

ISO 8217 : 2005 E

Characteristic	Units	Limits	DMX	DMA	DMB	DMC	ISO
Density at 15 °C	kg/m ³	max	-	890.0	900.0	920.0	3675 or 12185
Viscosity at 40 °C	mm ² /s b	min	1.4	1.5	-	-	3104
Viscosity at 40 °C	mm ² /s b	max	5.5	6.0	11.0	14.0	3104
Flash Point	°C	min	43	60	60	60	2719
Pour Point (upper) c							
- Winter Quality	°C	max	-	-6	0	0	3016
- Summer Quality	°C	max	-	0	6	6	3016
Cloud Point	°C	max	-16 d	-	-	-	3015
Sulfur	%(m/m)	max	1.00	1.5	2.00 e	2.0 e	8754 or 14596
Cetane Index	-	min	45	40	35	-	4264
Carbon residue on 10% (V/V) distillation bottoms	%(m/m)	max	0.30	0.30	-	-	10370
Carbon residue	%(m/m)	max	-	-	0.30	2.50	10370
Ash	%(m/m)	max	0.01	0.01	0.01	0.05	6245
Appearance f	-	-	Clear + bright				
Total sediment, existent	%(m/m)	max	-	-	0.10 f	0.10	10307-1
Water	%(V/V)	max	-	-	0.3 f	0.3 f	3733
Vanadium	mg/kg	max	-	-	-	100	14597, IP 501 or IP 470
Aluminium plus silicon	mg/kg	max	-	-	-	25	10478, IP 501 or IP 470
Used lubricating oil (ULO)			**** The fuel shall be free of ULO (g) ****				
- Zinc	mg/kg	max	-	-	-	15	IP 501 or IP 470
- Phosphorus	mg/kg	max	-	-	-	15	IP 501 or IP 500
- Calcium	mg/kg	max	-	-	-	30	IP 501 or IP 470

a. Note that although predominantly consisting of distillate fuel, the residual oil proportion can be significant.

b. 1 mm²/s = 1 cSt

c. Purchasers should ensure that this pour point is suitable for the equipment on board, especially if the vessel operates in both the northern and southern hemispheres.

d. This fuel is suitable for use without heating at ambient temperatures down to - 16 °C.

e. A sulfur limit of 1,5 % (m/m) will apply in SOx emission control areas designated by the International Maritime Organization, when its relevant protocol enters into force. There may be local variations, for example the EU requires that sulphur content of certain distillate grades be limited to 0,2 % (m/m) in certain applications. See 0.3 and reference [7].

f. If the sample is clear and with no visible sediment or water, the total sediment existent and water tests shall not be required. See 7.4 and 7.5.

g. A fuel shall be considered to be free of used lubricating oils (ULOs) if one or more of the elements zinc, phosphorus and calcium are below or at the specified limits. All three elements shall exceed the same limits before a fuel shall be deemed to contain ULOs.