

MARINE RESIDUAL FUELS

Parameter	Unit	Limit	RMA ^a	RMB	RMD	RME	RMG				RMK		
			10	30	80	180	180	380	500	700	380	500	700
Viscosity at 50°C	mm ² /s	Max	10.00	30.00	80.00	180.0	180.0	380.0	500.0	700.0	380.0	500.0	700.0
Density at 15°C	kg/m ³	Max	920.0	960.0	975.0	991.0	991.0				1010.0		
Micro Carbon Residue	% m/m	Max	2.50	10.00	14.00	15.00	18.00				20.00		
Aluminium + Silicon	mg/kg	Max	25	40	50	60							
Sodium	mg/kg	Max	50	100	50	100							
Ash	% m/m	Max	0.040	0.070		0.100				0.150			
Vanadium	mg/kg	Max	50	150		350				450			
CCAI	-	Max	850	860		870							
Water	% V/V	Max	0.30	0.50									
Pour point (upper) ^b , Summer	°C	Max	6		30								
Pour point (upper) ^b , Winter	°C	Max	0		30								
Flash point	°C	Min	60.0										
Sulphur ^c	% m/m	Max	Statutory requirements										
Total Sediment, aged	% m/m	Max	0.10										
Acid Number ^e	mgKOH/g	Max	2.5										
Used lubricating oils (ULO): Calcium and Zinc; or Calcium and Phosphorus	mg/kg	-	<p>The fuel shall be free from ULO, and shall be considered to contain ULO when either one of the following conditions is met:</p> <p>Calcium > 30 and zinc >15; or</p> <p>Calcium > 30 and phosphorus > 15.</p>										
Hydrogen sulphide ^d	mg/kg	Max	2.00										
^a	This residual marine fuel grade is formerly DMC distillate under ISO 8217:2005.												

b	Purchasers shall ensure that this pour point is suitable for the equipment on board, especially in cold climates.
c	The purchaser shall define the maximum sulphur content according to the relevant statutory requirements.
d	Effective only from 1 July 2012.
e	<p>Strong acids are not acceptable, even at levels not detectable by the standard test methods for SAN.</p> <p>As acid numbers below the values stated in the table do not guarantee that the fuels are free from problems associated with the presence of acidic compounds, it is the responsibility of the supplier and the purchaser to agree upon an acceptable acid number.</p>

Source: ISO 8217 Fourth Edition 2010-06-15

Petroleum products - Fuels (class F) - Specifications of marine fuels