ExxonMobil

# Mobilgard 409 NC

ExxonMobil Marine , United States

Marine Crankcase Oil

## Product Description

Mobilgard 409 NC (No Chlorine) engine oil by ExxonMobil is a non-zinc and non-chlorine lubricant formulated with high-quality basestocks which provide low oil consumption characteristics, high-temperature oxidation resistance, and thermal stability. These basestocks are combined with an Electro Motive Diesel (EMD) and General Electric (GE) endorsed additive package, resulting in an engine oil with well-balanced properties.

The optimized additive formulation in Mobilgard 409 NC has reduced ash content and advanced dispersant technology. Its alkalinity reserve provides excellent corrosion protection when using fuels containing up to 0.05 wt.% sulfur, including low and ultra low sulfur diesel fuels, even though metals such as steel, copper, silver and bronze are present. It has outstanding lubricating properties and is optimized for low and ultra low sulfur fuel use and takes into account after-treatment technologies. Mobilgard 409 NC exhibits good wear control for piston rings and cylinder liners.

## Features and Benefits

When used as recommended, Mobilgard 409 NC provides the following features and potential benefits:

| Features | Advantages and Potential Benefits |
|---|---|
| High thermal and oxidation stability | Helps protect against sludge formation in intermittent marine service, providing clean, smooth running e ngines |
| Effective anti-wear and load carrying propert ies | Helps protect critical wear surfaces and extend engine life |
| Optimized<br>TBN | Helps reduced sulfated ash content<br>Formulated for use with low and ultra low sulfur diesel fuel |
| Advanced dispersant technology | High soot loading capability<br>Superior cleanliness in engines with lower lube oil consumption rates |
| High Viscosity Index | Helps reduce oil consumption |
| Excellent TBN Reserve and Retention | Combats fuel/combustion related corrosion and deposits |

## Applications

Mobilgard 409 NC engine oil has been specifically formulated to meet requirements of heavily loaded diesel engines manufactured by EMD and used in marine applications. It is suitable for other marine diesel engines of the highest horsepower, or higher brake mean effective pressure (BMEP) using distillate fuels with a sulfur content up to 0.05 wt.%.

Mobilgard 409 NC has been approved by EMD and General Electric and is recommended for diesel engines manufactured by Alco, Detroit Diesel and Fairbanks Morse. The newest improvements in General Electric and EMD engines are modified piston rings and cylinder liners that have significantly reduced oil consumption. This drastic reduction in the amount of fresh oil makeup, plus the higher operating temperatures of the newer engines, places an extra burden on the oil. The good base number retention and improved oxidation inhibition of Mobilgard 409 NC provides excellent service under these conditions, even with extended oil drain intervals.

## Typical Properties

| SAE Grade | 40 |
|---|---|
| Viscosity, ASTM D 445 | |

| SAE Grade | 40 |
|---|---|
| cSt, at 40°C | 141 |
| cSt, at 100°C | 14.5 |
| Viscosity Index, ASTM D 2270 | 104 |
| Sulphated Ash, wt%, ASTM D 874 | 0.99 |
| Total Base Number, mg KOH/g, ASTM D2896 | 9.0 |
| Pour Point, °C, ASTM D 97 | -18 |
| Flash Point, °C, ASTM D 92 | 262 |
| Density @ 15°C kg/l, ASTM D 4052 | 0.889 |
| Zinc, ppm, max | 10 |
| Chlorine, ppm, max | 50 |

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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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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