



# GLANDER

## International Inc.

Established 1961

### ISO 8217:1996 [E] Marine Fuel Specifications

**\*Requirements for Marine Distillate Fuels**

Characteristics	Limit	Category, ISO-F			
		DMX	DMA	DMB	DMC
Appearance		Visual		----	----
Density at 15° Ckg/m <sup>3</sup>	max	(1)	890.0	900.0	920.0
Viscosity at 40° C mm <sup>2</sup> /s (2)	min	1.40	1.50	----	----
	max	5.50	6.00	11.00	14.00
Flash Point, C	min	43.00	60.00	60.00	60.00
Pour Point (upper), C (3)					
Winter Quality	max	----	-6	0	0
Summer Quality	max	----	0	6	6
Cloud Point, C	max	-16 (4)	----	----	----
Sulfur, % (m/m)	max	1.0	1.5	2.0	2.0
Cetane Number	min	45	40	35	----
Carbon residue, (micro method 10% (v/v) distillation bottoms), % (m/m)	max	0.30	0.30	----	----
Carbon residue (micro method), % (m/m)	max	----	----	0.30	2.50
Ash, % (m/m)	max	0.01	0.01	0.01	0.05
Sediment, % (m/m)	max	----	----	0.07	----
Total existent sediment, % (m/m)	max	----	----	----	0.10
Water, % (V/V)	max	----	----	0.30	0.30
Vanadium, mg/kg	max	----	----	----	100.0
Aluminium plus silicon, mg/kg	max	----	----	----	25.0

(1) In some geographical areas there may be a maximum limit.

(2) 1mm<sup>2</sup>/s = 1CST

(3) Purchasers should ensure that this pour point is suitable for the equipment on board, especially if the vessel is operating in both Northern and Southern hemispheres.

(4) This fuel is suitable for use without heating at ambient temperatures down to -15°C.

www.glander.net

email: bunkers@glander.net

561-625-5500



# GLANDER

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## ISO 8217:1996 [E] Marine Fuel Specifications

### \*Requirements for Marine Residual Fuels

Characteristics	Limits	Category, ISO-F							
		RMA 10	RMB 10	RMC 10	RMD 15	RME25	RMF 25	RMG 35	RMH 35
Density at 15° C kg/m <sup>3</sup>	max	975.00	981.00		985.00	991.00		991.00	
Kinematic Viscosity at 100° C mm <sup>2</sup> /s (1)	max	10.00			15.00	25.00		35.00	
Flash Point (upper), C	min	60.00			60.00	60.00		60.00	
Pour Point (upper),C (2)									
Winter Quality	max	0.00	24.00		30.00	30.00		30.00	
Summer Quality	max	6.00	24.00		30.00	30.00		30.00	
Carbon Residue, % (m/m)	max	10.00		14.00	14.00	15.00	20.00	18.00	22.00
Ash, % (m/m)	max	0.10			0.10	0.10	0.15	0.15	0.20
Water, % (V/V)	max	0.50			0.80	1.00		1.00	
Sulfur, % (m/m)	max	3.50			4.00	5.00		5.00	
Vanadium, mg/kg	max	150		300	350	200	500	300	600
Aluminium plus silicon, mg/kg	max	80.00			80.00	80.00		80.00	
Total sediment potential, % (m/m)	max	0.10			0.10	0.10		0.10	

(1) Annex C gives a brief viscosity/temperature table, for informational purposes only. 1mm<sup>2</sup>/s = 1CST  
(2) Purchasers should ensure that this pour point is suitable for the equipment on board, especially if the vessel is operating in both Northern and Southern hemispheres.

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