ELF MOTO 4T-MAX

« Unleaded competition fuel for 4-stroke engines »

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, in conformity with official regulations.

Use

- **ELF MOTO 4T-MAX** has been specifically developed to give maximum power under FIM regulations.
- **ELF MOTO 4T-MAX** is particularly suited for 4-stroke atmospheric high revs engines.
- **ELF MOTO 4T-MAX** has been successfully tested by top-class Superbikes and Supersport engine tuners and teams.

Characteristics

		Typical data	FIM regulations
OCTANE NUMBER	RON	101.7	95 à 102
	MON	89.6	85 to 90
DENSITY	kg/l at 15°C	0.755	0.720 to 0.775
OXYGEN	% m/m	2.6	2.7 max
AIR/FUEL RATIO		14.05	
VAPOUR PRESSURE	Bar at 37,8°C	0.480	0.900
DISTILLATION (°C)	% vol. at 70°C	24	22 to 50
	% vol. at 100°C	57	46 to 71
LEAD	g/litre	<0.005	0.013 max
SULPHUR	mg/kg	6	10 max
BENZENE	% vol.	<0.4	1 max

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Properties

Fuel characteristics	→	Technical gains	→	Engine benefits
Octane numbers set to upper regulatory limit	→	Excellent resistance to **knocking** for controlled combustion	→	**Exceptional reliability under severe application (heat/ humidity)** **Allows work with optimised ignition sequence** **Spontaneous power gains**
High **density** and **net calorific value**	→	High energy content of fuel	→	**Significant improvement of fuel consumption**
Chemical composition adjusted	→	**High combustion speed** for comfortable combustion control up to 15,000 rpm	→	**Excellent engine response in transient phase**
Very low **benzene** and **sulphur** content	→	Harmless	→	**No special precautions for use** **ELF MOTO 4-T MAX respects both the environment and health**

Recommendations

- **ELF MOTO 4T-MAX** provides significant gains in power and reliability, with no fine-tuning.
- Absence of alcohol and di-olefins implies full compatibility with fuel circuit materials.
- To get the full benefit of this product, it is preferable to optimise the Air/Fuel ratio and ignition advance.

Storage

To preserve its original properties and comply with the Health and Safety rules pertaining to fuels, **ELF MOTO 4-T 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

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).

KNOCKING: Knocking is the result of un-controlled combustion of the fuel in the engine. Sometimes revealed by a characteristic 'pinking' noise, these detonation phenomena are often damaging to 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).

COMBUSTION SPEED: It characterizes the fuel's reactivity in the combustion process. The higher the combustion speed, the more effective it is, and the greater the power produced by the engine, via a better cycle yield.

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

AIR/FUEL RATIO (stoichiometric ratio): This ratio characterizes the respective fuel and combustive (air intake) quantities necessary for ideal combustion in theory. In practice, most of the time, the engine tuner will make sure that the air/fuel ratio corresponds to a value between 1.10 and 1.20, or the theoretical value in relation to the actual value.

NET CALORIFIC VALUE (NCV): Calculated per litre or kilogramme, this energy represents the amount of heat released by the combustion of one litre (or kilogramme) of fuel. This value characterizes the fuel's energy content and can be considered on first estimate as the energy supplied to the engine for conversion into engine power.
The higher the fuel NCV, the more the engine is likely to develop power.