



ELF E85

“Unleaded competition fuel for 2-stroke and 4-stroke engines”



Our formulae use pure bases to guarantee naturally stable, long-lasting properties, consistent from one production batch to another. This search for constant and optimum quality ensures you obtain first class performance, in conformity with competition requirements.

"The unleaded biofuel from ELF for 2-stroke and 4-stroke engines"

Uses

- **ELF E85** has been designed differently from the super-ethanol and E 85 fuels already on the market regarding its constant quality and composition, improved combustion speed and considerably increased Net Calorific Value.
- **ELF E85 does not conform** to FIA Annex J regulations.
- **ELF E85** provides optimal resistance against knocking and superlative fuel reactivity due to its exceptional RON and sensitivity. This fuel therefore permits tuning optimised ignition timing and increases the power generated.
- Adapted everywhere naturally aspirated and turbocharged 4-stroke engines are used:
 - Group A & Group N
 - WRC & Rallycross
 - Hill climbing

Characteristics

		Standard data
OCTANE NUMBERS	RON	108
	MON	89
DENSITY	kg/l at 15°C	0.79
OXYGEN	% m/m	32
AIR/FUEL RATIO		9.32
VAPOUR PRESSURE	Bar at 37,8°C	0.400
SULPHUR	mg/kg	<30
LEAD CONTENT	g/litre	<0.001
BENZENE	% vol.	0.1

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Properties

Characteristics	→	Technical advantages	→	Engine benefits
Exceptional octane numbers	→	Excellent resistance to knocking , ensuring controlled combustion	→	<p>Exceptional reliability under severe conditions (supercharging pressure / compression rate / intake temperature).</p> <p>Permits using optimised ignition timing for higher power.</p>
E85 for the general public varies from an ethanol content from 65 to 85%, whereas ELF E85 has a constant content.	→	<p>Effect of natural supercharging</p> <p>High latent vaporisation heat favouring mixture cooling before combustion</p> <p>Increased volume filling by charge cooling</p>	→	<p>Spontaneous power gains (without specific tuning) over the whole range.</p> <p>Increased power by optimisation before ignition.</p> <p>Excellent engine response in transient phase.</p> <p>Constant product quality requiring no adaptation of engine tuning</p>
Selection of the best oxygenated and olefin compounds	→	Excellent combustion speed for optimised yields	→	Favours engine speed increases and engine reactivity.
Very low benzene and sulphur contents	→	Harmless	→	No special precautions for use

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Recommendations

- This fuel requires the use of an adapted fuel line (compatible materials): seals and elastomers.
- **ELF E85** provides exceptional gains in power and reliability, without fine-tuning.
- Engine mapping must be optimised (Air/Fuel ratio, ignition sequence) to obtain full benefit from this product. The air/fuel ratio of **ELF E85** is very different from that of an ordinary fuel.
- The constant quality of our products ensure that there is no specific need for tuning from one season to another, unlike the E85 for the general public.

Storage

To preserve its original properties and comply with the Health and Safety rules pertaining to fuels, **ELF E85** must be handled and stored away from sunlight and bad weather and properly resealed in its drum after each use, to avoid loss of the lightest particles.

Glossary

For any further information relative to the technical aspects written in our Data Sheets, a glossary is on line on our website www.acs.total.com, racing fuels and lubricants section.