

Marine Fuel Oil

Characteristic	Unit	Limit	RME 180	RMG 380	ISO Test Method	Alternative
Viscosity @ 50 Deg C ^b	mm ² /s	Max	180.0	380.0	ISO 3104	D 445
Density @ 15 Deg C	Kg/m ³	Max	991.0	991.0	ISO 3675/ISO 12185	D 1298/D4052
CCAI		Max	860.0	870.0	Calculation	Calculation
Flash Point	Deg C	Min	60.0	60.0	ISO 2719	D 93
Pour Point						
- Winter Quality	Deg C	Max	30	30	ISO 3016	D 97
- Summer Quality		Max	30	30		
Carbon residue	wt.%	Max	15.00	18.00	ISO 10370	D4530
Ash	wt.%	Max	0.070	0.100	ISO 6245	D 482
Water	vol.%	Max	0.50	0.50	ISO 3733	D 95
Hydrogen Sulfide ^d	mg/kg	Max	2.00	2.00	IP 570	IP 570
Acid Number ^e	mg KOH/g	Max	2.5	2.5	ASTM D664	IP 177
Sulfur ^c	wt.%	Max			ISO 8754/ISO14596	D 4294
Total Sediment Accelerated	wt.%	Max	0.10	0.10	ISO 10307-2	IP 390b
Vanadium	wt.ppm	Max	150	350	ISO 14597/IP501/IP470	IP 501 / IP 377
Sodium	wt.ppm	Max	50	100	ISO 14597/IP501/IP470	IP 501 / IP 377
Aluminium + Silicon	wt.ppm	Max	50	60	ISO 10478/IP501/IP470	IP 501 / IP 377
Used Lubricating Oil					ISO 10478/IP501/IP471	ISO 0478/IP501/IP472

Remarks:

a. This category is based on a previously defined distillate DMC category that was described in ISO 8217:2005, Table 1. ISO8217:2005 has been withdrawn.

b. 1 mm²/s=1 cSt

c. The purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations. See 0.3 and Annex C of ISO8217:2010

d. Due to reasons stated in ISO8217:2010, the implementation date for compliance with the limit shall be 1 July 2012. Until such time, the specified value is given for guidance.

e. See Annex H, ISO 8217:2010

f. Purchasers shall ensure that the pour point is suitable for equipment on board, especially if the ship operates in cold climates.