



PRODUCT SPECIFICATIONS

Heating & Marine diesel Oil (GO C/DMA)

CHARACTERISTICS	UNITS	LIMITS (1)	TEST METHODS (2)		
			EN/ISO/IP STANDARDS(3)	UNE STANDARDS (3)	ASTM STANDARDS (3)
Cetane Index		minimum 40	EN ISO 4264	UNE-EN ISO 4264	D 4737
Density at 15°C	kg/m ³	maximum 890,0	EN ISO 3675 EN ISO 12185	UNE-EN ISO 3675 UNE-EN ISO 12185	D 4052 D 1298
Sulphur content	mg/kg	maximum 1000	EN ISO 8754 EN ISO 14596 EN 24260	UNE-EN ISO 8754 UNE-EN ISO 14596 UNE-EN 24260	D 2622 D 4294
Distillation (7): 65 % V/V collected 85 % V/V collected 95 % V/V collected	°C °C °C	minimum 250 maximum 390 informer	EN ISO 3405	UNE-EN ISO 3405	D 86
Kinematic viscosity at 40°C	mm ² /s	2,000 to 6,000	EN ISO 3104	UNE-EN ISO 3104	D 445
Flash point	°C	minimum 60,0	EN ISO 2719	UNE-EN ISO 2719	D 93
Cold filter plugging point (POFF)	°C	maximum -6	EN 116	UNE-EN 116	
Cloud point	°C	maximum +4	EN 23015	UNE-EN 23015	D 2500 D 5772
Upper pour point: Winter (1 October to 31 March) (5) Summer (1 april to 30 september) (5)	°C °C	maximum -6 maximum 0	ISO 3016		D 97
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	µm	maximum 520	EN ISO 12156-1	UNE-EN ISO 12156-1	
Water and sediments content	% V/V	maximum 0,1		UNE 51083	D 2709
Ash content	% m/m	maximum 0,010	EN ISO 6245	UNE-EN ISO 6245	D 482
Corrosion to copper (3h at 50°C)	ASTM scale	maximum 2e	EN ISO 2160	UNE-EN ISO 2160	D 130
Oxidation stability	g/m ³	maximum 25	EN ISO 12205	UNE-EN ISO 12205	D 2274
Acid number	mg KOH/g	maximum 0,5			D 664
FAME content	% V/V	(6)	EN 14078	UNE-EN 14078	
Hydrogen sulfide	mg/kg	maximum 2,00	IP 570		
Transparency and gloss		complies			D 4176
Colour		(7)		Visual	

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SEE NOTES IN THE NEXT PAGE	

NOTES:

- (1) Diesel oil referred to in this specification fulfil the quality requirements for both diesel oil C established by RD 1088/2010 and DMA established in the current version of ISO 8217 standard.
All test methods referred to in this document include a precision statement. In case of dispute, the procedure for resolving the dispute and interpretation of the results based on test method precision, described in EN ISO 4259, 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 ISO 8217 and RD 1088/2010 standards shall be followed.
- (3) For the test methods reflected on ISO 8217 standard and the corresponding UNE ones, the method edition to be used shall be the corresponding one specified in that standard. For the other test methods, the last published version must be applied.
- (4) 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.
- (5) 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.
- (6) The blending of FAME shall not be allowed. The maximum FAME content present by contamination during the production process must be less than 0.1 % V/V.
- (7) Diesel oil C is delivered to EXOLUM without the addition of tracers or colorants. In such a state, it shall be clear, clean, transparent and glossy. The base diesel oil, without tracers or colorants, shall have a maximum (ASTM D 1500/ASTM D 6045) colour of 2. In the EXOLUM system, the colorants and tracers shall be incorporated as established by Order PRE/1724/2002, of 5 July, which approves the tracers and markers that shall be added to some hydrocarbons in order to apply reduced rates established by Law 38/1992, of 28 December, of Special Taxes, modified by Order PRE/3293/2004, of 22 October.

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