



# ELF ATMO BOOST

*“Leaded racing fuel for naturally-aspirated 4-stroke engine”*



*Using pure bases, our formulas guarantee naturally stable, long-lasting properties, consistent from one production batch to another. This search for constant and optimum quality gives you first class performance and easy settings adjustments.*

## Use

- **ELF ATMO BOOST** leaded fuel for naturally-aspirated 4-stroke engines has been designed to get maximum power from naturally-aspirated engines with high compression ratios, while ensuring mechanical reliability at the same time.
- **ELF ATMO BOOST** has optimum anti-knocking and combustion speed properties.
- **ELF TURBO BOOST** contains an additive package that provides continuous engine cleanliness; hence the engine works permanently at its best.
- **ELF ATMO BOOST** gives maximum engine power use without losing mechanical reliability.
- Suited to any use of naturally-aspirated 4-stroke engines:
  - Circuit
  - Rally & Rallycross
  - Acceleration
  - Hill climb race

## Characteristics

		Typical data
<b>OCTANE NUMBER</b>	RON	107.1
	MON	94.0
<b>DENSITY</b>	kg/l at 15°C	0.745
<b>OXYGEN</b>	% m/m	1.0
<b>VAPOUR PRESSURE</b>	Bar at 37.8°C	0.580
<b>SULPHUR</b>	mg/kg	<10
<b>LEAD</b>	g/liter	1.1



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## Properties

Fuel characteristics	→	Technical gains	→	Engine benefits
<b>Octane indexes</b> particularly high	→	Exceptional resistance to <b>knocking</b> for engines with very high <b>compression ratios</b>	→	<b>Improved combustion yield</b> <b>More power without altering reliability</b>
Selection of compounds with highest energy content and combustion speeds	→	<b>High combustion speed</b> for optimised cycle yield	→	<b>Excellent engine response in transient phase (acceleration)</b>
10 times more <b>lead content</b> than a traditional leaded fuel	→	Perfect lubrication of valve seats	→	<b>Impeccable reliability under severe conditions</b>
<b>Additivation</b>	→	Maintains cleanliness of piston heads and combustion chamber	→	<b>No loss of engine performance over time</b>

## Recommendation

- **ELF ATMO BOOST** provides significant gains in power and reliability, with no fine-tuning.
- To get the full benefit of this product, the engine mapping must be optimised (Air/Fuel ratio, ignition sequence).
- **ELF ATMO BOOST** is outside sports regulations and incompatible with most public driving regulations.
- Specifically for use with naturally-aspirated engines, ELF also proposes the unleaded fuel **ELF ATMO MAX** complying with FIA Annex J regulations and the **PERFO RALLYE** fuel (outside FIA Annex J regulations).



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## Storage

To preserve its original properties and comply with the Health and Safety rules pertaining to fuels, **ELF ATMO BOOST** 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

**RON & MON:** The RON & MON characterize the resistance to knocking (see definition) of a fuel used in a spark-ignition engine. The RON is representative of the functioning of an engine running in cold and low speed condition, while the MON is representative of an engine running in warm and high speed condition.

For competition use, the MON is commonly used to describe a fuel's anti-knocking capacity. Higher octane levels give the fuel greater capacity to allow the engine to function under severe conditions that raise speeds (high rotation speed, high compression ratio).

**LEAD CONTENT:** Generally given in mg/liter, this value describes the amount of lead (usually in the form of tetraethyl lead) added to the fuel, to increase the octane indexes (RON & MON). Tetraethyl lead also has lubricating properties that increase the mechanical resistance of valve seats.

Since lead is a poison for catalytic converters, leaded petrol is actually reserved for very specific uses, like competition racing (where local law permits).

**KNOCKING:** Is the result of non controlled fuel combustion in the engine. Sometimes revealed by a characteristic 'pinking' noise, these detonation phenomena often damage the engine. There are two ways to prevent knocking: tuning the ignition timing and/or using a fuel with better anti-knocking characteristics (RON/MON and combustion speed).