


ISO 8217 : 2017 - REQUIREMENTS FOR MARINE RESIDUAL FUELS

	Unit	Limit	Category ISO-F-											Test method reference
			RMA	RMB	RMD	RME	RMG				RMK			
			10	30	80	180	180	380	500	700	380	500	700	
Kinematic viscosity at 50 °C	mm ² /s a	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; see 6.1
CCAI	–	Max	850	860	860	860	870						see 6.2	
Sulfur b	mass %	Max	Statutory requirements											ISO 8754 or ISO 14596 or ASTM D4294; see 6.3
Flash point	°C	Min	60.0	60.0	60.0	60.0	60.0						ISO 2719; see 6.4	
Hydrogen sulfide	mg/kg	Max	2.00	2.00	2.00	2.00	2.00						IP 570; see 6.5	
Acid number c	mg KOH/g	Max	2.5	2.5	2.5	2.5	2.5						ASTM D664; see 6.6	
Total sediment – Aged	mass %	Max	0.10	0.10	0.10	0.10	0.10						ISO 10307-2; see 6.9	
Carbon residue – Micro method	mass %	Max	2.50	10.00	14.00	15.00	18.00				20.00			ISO 10370
Pour point (upper) d	winter	°C	Max	0	0	30	30	30						ISO 3016
	summer	°C	Max	6	6	30	30	30						
Water	volume %	Max	0.30	0.50	0.50	0.50	0.50						ISO 3733	
Ash	mass %	Max	40	70	70	70	100				150			ISO 6245
Vanadium	mg/kg	Max	50	150	150	150	350				450			IP 501, IP 470 or ISO 14597; see 6.14
Sodium	mg/kg	Max	50	100	100	50	100						IP 501, IP 470; see 6.15	
Aluminium plus silicon	mg/kg	Max	25	40	40	50	60						IP 501, IP 470 or ISO 10478; see 6.16	
Used lubricating oil (ULO): – Calcium and zinc; or	mg/kg	–	Calcium > 30 and zinc > 15 or											IP 501 or IP 470, IP 500; see 6.17

a 1 mm²/s = 1 cSt.

b The purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations. See Introduction.

c See Annex E.

d Purchasers should confirm that this pour point is suitable for the ship's intended area of operation.