



IMO 2020 regulation

Cepsa's solution for your marine lubricants



IMO 2020 regulation

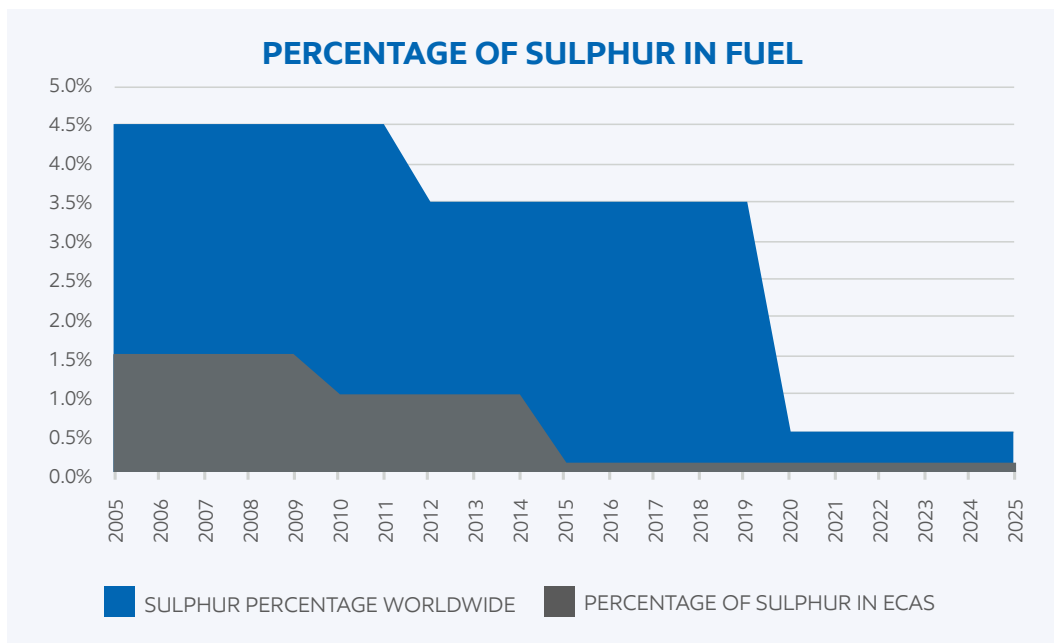
The most significant change in the maritime industry in recent decades



IMO 2020 regulation

The entry into force of the IMO 2020 regulation entails the greatest change that the maritime industry has faced in recent decades. Under a very strict global regulation and with the aim of reducing sulphur oxide emissions, ships have to use fuels with a sulphur content not exceeding 0.5% m/m or ensure an equivalent maximum emission result. Operators who choose to continue using HSFO must equip their vessels with scrubbers and ensure a level of emissions equivalent to that of the fuel that complies with the legislation.

Emission control areas (ECAs) will continue to be capped at the current 0.1% sulphur limit.



- As shown in the graph, the implementation of the IMO 2020 regulation will result in the largest single-phase reduction in sulphur content in the industry in recent decades.
- It is estimated that the adoption of these measures will mean a reduction of sulphur oxide (SOX) emissions of more than 80%.

Cepsa Lubricants
a leader in the marine
market, meets the needs of the

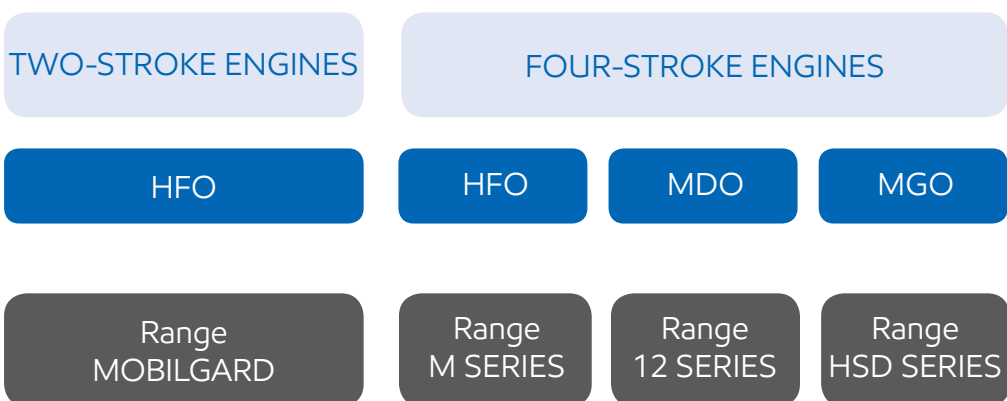
new IMO 2020
regulation



Cepsa and the IMO 2020 regulation

As a leading company in the manufacture and supply of marine lubricants in the Iberian Peninsula, and as the official distributor of ExxonMobil, Cepsa has completed its product portfolio with the addition of new specific lubricants developed by ExxonMobil. These lubricants are suitable for use in combination with new fuel oils that meet the requirements of the IMO 2020 regulation. The use of such alternative fuels to HSFO has a direct impact on the lubrication of engines and cylinders because the BN of the lubricant must be adjusted to the sulphur content of the fuel and the operating conditions in the engine.

A large proportion of ships with 2-stroke engines will use compliant fuels and will need a lubricant with a BN of 40. For ships operating with 4-stroke engines, the shift will be towards the use of BN 20-30 lubricants. As a result, the company now has new Mobil products with very well-balanced BNs specifically to meet the lubrication requirements of 2-stroke and 4-stroke engines using the new low-sulphur fuels (<0.50%).



New Mobil products

In view of the new lubrication requirements with the entry into force of the new IMO 2020 regulation, ExxonMobil has developed two specific products adapted to the new regulation. Cepsa has added these to its portfolio of Mobilgard brand products marketed in Spain, Gibraltar and Portugal.

Mobilgard™ 540

Mobilgard™ 540 oil has been specially developed for the lubrication of cylinders of slow two-stroke marine engines that use VLSFO (Very Low Sulphur Fuel Oil) fuels with low sulphur content (<0.1% to 0.5%).

This new oil Mobilgard™ 540 oil is formulated to meet lubrication needs and operate safely, in compliance with the IMO 2020 regulation, with the vast majority of VLSFO fuel systems.

Mobilgard™ M 420

Mobilgard™ M420 oil is specifically developed for safe operation on vessels that use VLSFO fuel ($S \leq 0.5\%$) in compliance with IMO 2020 regulation.

The Mobilgard™ M420 product is formulated for use on ships running on 0.5% or 0.1% sulphur fuels, as recommended by the manufacturer. It has been developed for use in four-stroke engines, even in severe conditions.



Cepsa has a complete range of
marine engine lubricants to
meet the lubrication needs of
its customers



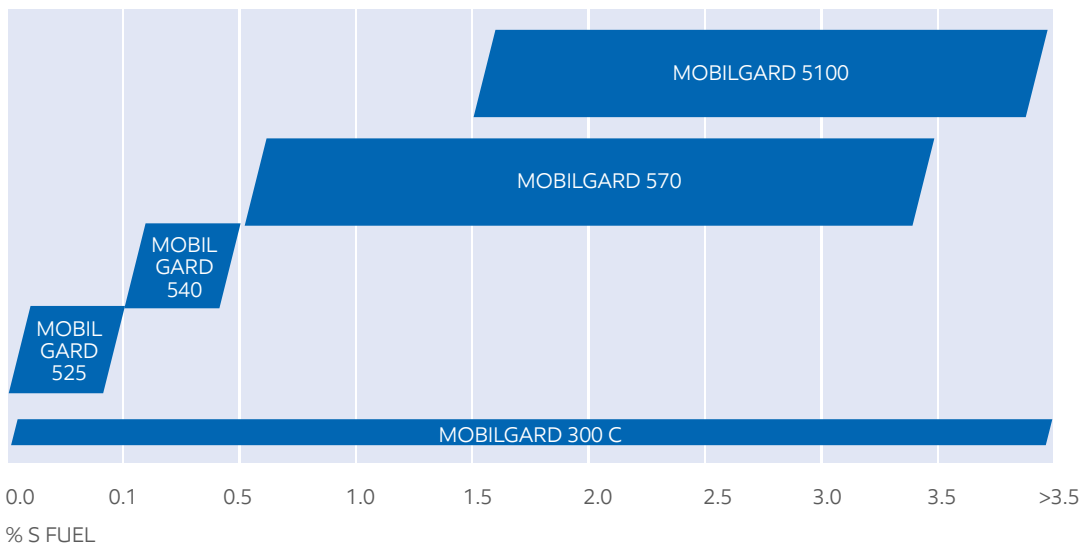
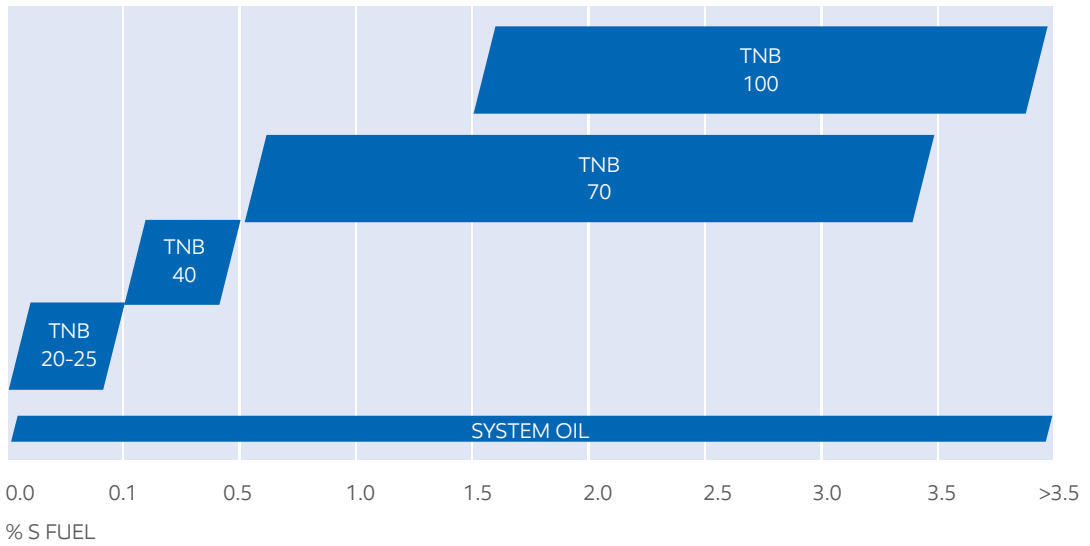
Two-stroke engines

The range developed by ExxonMobil for the lubrication of slow two-stroke diesel marine engines provides various lubricants adapted to different fuels.

MOBIL LUBRICANT	TBN	SAE GRADE	FUEL
MOBILGARD 5100	100	50	S>0.5% Use of scrubbers
MOBILGARD 570	70	50	S>0.5% Use of scrubbers
MOBILGARD 540	40	50	0.1%–0.5% S in the fuel
MOBILGARD 300 C	10	30	System oil



Two-stroke engines



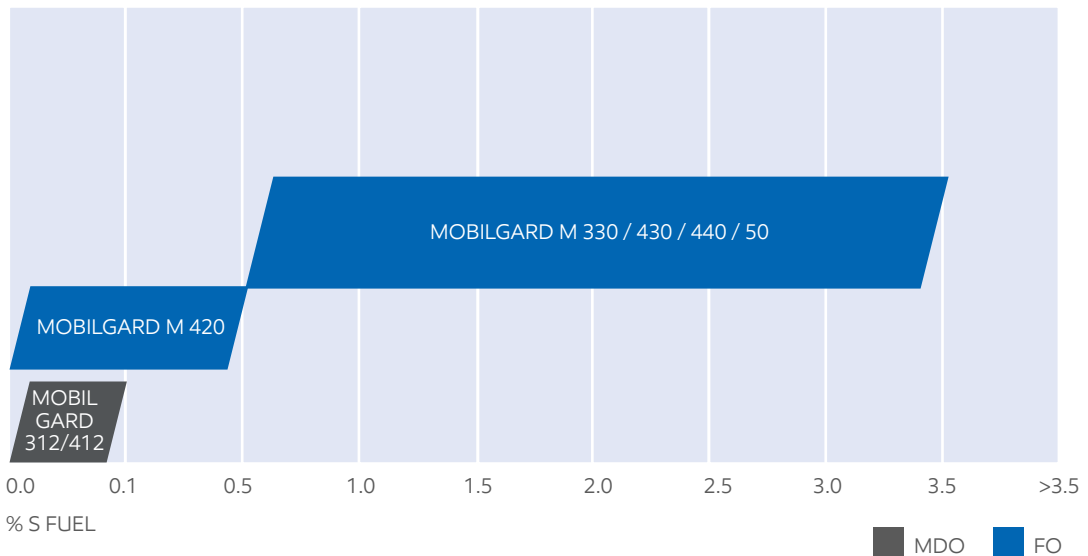
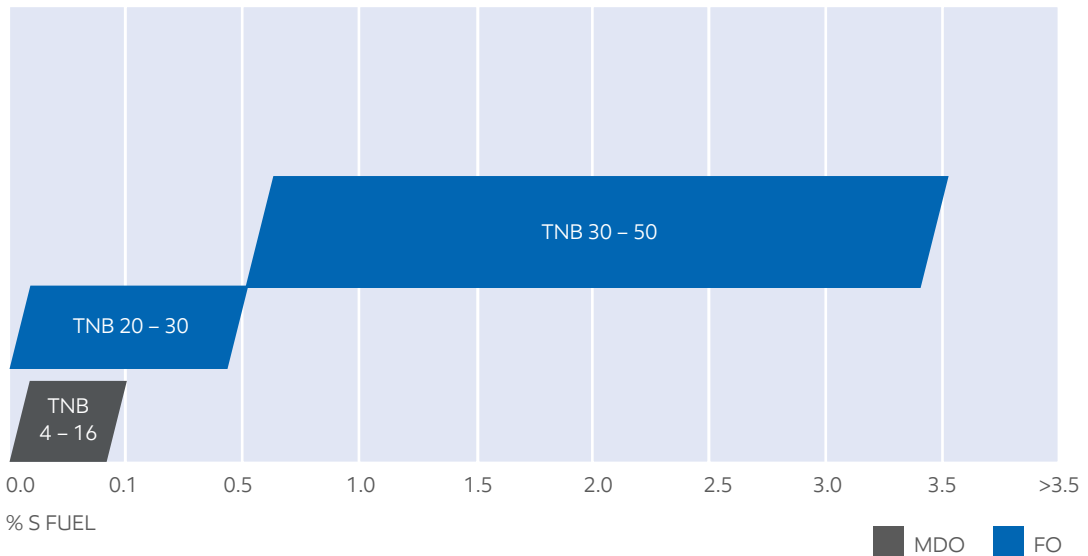
Medium-speed four-stroke engines

ExxonMobil has a full range of products for lubricating medium speed four-stroke marine diesel engines depending on the type of fuel used by the ship.

MOBIL LUBRICANT	BASE NUMBER	SAE GRADE	FUEL
MOBILGARD M420	20	40	0.1% – 0.5% S in the fuel
MOBILGARD M330	30	30	S ≥ 0.5% in the fuel
MOBILGARD M430	30	40	S ≥ 0.5% in the fuel
MOBILGARD M440	40	40	S > 0.5% in the fuel Use of scrubber
MOBILGARD M50	50	40	S > 0.5% in the fuel Use of scrubber
MOBILGARD 312	15	30	MDO
MOBILGARD 412	15	30	MDO
MOBILGARD ADL 40	15	40	MDO. Anti-laquer



Medium-speed four-stroke engines



Fast four-stroke engines

Marine lubricants specially developed for fast diesel engines working under very demanding operating conditions.

MOBIL LUBRICANT	BASE NUMBER	SAE GRADE	FUEL
MOBILGARD HSD 15W40	10	15W40	MGO





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