ELF MITS 46

"Unleaded competition fuel for 2-stroke Motorcycle racing"

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 MITS 46** is an unleaded fuel for 2-stroke engines, exclusively dedicated to motorcycle circuit racing.
- Complies with FIM 2-stroke regulations.
- Thanks to its high octane level and specific formula, **ELF MITS 46** offers exceptional anti-knocking protection and a particularly high combustion speed.
- A development of the fuel **ELF MITS 42**, **ELF MITS 46** has a finer olefin distribution that delays the appearance of the knock phenomenon. The latter is nonetheless less gradual.
- Directly drawn from ELF's experience in 2-stroke MotoGP, **ELF MITS 46** is regularly used in Grand Prix.
- Particularly suited to competitions like:
  - Moto 250cc
  - Moto 125cc

Characteristics

		Typical data	FIM 2-stroke regulations
OCTANE NUMBER	RON	101.5	95 to 102
	MON	89.6	85 to 90
DENSITY	kg/l at 15°C	0.765	0.725 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	26	20 to 47
	% vol. at 100°C	58	46 to 70
SULPHUR	mg/kg	<0.001	0.015 max
BENZENE	% vol.	<0.05	1 max

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Properties

Fuel characteristics	→	Technical gains	→	Engine benefits
Oxygen content set to FIM upper regulatory limit	→	Greater **filling capacity** through air/fuel mixture cooling	→	**Spontaneous power gains (without special tuning)** **Excellent engine response in transient phase**
Octane content set to FIM upper regulatory limit	→	Excellent anti-**knocking**	→	**Perfect reliability at prolonged high speed**
Strong **olefins content**	→	**High combustion speed**	→	**Better engine speed and better combustion yield**

Recommendation

- **ELF MITS 46** provides significant gains in power and reliability, even with no fine-tuning.
- To get the full benefit of this fuel, the engine must be very carefully adapted.
- **ELF MITS 46** can be mixed with the lubricant **ELF HTX 909** or with **ELF HTX 976**, for even more efficiency.
- **ELF MITS 46** comes in a more progressive ELF version: **MITS 42**

Storage

To preserve its original properties and comply with the Health and Safety rules pertaining to fuels, **ELF MITS 46** 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 conditions, while the MON is representative of an engine running in warm and high speed conditions.
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).

OXYGEN CONTENT: Oxygenated compounds naturally contain high levels of octane and generally improve engine filling capacities thanks to the cooling effect on the admitted air flow (see definition). Others also have remarkable combustion speeds.

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.

OLEFINS AND DI-OLEFINS: These unsaturated hydrocarbon compounds (double carbon-carbon bond) do not exist in natural form; they are found in petroleum fractions from cracking facilities.
Thanks to the reactivity of their double bond(s), these molecules have particularly high combustion speeds.