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## BRAZILIAN ANP FUEL ETHANOL SPECIFICATIONS

### RESOLUTION ANP #19 – DATED APRIL 15, 2015 TECHNICAL REGULATION

(applies to EAC, EHC and EHCP, national or imported)

<b>EAC</b>	<b>ANHYDROUS ETHANOL FUEL</b> (destined for mixing with gasoline “A”, in the formulation of gasoline “C”)
<b>EHC</b>	<b>HYDRATED ETHANOL FUEL</b> (destined for direct use in internal combustion engines)
<b>EHCP</b>	<b>HYDRATED ETHANOL FUEL PREMIUM</b> (with density at 20°C varying from 799.7 to 802.8 kg/m <sup>3</sup> )

CHARACTERISTIC	UNIT	LIMIT			METHOD	
		EAC	EHC	EHCP	NBR	ASTM/EN/ISO
Aspect	-	Clear and free of impurities				Visual
Total acidity, max.	mg/L	30			9866 16047	ISO 17315
Electrical conductivity, max.	µs/m	300			10547	ISO 17308
Specific mass at 20° C	kg/m <sup>3</sup>	791.5 max.	805.2 to 811.2	799.7 to 802.8	5992 15639	D 4052
Alcoholic strength	% mass	99.3 min.	92.5 to 94.6	95.5 to 96.5	5992 15639	-
Ph	-	-	6.0 to 8.0		10891	-
Ethanol content, min.	% vol.	98.0	94.5	96.3	16041	D 5501
Water content, max.	% mass	0.7	7.5	4.5	15531 15888	E 203
Methanol, max.	% vol.	0.5			16041	-
Evaporation residue, max.	mg/100ml	5			8644	-
Hydrocarbons, max.	% vol.	3			13993	-
Chlorides, max.	mg/kg	1			10894	D 7328 D 7319
Sulfate, max.	mg/kg	4			10894	D 7328 D 7319
Iron, max.	mg/kg	5			11331	-
Sodium, max.	mg/kg	2			10422	-
Copper, max.	mg/kg	0.07			11331	-
Sulfur, max.	mg/kg	Report			-	D 5453 EN 15485 EN 15486