ELF AVSP 11

"Unleaded competition fuel for naturally aspirated 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.

Uses

- Unleaded **ELF AVSP 11** fuel has been especially designed for 2-stroke engines running at high speeds and compression rates. It is suitable for every category (125, 250 and 500 cm^3).
- **ELF AVSP 11** is also suitable for 4-stroke engines running at high compression rates.
- **ELF AVSP 11** does **not conform** to international regulations prohibiting the use of MTBE in fuels.
- **ELF AVSP 11** has a high octane content ensuring excellent resistance against knocking, even under severe conditions.
- Especially suitable for naturally aspirated engines running at high compression rates, such as for:
  - Circuits
  - Rally & Rallycross
  - Acceleration
  - Hill climbing

Characteristics

		Standard data
OCTANE NUMBERS	RON	107
	MON	96
DENSITY	kg/l at 15°C	0.750
OXYGEN	% m/m	2.7
VAPOUR PRESSURE	Bar at 37.8°C	0.300
SULPHUR	mg/kg	<10
LEAD CONTENT	g/litre	<0.005

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Properties

Fuel characteristics	→	Technical advantages	→	Engine benefits
High oxygenated compound content	→	Natural **supercharging** effect High latent vaporisation heat favouring **mixture cooling** before combustion Increased **volume filling** by charge cooling	→	**Spontaneous power gains (without specific tuning) over the whole range.** **Increased power by optimisation before ignition.** **Excellent engine response in transient phase.**
Exceptional octane numbers	→	Excellent resistance to **knocking**, ensuring controlled combustion	→	**Remarkable reliability under severe conditions (compression and heat / humidity rates)** **Permits using optimised ignition timing for higher power.**
Very low **benzene** and **sulphur** contents	→	Harmless	→	**No special precautions for use** **ELF ATMO MAX respects both health and the environment.**

Recommendations

- Caution: this fuel contains MTBE (Methyl Tertio-Butyl Ether), a compound prohibited by certain local and national regulations.
- For application in 2-stroke engines, **ELF AVSP 11** can be used in mixture with the **ELF HTX 909** lubricant or, for even greater efficiency, with **ELF HTX 976** (dosing recommended at 4% of lubricant mixed with the fuel).

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Storage

To preserve its original properties and comply with the Health and Safety rules pertaining to fuels, **ELF AVSP 11** 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: RON & MON characterise the resistance to knocking (see definition) of a fuel used in a spark-ignition engine. RON is representative of the functioning of an engine running under cold and low speed conditions, while MON is representative of an engine running under warm and high speed conditions.
Used for competition, MON is commonly used to describe a fuel's anti-knocking capacity.
Higher octane levels allow engines to run more efficiently under severe, high speed conditions (high rotation speed, high compression ratio).

KNOCKING: 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).

DENSITY (or dimensional weight): Usually measured at 15°C and under 1 bar, given in kg/litre (or in kg/m3), this is the density of one litre (or 1000 litres) of fuel.
A fuel's density increases as its temperature drops.

CHARGE COOLING: The amount of energy needed to vaporise fuel depends on the latent vaporisation heat. This phenomenon leads to cooling the intake air which in turn generates internal supercharging.