ExxonMobil

# Mobilgard™ 540 AC

ExxonMobil Marine , Hong Kong

High Performance Marine Diesel Engine Cylinder Oil

## Product Description

Mobilgard™ 540 AC by ExxonMobil is an MAN ES Category II and WinGD approved, premium quality, high-performance marine diesel engine cylinder oil designed to effectively lubricate and deliver advanced cleanliness through effective deposit control across wide-ranging fuel and engine conditions.

Through the use of advanced formulation and detergency technologies in conjunction with a low Base Number (BN), Mobilgard 540 AC has demonstrated the ability to deliver advanced cleanliness and wear protection, whilst optimising cylinder oil feed-rates and effectively managing acid neutralisation in a range of engines and fuel applications.

Mobilgard 540 AC has been granted Category II status by MAN Energy Solutions and obtained Liquid and Gas Fuel usage approval from Winterthur Gas & Diesel (WinGD). Its formulation has been designed for optimal lubrication at the elevated peak firing pressures and liner temperatures found in modern marine two stroke engines. The use of this product, in combination with the Mobil Serv℠ Cylinder Condition Monitoring onboard monitoring, will help operators to achieve the best possible cylinder oil feed rates, while maintaining excellent lubrication.

This cylinder oil is applicable for use in:

- all MAN B and W two - stroke engines operating on <0.10 - 0.50%S fuels and LNG, ethane, methanol, and LPG.

- all WinGD X, WinGD X-DF, WinGD RT-flex, WinGD RT-flex-DF, Wärtsilä RTA, Wärtsilä RT-flex and Wärtsilä X engines as well as in Sulzer 2-stroke engines operating on gas and liquid fuels with a Sulphur content in the range of 0.00<S<1.50 % m/m.

## Features and Benefits

Mobilgard 540 AC combines the use of high-quality, globally consistent base stocks with a superb additive formulation to provide superior detergency capability, which can lead to cleaner engine components.

Mobilgard 540 AC also offers outstanding resistance to oxidation, acid formation and excellent deposit control due to increased temperatures and pressures within combustion cylinders, which are particularly prevalent in LNG fuel operation.

## Applications

Mobilgard 540 AC is formulated to provide outstanding performance in marine crosshead engines operating on a wide variety of fuel applications, including continuous LNG use.

This exceptional cylinder oil has been approved by MAN ES and WinGD for application to all their two-stroke engines operating on LNG, Distillate and Very Low Sulphur Fuel Oil (VLSFOs).

Additionally it has received MAN ES approval for their two - stroke engines operating on ethane and methanol.

## Specifications and Approvals

| This product has the following approvals: |
| --- |
| MAN Energy Solutions Copenhagen (Heritage MAN B&W) Category II for 2-Stroke Marine Engines |

| This product has the following approvals: |
|---|
| Winterthur Gas and Diesel Engine (Heritage Wartsila & Sulzer) Gas General Usage for 2-Stroke Marine Engines |
| Winterthur Gas and Diesel Engine (Heritage Wartsila & Sulzer) Liquid Fuel General Usage for 2-Stroke Marine Engines according to manufacturer´s latest operating guidelines |

## Properties and Specifications

| Property | |
|---|---|
| Grade | SAE 50 |
| Viscosity Index, ASTM D2270 | 99 |
| Total Base Number, mgKOH/g, ASTM D2896 | 40 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 19 |
| Pour Point, °C, ASTM D97 | -30 |
| Flash Point, Pensky-Martens Closed Cup, °C, ASTM D93 | 207 |
| Density @ 15.6 C, kg/m3, ASTM D4052 | 904 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 218 |

## Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.

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