

ISO 8217:2010(E) Table 1 - Requirements for Marine Distillate Fuels

Characteristic	Unit	Limit	Category ISO-F				ISO Test Method	Alternative
			DMX	DMA	DMZ	DMB		
Density @ 15 Deg C	Kg/m ³	Max	-	890.0	890.0	900.0	ISO 3675/ISO 12185	D 1298/D 4052
Viscosity @ 40 Deg C	mm ² /s b	Min	1.400	2.000	3.000	2.000	ISO 3104	D 445
		Max	5.500	6.000	6.000	11.00		
Flash Point	Deg C	Min	-	60	60	60	ISO 2719	D 93
		Min	43	-	-	-		
Hydrogen Sulphide	mg/kg	Max	2.00	2.00	2.00	2.00	IP 570	IP 570
Acid number	mg KOH/kg	Max	0.5	0.5	0.5	0.5	D644	IP 177
Pour Point	Deg C							
- Winter Quality		Max	-6	-6	-6	0	ISO 3016	D 97
- Summer Quality		Max	0	0	0	6		
Cloud Point	Deg C	Max	-16	-	-	-	ISO 3015	D 2500
Sulfur ^b	wt.%	Max	1.00	1.50	1.50	2.00	ISO 8754/ISO14596	D 4294
Cetane Index		Min	45	40	40	35	ISO 4264	D 976
Carbon Residue 10 % Bottoms	wt.%	Max	0.30	0.30	0.30	-	ISO 10370	D 4530
Carbon residue	wt.%	Max	-	-	-	0.30		
Ash	wt.%	Max	0.010	0.010	0.010	0.010	ISO 6245	D 482
Appearance			B & C	B & C	B & C	e,f,g	Visual	Visual
Total Sediment Existent	wt.%	Max	-	-		0.10 ^e	ISO 10307-1	IP 375 / D 4870
Oxidation stability	g/m ³	Max	25	25	25	25 ^f	ISO 12205	D 2274
Water	vol.%	Max	-	-	-	0.30 ^e	ISO 3733	D 95
Lubricity, corrected wear scar diameter (wsd 1,4) at 60°C	µm	Max	520	520	520	520 ^g	ISO 10307-1	IP 450

Note :

- a. $1 \text{ mm}^2/\text{s} = 1 \text{ cSt}$
- b. Notwithstanding the limits given, the purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations. See Annex C of ISO 8217 2010 4th Edition
- c. Due to reasons stated in Annex D, the implementation date for compliance with the limit shall be July 2012. Until such time, the specified value is given for guidance. For distillate fuels the precision data are currently being developed.
- d. Purchasers should ensure that this pour point is suitable for the equipment on board, especially if the ship operates in cold climates.
- e. If the sample is not bright and clear, the total sediment by hot filtration and water tests shall be required, see section 7.4 and 7.6 of the ISO 8217 2010 4th Edition
- f. If the sample is not bright and clear, the test cannot be undertaken and hence the oxidation stability limit shall not apply
- g. If the sample is not bright and clear, the test cannot be undertaken and hence the lubricity limit shall not apply
- h. This requirement is applicable to fuels with a sulfur content below 500 mg/kg (0.050 mass%)
- j. If the sample is dyed and not transparent, then the water limit and test method as given in section 7.6 of the ISO 8217 4th Edition, shall apply.

Global HQ :

387 Park Avenue South, 5th Floor,
Manhattan, New York, NY 10016, USA

+1 (646)-494-5101

West Africa HQ:

Old Maritime House, Government
Wharf, Off Wallace Johnson Street,
Freetown, Sierra Leone.

+232 (0)76 604 664

African HQ :

2nd Floor, West Tower, Nelson Mandela
Square, Crn 5th & Maude Street, Sandton
2196, Johannesburg, South Africa

+27 11 881 5942

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