

Marine Gas Oil

Distillate Marine Fuels
ISO 8217 2010 Specification of Marine Fuels

Characteristics	Unit	Limit	Category				Test method reference
			DMX	DMA	DMZ	DMB	
Kinematic viscosity at 40 °Ca	mm ² /s	max.	5,500	6,000	6,000	11,00	ISO 3104
		min.	1,400	2,000	3,000	2,000	
Density at 15 °C	kg/m ³	max.	—	890,0	890,0	900,0	see 7.1 ISO 3675 or ISO 12185
Cetane index	—	min.	45	40	40	35	ISO 4264
Sulfurb	mass %	max.	1,00	1,50	1,50	2,00	see 7.2 ISO 8754, ISO 14596
Flash point	°C	min.	43	60	60	60	see 7.3 ISO 2719
Hydrogen sulfide ^c	mg/kg	max.	2,00	2,00	2,00	2,00	IP 570
Acid number	mg KOH/g	max.	0,5	0,5	0,5	0,5	ASTM D664
Total sediment by hot filtration	mass %	max.	—	—	—	0,10 ^e	see 7.4 ISO 10307-1
Oxidation stability	g/m ³	max.	25	25	25	25f	ISO 12205
Carbon residue: micro method on the 10 % volume distillation residue	mass %	max.	0,30	0,30	0,30	—	ISO 10370
Carbon residue: micro method	mass %	max.	—	—	—	0,30	ISO 10370
Cloud point	°C	max.	-16	—	—	—	ISO 3015
Pour point (upper) ^d	winter quality	max.	-6	-6	-6	0	ISO 3016
	Summer quality	max.	0	0	0	6	ISO 3016
Appearance	—	—	Clear and bright ^h				see 7.6
Water	volume %	max.	—	—	—	0,30 ^e	ISO 3733
Ash	mass %	max.	0,010	0,010	0,010	0,010	ISO 6245
Lubricity, corrected wear scar diameter (wsd 1,4) at 60 °C ^h	µm	max.	520	520	520	520g	ISO 12156-1

a 1 mm²/s -1 cSt.

b Notwithstanding the limits given, the purchaser shall define the maximum sulfur content in accordance with relevant statutory limitations.

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

e If the sample is not clear and bright, the total sediment by hot filtration and water tests shall be required.

f If the sample is not clear and bright, the test cannot be undertaken and hence the oxidation stability limit shall not apply.

g If the sample is not clear and bright, the test cannot be undertaken and hence the lubricity limit shall not apply.

h This requirement is applicable to fuels with a sulfur content below 500 mg/kg (0,050 mass %).