

# Marine fuel oil ISO 8217:2017

## Information on specifications and tests



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ExxonMobil offers a range of marine distillate fuels and heavy fuel oils. Our integrated supply chain enables the delivery of high-quality fuels in a safe and timely manner. Experienced technical support and sales teams can advise you on the most appropriate fuel for your fleet, as well as provide guidance for switching between different grades.

A summary of marine fuel oils follows.

Test	Unit	Test Method			Limits	Grade										
		ASTM	IP	ISO		RMA 10	RMB 30	RMD 80	RME 180	RMG 180	RMG 380	RMG 500	RMG 700	RMK 380	RMK 500	RMK 700
Viscosity at 50°C	mm <sup>2</sup> /s (cSt)	D445	71	3104	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 <sup>3</sup>	D1298	160	3675 or 12185	max.	920.0	960.0	975.0	991.0	991.0	991.0	991.0	991.0	1010.0	1010.0	1010.0
CCAI	-	Calculated			max.	850	860	860	860	870	870	870	870	870	870	870
Sulphur	mass %	D4294	336	8754, 14596	max.	Statutory requirements										
Flash point	°C	D93	34	2719	min.	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Hydrogen sulphide	mg/kg	-	570	-	max.	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Acid number	mg KOH/g	D664	-	-	max.	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Total sediment aged	mass %	-	390	10307-2	max.	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Carbon residue, micro	mass %	D4530	398	10370	max.	2.50	10.00	14.00	15.00	18.00	18.00	18.00	18.00	20.00	20.00	20.00
Pour point																
Winter quality	°C	D97	15	3016	max.	0	0	30	30	30	30	30	30	30	30	30
Summer quality	°C	D97	15	3016	max.	6	6	30	30	30	30	30	30	30	30	30
Water	volume %	D95	74	3733	max.	0.30	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Ash	mass %	D482	4	6245	max.	0.040	0.070	0.070	0.070	0.100	0.100	0.100	0.100	0.150	0.150	0.150
Vanadium	mg/kg	-	501, 470	14597	max.	50	150	150	150	350	350	350	350	450	450	450
Sodium	mg/kg	-	501, 470	-	max.	50	100	100	50	100	100	100	100	100	100	100
Aluminium + silicon	mg/kg	D5184	501, 470	10478	max.	25	40	40	50	60	60	60	60	60	60	60
Used lubricating oil						The fuel shall be free of ULO.										
Calcium + zinc	mg/kg	-	501 or 470	-	-	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										
Calcium + phosphorus	mg/kg	-	500	-	-											

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## **ExxonMobil marine fuels specifications**

Exxon Mobil Corporation and affiliated companies (ExxonMobil) supply marine fuels against the attached specifications, which apply to fuels manufactured by ExxonMobil and those purchased or exchanged or unless otherwise agreed. These specifications are regularly reviewed to encompass both equipment-builder and industry requirements, including standard-setting organisations such as ASTM and ISO.

These specifications comply with ISO 8217:2017. Therefore, please note that these specifications are subject to change without notice. In addition, local conditions may require deviation from published specifications or may offer a higher quality, but without guarantee. Please contact your ExxonMobil marine fuels representative regarding current typical qualities at your nominated bunker port. Final product quality specifications are subject to order confirmation details.

This document is supplied for information only and is not part of any contract for the supply of marine fuels. Any warranties as to the quality of marine fuels supplied will be set out separately in a contract with the relevant ExxonMobil marine fuels entity.

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## **Sampling and delivery**

In delivery of our marine fuel oils and distillates, ExxonMobil employs continuous drip samplers as the preferred method for obtaining representative samples of a marine fuel oil delivery. Samples are drawn following the procedures set out in the ExxonMobil Sampling Policy. Purchasers may wish to use the services of an independent survey at delivery.

Quantity measurement is according to the terms of the most current version of "ExxonMobil marine fuels general conditions of contract." ExxonMobil uses certified calibrations of barges and tanks to determine quantities delivered.

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