

Parameter	Unit		RMA 30	RMB 30	RMD 80	RME 180	RMF 180	Test Method
Density @ 15 °C	kg/m <sup>3</sup>	Max	960.0	975.0	980.0	991.0	991.0	ISO 12185 / 3675
Viscosity @ 50°C <sup>1</sup>	mm <sup>2</sup> /s	Max	30.0	30.0	80.0	180.0	180.0	ISO 3104
Water	%V/V	Max	0.5	0.5	0.5	0.5	0.5	ISO 3733
Micro Carbon Residue	%m/m	Max	10	10	14	15	20	ISO 10370
Sulfur <sup>3</sup>	%m/m	Max	3.5	3.5	4.0	4.5	4.5	ISO 14586/8754
Total Sediment Potential	%m/m	Max	0.10	0.10	0.10	0.10	0.10	ISO 10307-2
Ash	%m/m	Max	0.10	0.10	0.10	0.10	0.15	ISO 6245
Vanadium	mg/kg	Max	150	150	350	200	500	ISO 14597
Aluminium + Silicon	mg/kg	Max	80	80	80	80	80	ISO 10478
Flash Point	°C	Min	60	60	60	60	60	ISO 2719
Pour Point, Summer <sup>2</sup>	°C	Max	6	24	30	30	30	ISO 3016
Pour Point, Winter <sup>2</sup>	°C	Max	0	24	30	30	30	ISO 3016
			<b>The fuel shall be free of Used Lubrication Oil (ULO).</b> A fuel shall be considered to be free of ULO if one or more of the elements Zinc, Phosphorous and Calcium are below or at the specified limits. <b>All</b> three elements must exceed the same limits before a fuel shall be deemed to contain ULO.					
Zinc	mg/kg	-	15					IP 501
Phosphorous	mg/kg	-	15					IP 501
Calcium	mg/kg	-	30					IP 501

<sup>1</sup> Annex C gives a brief viscosity / temperature table, for information purposes only. 1 mm<sup>2</sup>/s = 1 cSt

<sup>2</sup> Purchasers should ensure that his pour point is suitable for the equipment on board, especially if the vessel operators in both the northern and southern hemispheres.

<sup>3</sup> A sulfur limit of 1.5% m/m will apply in SO<sub>x</sub> Emission Control Areas designated by the International Maritime Organization, when its relevant Protocol becomes in force.



Parameter	Unit		RMG 380	RMH 380	RMK 380	RMH 700	RMK 700	Test Method
Density @ 15 °C	kg/m <sup>3</sup>	Max	991.0	991.0	1010.0	991.0	1010.0	ISO 12185 / 3675
Viscosity @ 50°C <sup>1</sup>	mm <sup>2</sup> /s	Max	380.0	380.0	380.0	700.0	700.0	ISO 3104
Water	%V/V	Max	0.5	0.5	0.5	0.5	0.5	ISO 3733
Micro Carbon Residue	%m/m	Max	18	22	22	22	22	ISO 10370
Sulfur <sup>3</sup>	%m/m	Max	4.5	4.5	4.5	4.5	4.5	ISO 14596/8754
Total Sediment Potential	%m/m	Max	0.10	0.10	0.10	0.10	0.10	ISO 10307-2
Ash	%m/m	Max	0.15	0.15	0.15	0.15	0.15	ISO 6245
Vanadium	mg/kg	Max	300	600	600	600	600	ISO 14597/ IP 501
Aluminium + Silicon	mg/kg	Max	80	80	80	80	80	ISO 10478
Flash Point	°C	Min	60	60	60	60	60	ISO 2719
Pour Point, Summer <sup>2</sup>	°C	Max	30	30	30	30	30	ISO 3016
Pour Point, Winter <sup>2</sup>	°C	Max	30	30	30	30	30	ISO 3016
			<b>The fuel shall be free of Used Lubrication Oil (ULO).</b> A fuel shall be considered to be free of ULO if one or more of the elements Zinc, Phosphorous and Calcium are below or at the specified limits. <b>All</b> three elements must exceed the same limits before a fuel shall be deemed to contain ULO.					
Zinc	mg/kg	-	15					IP 501
Phosphorous	mg/kg	-	15					IP 501
Calcium	mg/kg	-	30					IP 501

<sup>1</sup> Annex C gives a brief viscosity / temperature table, for information purposes only. 1 mm<sup>2</sup>/s = 1 cSt

<sup>2</sup> Purchasers should ensure that his pour point is suitable for the equipment on board, especially if the vessel operators in both the northern and southern hemispheres.

<sup>3</sup> A sulfur limit of 1.5% m/m will apply in SO<sub>x</sub> Emission Control Areas designated by the International Maritime Organization, when its relevant Protocol becomes in force.