on petrol consumption.



<sup>1</sup>Fuel Quality Directive - Annex I

<sup>2</sup>Impact of higher levels of bio components in transport fuels in the context of the Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998, relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC. ICF International (2015).

<sup>3</sup>A harmonised Auto-Fuel biofuel roadmap for the EU to 2030. E4tech (2013).