



**viroque energy**  
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## Product especificaciones GASÓLEO A

CHARACTERISTICS	UNITS	LIMITS (1)	TEST METHODS (2)		
			En EN 590 (3)	UNE STAND. (3)	ASTM STAND. (3)
Cetane number (4)		minimum 51,0	EN ISO 5165 EN 15195	UNE -EN ISO 5165 UNE -EN 15195	D 613
Cetane Index (4)		minimum 46,0	EN ISO 4264	UNE -EN ISO 4264	D 4737
Density at 15°C	kg/m³	820 a 845 (5)	EN ISO 3675 EN ISO 12185	UNE -EN ISO 3675 UNE -EN ISO 12185	D 4052 D 1298
Polycyclic aromatic hydrocarbons (6)	% m/m	maximum 8	EN 12916	UNE -EN 12916	
Sulphur content	mg/kg	maximum 10	EN IS O 20846 EN ISO 20884	UNE -EN ISO 20846 UNE -EN ISO 20884	
Distillation (7): 65 % V/V collected 85 % V/V collected 95 % V/V collected	°C °C °C	minimum 250 maximum 350 maximum 360	EN ISO 3405	UNE -EN ISO 3405	D 86
Kinematic viscosity at 40°C	mm²/s	2,00 a 4,50	EN ISO 3104	UNE -EN ISO 3104	D 445
Flash point	°C	higher than 55	EN ISO 2719	UNE -EN ISO 2719	D 93
Cloud filter plugging ponint (POFF): Winter (1 October to 31 March) (8) Summer (1 April to 30 September) (8)	°C °C	maximum -10 maximum 0	EN 116	UNE -EN 116	
Cloud point: Winter (1 October to 21 March) (8) Summer (1 April to 30 September) (8)	°C °C	maximum 0 maximum +6	EN 23015	UNE -EN 23015	D 2500 D 5772
Carbon residue (on 10% distillation residue)	% m/m	maximum 0,30	EN ISO 10370	UNE -EN ISO 10370	D 4530
Lubricity, corrected wear scar diameter (corrected WSD 1,4) at 60°C (12)	µm	maximum 460	EN ISO 12156 -1	UNE -EN ISO 12156 -1	
Water content	mg/kg	maximum 200	EN ISO 12937	UNE -EN ISO 12937	
Total contamination (Solid particles)	mg/kg	maximum 24	EN 12662	UNE -EN 12662	
Ash content	% m/m	maximum 0,01	EN ISO 6245	UNE -EN ISO 6245	D 482
Corrosion to copper (3h at 50°C)	escala ASTM	maximum 1b	EN ISO 2160	UNE -EN ISO 2160	D 130
Oxidation stability	g/m³	maximum 25	EN ISO 12205	UNE -EN ISO 12205	D 2274
Oxidation stability (9)	horas	minimum 20	EN 15751	UNE -EN 15751	
FAME Content (10)	% V/V	maximum 7	EN 14078	UNE -EN 14078	
Manganese	mg/l	(11)	EN 16 576	UNE -EN 16 576	
Colour	scale ASTM	maximum 2			D 1500 D 6045
Transparency and gloss		complies			D 4176

EDITION: 5

DATE: 01/08/2015

SEE NOTES IN THE NEXT PAGE

## NOTES:

- (1) All test methods referred to in this document include a precision statement. In case of dispute, the procedures for resolving the dispute and interpretation of the results based on the test method precision described in EN ISO 4259 standard shall be used.
- (2) Other technically equivalent test methods are acceptable under prior approval by EXOLUM. In case of dispute, the criteria about reference methods and the interpretation of results established in the current version of EN 590 standard shall be followed.
- (3) For the test methods reflected in EN 590 standard and the corresponding UNE ones, the method edition to be used shall be the one specified in section 2 of this standard. For the other test methods, the last published version must be applied.
- (4) If the cetane index is lower than 51, diesel oil must contain duly approved ignition enhancers in a proportion that is sufficient for achieving a minimum cetane number of 51.
- (5) In order to guarantee blending in EXOLUM of 7% V/V FAME the density of the automotive diesel delivered must not exceed 841 kg/m<sup>3</sup>. For higher densities, the proportion of blend will be adjusted so that the final diesel fuel does not exceed 845 kg/m<sup>3</sup>.
- (6) Polycyclic aromatic hydrocarbons are defined as being the difference between total aromatic hydrocarbons and monoaromatic hydrocarbons, both determined through the EN 12916 method.
- (7) Besides the specified values, the values of 10%, 50% and 90% collected, which are necessary for calculation of the cetane index, must be reported on.
- (8) The dates indicated are the dates established officially for diesel oil to be available at the retail points with the quality of the new season. The advance period within which diesel oil must enter the EXOLUM system for achieving this objective is defined in the service provision contract.
- (9) This rule will only apply when the diesel fuel contains more than 2% V/V of FAME. If the rule is modified, it will be applied according to the provisions of the latest published version.
- (10) The biodiesel to be used as a component, up to a maximum of 7.0% V/V, in the composition of automotive diesel must conform to the European EN 14214 specification; furthermore, the biodiesel must fulfill additional limits established in the EXOLUM specifications for FAME.
- (11) It should be free from compounds with manganese.
- (12) The lubricity of a diesel fuel, regardless of its FAME content, shall meet the HFRR limit of 460 µm maximum. Diesel with a FAME content greater than 4.0% (V/V) has good lubricity with an HFRR below 460 µm and an HFRR test is not required, provided that no negative experience is known. However, if the test is not carried out, it must be indicated in the certificate < 460 µm with a note that refers to the fact that the result is guaranteed due to a FAME content greater than 4%.

IF THERE IS A CHANGE IN THE OFFICIAL SPECIFICATIONS IN FORCE IN SPAIN, THIS TABLE WILL BE REVISED TO SUIT THE NEW SITUATION.