

Residual Marine Fuels & Distillate Marine Fuels - ISO 8217: 2005(E)

PARAMETER	UNIT	LIMIT	MF 380CST			MF 180CST		MDO		MGO	
			RMG380	RMH380	RMK380	RME180	RMF180	DMB	DMC	DMX	DMA
Density at 15 °C	kg/m ³	max	991.0		1010.0	991.0		900.0	920.0	-	890.0
Viscosity at 40 °C	mm ² /s ^a	max						11.0	14.0	5.5	6.0
		min						-	-	1.4	1.5
Viscosity at 50 °C	mm ² /s	max	380.0			180.0					
Water	% v/v	max	0.5			0.5		0.3	0.3	-	-
Micro Carbon Residue at 10% residue	% m/m	max						-	-	0.3	0.3
Micro Carbon Residue	% m/m	max	18	22		15	20	0.3	2.5	-	
Sulfur ^c	% m/m	max	4.5			4.5		2.0	2.0	1.0	1.5
Ash	% m/m	max	0.15			0.1	0.15	0.01	0.15	0.01	0.01
Vanadium	mg/kg	max	300	600		200	500	-		-	-
Flash point	°C	min	60			60		60	60	43	60
Pour point ^b	summer	°C	30			30		6	6	-	0
	winter	°C	30			30		0	0	-	-6
Aluminium + silicon	mg/kg	max	80			80		-	25	-	-
Total sediment (Existent)	% m/m	max						0.1		-	-
Total sediment (Potential)	% m/m	max	0.1			0.1					
Cloud point	°C	max						-	-	-16	-
Calculated Centane Index		min						35	-	45	40
Appearance								-	-	Clear & Bright	
Zinc ^d	mg/kg	max	15					-	15	-	
Phosphorus ^d	mg/kg	max	15					-	15	-	
Calcium ^d	mg/kg	max	30					-	30	-	

a. Annex C gives a brief viscosity/temperature table, for information purposes only. 1mm²/sa = 1cSt

b. 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.

c. 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 comes into force. There may be local variations.

d. A fuel shall be considered to be free from ULO if one of 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 ULO.