

Annexe N°4

Appendix No. 4

Spécifications du carburant

Specifications of the fuel

Property	Units	Min.	Max.	Test Methods
RON		95.0 ⁽¹⁾	102.0 ⁽¹⁾	ISO 5164 / ASTM D2699
MON		85.0 ⁽¹⁾	90.0 ⁽¹⁾	ISO 5163 / ASTM D2700
Density (at 15°C)	kg/m ³	720.0	785.0	ISO 12185 / ASTM D4052
Oxygen	%m/m		3.7	EN ISO 22854/ EN 3132 ⁽²⁾ Elemental Analysis / ASTM D5622
Nitrogen	mg/kg		2000 ⁽³⁾	ASTM D4629 / ASTM D5762
Sulphur	mg/Kg		10.0	ISO 20486 ⁽²⁾ / ASTM D5453
Lead	mg/l		5.0	EN 237 /ASTM D3237 or ICP-OES
Manganese	mg/l		2.0	ASTM D3831 or (ICP-OES) EN16136
Benzene	% v/v		1.0	ISO 12177 / ASTM D5580 ISO 22854 ⁽²⁾ / ASTM D6839 EN 238
Olefins	% v/v		18.0	ISO 22854 / ASTM D6839
Aromatics	% v/v		35.0	ISO 22854 / ASTM D6839
Total di-olefins	% m/m		1.0	GC-MS or HPLC
Total styren and alkyl derivatives*	% m/m		1.0	GC-MS
Oxidation stability	minutes	360		ISO 7536 / ASTM D525
DVPE	kPa		90.0 ⁽⁴⁾	ISO 13016-1 ⁽²⁾ / ASTM D5191 ⁽²⁾ ASTM D4953
<u>Distillation Characteristics</u>				
At 70°C	%v/v	20.0	52.0	ISO 3405 / ASTM D86
At 100°C	%v/v	46.0	72.0	ISO 3405 / ASTM D86
At 150°C	%v/v	75.0		ISO 3405 / ASTM D86
Final Boiling Point	°C		210.0	ISO 3405 / ASTM D86
Residue	%v/v		2.0	ISO 3405 / ASTM D86
* Valid from 2022				
1) A correction factor of 0.2 for MON and RON shall be subtracted for the calculation of the final result in accordance with EN 228:2012				
2) Preferred method				
3) Octane boosting nitro compounds are not permitted				
4) The maximum DVPE may rise to 100 kPa for winter competitions.				
The only oxygenates permitted are paraffinic mono-alcohols and paraffinic mono-ethers (of 5 or more carbon atoms per molecule) with a final boiling point below 210°C.				
The fuel is accepted or rejected according to ASTM D3244 standard with a confidence limit of 95%.				
If the fuel available locally for the competition does not comply with the above specifications, the ASN of the organising country must ask the FIA for a waiver in order to enable the use of such a fuel.				
The addition of a lubricant on current sale is permitted in fuels for use in 2-stroke engines.				