Requirements for Marine Distillate Fuels

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Characteristic	Limit	Category ISO-F				Test Method Reference
		DMX	DMA	DMB	DMC	
Appearance		Visual		-	-	(See 6.2)
Density at 15 ºC,kg/m^3	max.	1)	890.0	900.0	920.0	ISO 3675 or ISO 12185 (see also 6.3)
Viscosity at 40 ºC, mm ^{2}/s 2)	min. max.	1.40 5.50	1.50 6.0	- 11.0	- 14.0	ISO 3104 ISO 3104
Flash point,ºC	min.	43	60	60	60	ISO 2719 (see also 6.4)
Pour point (upper), ºC3) - winter quality - summer quality	 max. max.	 - -	 -6 0	 0 6	 0 6	 ISO 3016 ISO 3016
Cloud point, ºC	max.	-16$^{4)}$	-	-	-	ISO 3015 (see also 6.5)
Sulfur, % (m/m)	max.	1.0	1.5	2.0	2.0	ISO 8754 (see also 6.6)
Cetane number	min.	45	40	35	-	ISO 5165 (see also 6.7)
Carbon residue [micro method, 10% (V/V) distillation bottoms], % (m/m) Carbon residue (micro method), % (m/m)	max. max.	0.30 -	0.30 -	- 0.30	- 2.50	ISO 10370 ISO 10370
Ash, % (m/m)	max.	0.01	0.01	0.01	0.05	ISO 6245
Sediment, % (m/m)	max.	-	-	0.07	-	ISO 3735
Total existent sediment, % (m/m)	max.	-	-	-	0.10	ISO 10307-1
Water, % (V/V)	max.	-	-	0.3	0.3	ISO 3733
Vanadium, mg/kg	max.	-	-	-	100	ISO 14597
Aluminum plus silicon, mg/kg	max.	-	-	-	25	ISO 10478 (see also 6.8)

1) In some geographical areas, there may be a maximum limit.
2) 1 mm^2/s = 1cSt.
3) 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.
4) This fuel is suitable for use without heating at ambient temperatures down to - 15Cº.