

## EXCELLIUM Rally

Official FIA WRC fuel 2019-2020-2021



RACING FUELS

## TECHNICAL DATA SHEET

« 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 racing requirements and at any time. »

### USES

**EXCELLIUM Rally** is official FIA WRC fuel used by top teams. It is compliant with the **FIA Appendix J 2020** regulation.

**EXCELLIUM Rally** is an unleaded racing fuel, consist to 10% of renewable material and designed to be used either in turbo-charged or naturally aspirated 4-stroke engines. This fuel offers a perfect balance between performances and reliability.

**EXCELLIUM Rally** is used by many national teams around the world on the rally market, well beyond the WRC Championship. Engine maps are prepared by all manufacturers involved in WRC and R5 Group.

### PROPERTIES

		Typical data	FIA / Appendix J regulation
Octane number	RON	101,7	95,0 – 102,0
	MON	88,4	85,0 - 90,0
Density at 15°C	kg/m <sup>3</sup>	749,0	720,0 – 785,0
Vapour Pressure at 37,8°C	kPa	58	< 80
Distillation	% v/v, at 100°C	71	46 – 72
Air Fuel Ratio at stœchiometry		13,90	
Oxygen content	% m/m	3,50	< 3,70
Sulphur content	mg/kg	< 10,0	< 10,0
Lead content	g/L	< 0,005	< 0,005
Benzene content	% v/v	≤ 1,0	< 1,0

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### CHARACTERISTICS

CHARACTERISTICS	→	TECHNICAL ADVANTAGES	→	ENGINE BENEFITS
<b>Octane number</b> high limit of FIA regulations	→	Excellent resistance to knocking for controlled combustion	→	<b>Exceptional reliability under severe conditions (heat / humidity) validated on engine test bench</b>  Allows optimizing ignition timing
Maximized <b>Oxygen content</b>	→	Effect of natural <b>supercharging</b>  High latent vaporisation heat that facilitates mixture <b>cooling</b> before combustion	→	<b>Spontaneous power gains (without special tuning)</b>  Increases power by optimisation before ignition
<b>Vapour pressure</b> optimized	→	Constant and better fuel <b>evaporation</b>	→	<b>Easy to start in all conditions</b>
Selection of <b>high energy content molecules</b>	→	<b>High combustion speeds</b> for controlled combustion	→	<b>Improves engine revving up</b>

### RECOMMANDATIONS

**EXCELLIUM Rally** provides significant enhancement in power and reliability, even with no fine-tuning. However, engine mapping should be optimised (Air/Fuel ratio, Ignition Timing...) to obtain full benefit from this product,

**Conservation** : to maintain its original properties, in accordance with the Fuel Health and Safety regulations, **EXCELLIUM Rally** should be handled and stored in the shade and sheltered from adverse weather conditions and must be perfectly sealed in its drum after each use, in order to avoid losing the lightest fractions.