



Heavy Fuel Oil Specification

ISO 8217-2012

Characteristic	Unit	Limit	Category ISO-F-											Test method
			RMA	RMB	RMD	RME	RMG				RMK			
			10 ^a	30	80	180	180	380	500	700	380	500	700	
Kinematic viscosity at 50 °C ^b	mm ² /s	Max.	10.00	30.00	80.00	180.0	180.0	380.0	500.0	700.0	380.0	500.0	700.0	ISO 3104
Density at 15 °C	kg/m ³	Max.	920.0	960.0	975.0	991.0	991.0				1010.0			ISO 3675 or ISO 12185
CCAI	--	Max.	850	860	860	860	870				870			
Sulfur ^c	% (m/m)	Max.	5 or Statutory requirements											ISO 8754 ISO 14596
Flash point	°C	Min.	60.0	60.0	60.0	60.0	60.0				60.0			ISO 2719
Hydrogen sulfide	mg/kg	Max.	2.00	2.00	2.00	2.00	2.00				2.00			
Acid number ^d	mg KOH/g	Max.	2.5	2.5	2.5	2.5	2.5				2.5			ASTM D664
Total sediment aged	% (m/m)	Max.	0.10	0.10	0.10	0.10	0.10				0.10			ISO 10307-2
Carbon residue: micro method	% (m/m)	Max.	2.50	10.00	14.00	15.00	18.00				20.00			ISO 10370

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			10 ^a	30	80	180	180	380	500	700	380	500		700	
Pour point (upper) ^e															
Winter quality	°C	Max.	0	0	30	30				30			30		ISO 3016
Summer quality	°C	Max.	6	6	30	30				30			30		
Water	% (V/V)	Max.	0.30	0.50	0.50	0.50			0.50				0.50		ISO 3733
Ash	% (m/m)	Max.	0.040	0.070	0.070	0.070			0.100				0.150		ISO 6245
Vanadium	mg/kg	Max.	50	150	150	150			350				450		ISO 14597
Sodium	mg/kg	Max.	50	100	100	50			100				100		
Aluminium plus silicon	mg/kg	Max.	25	40	40	50			60				60		ISO 10478
Used lubricating oils (ULO): calcium and zinc or calcium and phosphorus	mg/kg mg/kg	--.	The fuel shall be free from ULO. A fuel shall be considered to contain ULO when either one of the following conditions is met: calcium > 30 and zinc > 15 or calcium > 30 and phosphorus > 15												
1	The purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations.														
2	1mm ² /s = 1 cSt														
3	Purchasers shall ensure that this pour point is suitable for the equipment on board, especially if the ship operates in cold climates.														