Residual Marine Fuel

ISO 8217:2017 (E)

Characteristics		Unit	Limit	Category ISO –F–											Test method(s) and references
				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	10,0	30,0	80,0	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; ⊂→6.1
CCAI			Max	850	860	860	860	870				870			⊂→6.2
Sulfur [B]		mass%	Max	Statutory requirements											ISO 8754 or ISO 14596 or ASTM D4294; ⊂→6.3
Flash point		°C	Min	60,0	60,0	60,0	60,0	60,0				60,0			ISO 2719; ⊂→6.4
Hydrogen sulfide		mg/kg	Max	2,00	2,00	2,00	2,00	2,00				2,00			IP 570; ⊂→6.5
Acid number [C]		mg KOH/g	Max	2,5	2,5	2,5	2,5	2,5				2,5			ASTM D664; ⊂→6.6
Total sediment – Aged		mass %	Max	0,10	0,10	0,10	0,10	0,10				0,10			ISO 10307-2; ⊂→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				30			ISO 3016
	summer	°C	Max	6	6	30	30	30				30			
Water		volume %	Max	0,30	0,50	0,50	0,50	0,50				0,50			ISO 3733
Ash		mass %	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			IP 501, IP 470 or ISO 14597; ⊂→6.14
Sodium		mg/kg	Max	50	100	100	50	100				100			IP 501, IP 470; ⊂→6.15
Aluminium plus silicon		mg/kg	Max	25	40	40	50	60				60			IP 501, IP 470 or ISO 10478; ⊂→6.16
Used lubricating oil (ULO): Calcium and zinc or Calcium and phosphorus		mg/kg		Calcium >30 and zinc >15 or Calcium >30 and phosphorus >15											IP 501 or IP 470, IP 500; ⊂→6.17

[A] 1 mm^2/s = 1 cSt. [B] The purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations. See Introduction. [C] ⊂→Annex E. [D] The purchaser should confirm that this pour point is suitable for the ship's intended area of operation.