

INTERNATIONAL STANDARD ISO 8217:2010 (E)

Petroleum Products, Specifications of residuals marine fuels

Designation ISO Fuel														
Characteristics	Unit	Limit	CATEGORY ISO -F-											Test method reference
			RMA	RMB	RMD	RME	RMG			RMK				
			10 (a)	30	80	180	180	380	500	700	380	500	700	
Kinematic Viscosity at 50°C (b)	mm ² /s	max.	10.00	30.00	80.00	180.00	180.0	380.0	500.0	700.0	380.0	500.0	700.0	ISO 3104
Density at 15°C	kg/m ³	max.	920.0	960.0	975.0	991.0	991.0			1010.0			see 7.1 ISO 3675 or ISO 12185	
CCAI	-	max.	850	860	860	860	870			870			see 6.3 a)	
Sulfur (c)	mass %	max.	Statutory requirements											see 7.2 ISO 8754 ISO 14596
Flash Point	°C	min.	60.0	60.0	60.0	60.0	60.0			60.0			see 7.3 ISO 2719	
Hydrogen Sulfide (d)	mg/kg	max.	2.00	2.00	2.00	2.00	2.00			2.00			IP 570	
Acid Number	Mg KOH/g	max.	2.5	2.5	2.5	2.5	2.5			2.5			ASTM D664	
Total Sediment aged	mass %	max.	0.10	0.10	0.10	0.10	0.10			0.10			see 7.5 ISO 10307-2	
Carbon Residue - micro method	mass %	max.	2.50	10.00	14.00	15.00	18.00			20.00			ISO 10370	
Pour point (upper) f	Winter Quality	°C	max.	0	0	30	30	30			30			ISO 3016
	Summer Quality	°C	max.	6	6	30	30	30			30			ISO 3016
Water	Vol %	max.	0.30	0.50	0.50	0.50	0.50			0.50			ISO 3733	
Ash	mass %	max.	0.040	0.070	0.070	0.070	0.100			0.150			ISO 6245	
Vanadium	mg/kg	max.	50	150	150	150	350			450			see 7.7 IP 501, IP 470 or ISO 14597	
Sodium	mg/kg	max.	50	100	100	50	100			100			see 7.8 IP 501 IP470	
Aluminum plus silicon	mg/kg	max.	25	40	40	50	60			60			see 7.9 IP 501, IP 470 or ISO 10478	
Used Lub oils (ULO) Calcium and Zinc: or Calcium and phosphorus	mg/kg	-	The fuel shall be free from ULO. A fuel shall be considered to contain ULO when either one of the following conditions is met: Calcium > 30 and Zinc > 15 or Calcium > 30 and phosphorus > 15											see 7.10 IP 501 or IP470 IP 500