



ISO 8217 1996 FUEL STANDARD

ISO 8217 1996 Fuel Standard
for marine distillate fuels

REQUIREMENTS FOR MARINE DISTILLATE FUELS

Characteristic	Limit	Category ISO-F-				Test method reference
		DMX	DMA	DMB	DMC	
Appearance		Visual		–	–	See 6.2
Density at 15 °C, kg/m ³	max.	^a	890,0	900,0	920,0	ISO 3675 or ISO 12185 (see also 6.3)
Viscosity at 40 °C, mm ² /s ^b	min. max.	1,40 5,50	1,50 6,00	– 11,0	– 14,0	ISO 3104 ISO 3104
Flash point, °C	min.	43	60	60	60	ISO 2719 (see also 6.4)
Pour point (upper), °C ^c – winter quality – summer quality	max. max.	– –	–6 0	0 6	0 6	ISO 3016 ISO 3016
Cloud point, °C	max.	–16 ^d	–	–	–	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)		0,30	0,30	–	–	ISO 10370
Carbon residue (micro method), % (m/m)		–	–	0,30	2,50	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
Aluminium plus silicon, mg/kg	max.	–	–	–	25	ISO 10478 (see also 6.8)

a In some geographical areas, there may be a maximum limit

b 1 mm²/s = 1 cSt.

c 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.

d This fuel is suitable for use without heating at ambient temperatures down to – 15 °C.

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ISO 8217 1996 FUEL STANDARD

ISO 8217 1996 Fuel Standard for marine residual fuels

REQUIREMENTS FOR MARINE RESIDUAL FUELS

Characteristic	Limit	Category ISO-F-														Test method reference	
		RMA 10	RMB 10	RMC 10	RMD 15	RME 25	RMF 25	RMG 35	RMH 35	RMK 35	RMH 45	RMK 45	RML 45	RMH 55	RMK 55		RML 55
Density at 15 °C, kg/m ³	max.	975,0	981,0		985,0	991,0		991,0		1010,0	991,0	1010,0	–	991,0	1010,0	–	ISO 3675 or ISO 12185 (see also 6.3)
Kinematic viscosity at 100 °C, mm ² /s ^a	max.	10,0			15,0	25,0		35,0			45,0			55,0			ISO 3104
Flash point, °C	min.	60			60	60		60			60			60			ISO 2719 (see also 6.4)
Pour point (upper), °C ^b – winter quality – summer quality	max.	0	24		30	30		30			30			30			ISO 3016 ISO 3016
	max.	6	24		30	30		30			30			30			
Carbon residue, % (m/m)	max.	10		14	14	15	20	18	22		22		–	22		–	ISO 10370
Ash, % (m/m)	max.	0,10			0,10	0,10	0,15	0,15	0,20		0,20			0,20			ISO 6245
Water, % (V/V)	max.	0,5			0,8	1,0		1,0			1,0			1,0			ISO 3733
Sulfur, % (m/m)	max.	3,5			4,0	5,0		5,0			5,0			5,0			ISO 8754 (see also 6.6)
Vanadium, mg/kg	max.	150		300	350	200	500	300	600		600			600			ISO 14597
Aluminium plus silicon, mg/kg	max.	80			80	80		80			80			80			ISO 10478 (see also 6.8)
Total sediment, potential, % (m/m)	max.	0,10			0,10	0,10		0,10			0,10			0,10			ISO 10307-2 (see also 6.9)

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

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.

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