



ELF ATMO MAX

“Unleaded competition fuel for naturally aspirated 4-stroke engines”



Our formula 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.

“ELF ATMO MAX has been developed to provide maximum performances for small, naturally aspirated 4-stroke engines such as Super 1600 and S2000”.

Uses

- Unleaded **ELF ATMO MAX** fuel, derived from **ELF ATMO RALLYE**, has been especially designed for naturally aspirated 4-stroke engines. **ELF ATMO MAX** allows you to obtain maximum power from naturally aspirated engines with relatively low cylinder capacities but which run at high speeds.
- Adapted everywhere naturally aspirated 4-stroke engines are used: circuit, Rally & Rallycross, acceleration, hill climbing.
- The new FIA Annex J regulation, implemented in January 2014, is more limiting. **ELF ATMO MAX** is not in compliance with the FIA Annex J 2014 regulations

Characteristics

		Standard data
OCTANE NUMBERS	RON	101.6
	MON	86.9
DENSITY	kg/l at 15°C	0.735
OXYGEN	% m/m	3.65
AIR/FUEL RATIO		14.05
VAPOUR PRESSURE	Bar at 37.8°C	0.530
DISTILLATION	FBP (°C)	130
	% vol. at 70°C	39
	% vol. at 100°C	68
SULPHUR	mg/kg	<10
BENZENE	% vol.	<0.1
LEAD CONTENT	g/litre	<0.005



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Properties

Characteristics	→	Technical gains	→	Engine benefits
<p>Oxygenated compound content set at the upper limit of regulations.</p>	→	<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>The research octane and motor octane oad numbers (RON and MON) are set at the upper limit of the regulations</p>	→	<p>Excellent resistance to knocking, ensuring controlled combustion</p>	→	<p>Remarkable reliability under severe conditions (compression and heat / humidity rates)</p> <p>Permits using optimised ignition timing for higher power.</p>
<p>Strict selection and incorporation of the best olefin compounds</p>	→	<p>High combustion speed for optimised output for the same tuning parameters</p>	→	<p>Control of knocking at very high engine speeds.</p> <p>Good engine response in transient phase.</p>
<p>Very low benzene and sulphur contents</p>	→	<p>Harmless</p>	→	<p>No special precautions for use</p> <p>ELF ATMO MAX respects both health and the environment.</p>



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Recommendations

- **ELF ATMO MAX** fuel is custom-developed and adapted for naturally aspirated engines running at high compression rates.
- **ELF ATMO MAX** 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.

Storage

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

