



Mobilgard™ 12 Series

ExxonMobil Marine, United States

Diesel Engine Oils

Product Description

Mobilgard™ 12 Series by ExxonMobil are high performance diesel engine oils developed for use in trunk piston engines operating on low sulphur distillate fuels in marine and industrial applications. They are formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. They have superior water separating properties and provide excellent corrosion protection.

Features and Benefits

Mobilgard 12 Series is formulated with base oils having proven successful performance in diesel engines. The additive system is balanced to provide excellent resistance to thermal degradation under moderately severe operating conditions. They also provide good engine cleanliness and superior wear protection.

When used as recommended, Mobilgard 12 Series oils provide the following features and potential benefits:

Features	Advantages and Potential Benefits
Excellent thermal and oxidation stability	Extended periods between inspections, overhaul and cleaning
Improved antiwear properties	Reduced ring and liner wear
Excellent TBN reserve and retention	Increased protection against corrosive wear
Excellent detergency/dispersancy properties	Increased oil service life Cleaner engines

Applications

The Mobilgard 12 Series diesel engine oils are intended for use as cylinder and bearing lubricants in marine and industrial diesel engines operating on distillate fuels or light fuel blends. They are particularly effective in high speed engines in fishing fleets; in new, severe service engines; and in many types of medium speed engines. They may be used as crankcase lubricants in large crosshead type diesel engines operating on high sulphur fuels.

Typical Properties

	312	412
SAE Grade	30	40
Specific Gravity at 15°C	0.896	0.899
Flash Point, °C, ASTM D 92	266	272
Pour Point, °C, ASTM D 97	-9	-9
Viscosity, ASTM D 445		
cSt, at 40°C	108	142
cSt, at 100°C	12.0	14.5
Viscosity Index, ASTM D 2270	100	100
TBN, mg KOH/g, ASTM D 2896	15	15
Sulphated Ash, wt%, ASTM D 874	2.1	2.1

Health and Safety

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

The ExxonMobil logotype and Mobilgard are trademarks of Exxon Mobil Corporation, or one of its subsidiaries.

09-2017

ExxonMobil Marine Limited

Ermyrn Way
Leatherhead, Surrey
United Kingdom KT22 8UX

<http://www.exxonmobil.com>

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

© Copyright 2003-2017 Exxon Mobil Corporation. All Rights Reserved.



Mobilgard™ M30 Series

ExxonMobil Marine, United States

Diesel Engine Oils

Product Description

Mobilgard™ M30 Series (M330 and M430) by ExxonMobil are premium, extra high performance 30 TBN engine oils designed for use in the most severe residual-fuelled medium-speed diesel applications found in marine and stationary power industries. These outstanding trunk piston engine oils are formulated utilizing high performance additive detergent technology and provide outstanding residual fuel compatibility characteristics for excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston undercrowns. They also demonstrate excellent high temperature oxidation and thermal stability, low volatility, and high load carrying properties and corrosion protection.

Features and Benefits

Mobilgard M30 Series oils have high performance thermal and oxidation stability. They have excellent TBN retention and resistance to viscosity increases over long operating periods. They also promote a high level of engine cleanliness with protection against wear. Compared to other medium speed engine oils, they have excellent lube/fuel compatibility and separate easily from water.

When used as recommended, Mobilgard M30 Series oils provide the following benefits:

Features	Advantages and Potential Benefits
Excellent thermal and oxidation stability	Reduced deposits in piston undercrown and ring belt areas
Improved anti-wear properties	Extends the life of critical wear surfaces
Advanced detergency/dispersancy	Clean camshaft and crankcase spaces
Outstanding rust and corrosion properties	Protects wear surfaces from water and acidic corrosion
High Residual Fuel Compatibility	Reduced sludge formation, longer oil life, cleaner engines
Low volatility base stocks	Reduced lubricant consumption
Excellent TBN Reserve and Retention	Combats fuel/combustion related corrosion and deposits

Applications

Mobilgard M30 Series oils can be used in most medium-speed trunk piston engine applications. They are recommended for use in main propulsion and auxiliary engines on deep-sea vessels; in main propulsion engines on coastal and river ships; and in stationary power plants. This new Series of oils is the result of an extensive

research and development program, incorporating ExxonMobil's patented DAC (Detecting Asphaltene Contamination) Test.

Mobilgard M30 Series oils are designed to meet the needs of engines operating on heavy fuel. They are recommended for use in the latest model medium speed diesel engines and are especially beneficial in engines having low crankcase oil consumption or operating with low cylinder liner temperatures. Relatively high alkalinity reserves in these oils provide excellent protection in neutralising the strong acids resulting from the use of high sulphur fuels that find access to the crankcase to promote oil degradation and ring, cylinder, and bearing corrosion.

Typical Properties

	M330	M430
SAE Grade	30	40
Specific Gravity at 15°C	0.907	0.907
Flash Point, °C, ASTM D 92	244	250
Pour Point, °C, ASTM D 97	-6	-6
Viscosity, ASTM D 445, cSt, at 100°C	12	14
Viscosity Index, ASTM D2270	107	105
TBN, mg KOH/g, ASTM D 2896	30	30
Sulphated Ash, wt%, ASTM D 874	3.8	3.8

Health and Safety

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

The ExxonMobil logo and Mobilgard are trademarks of Exxon Mobil Corporation, or one of its subsidiaries.

09-2017

ExxonMobil Marine Limited

Ermyrn Way
Leatherhead, Surrey

United Kingdom KT22 8UX

<http://www.exxonmobil.com>

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

© Copyright 2003-2017 Exxon Mobil Corporation. All Rights Reserved.



Mobilgard™ M440

ExxonMobil Marine, United States

Diesel Engine Oils

Product Description

Developed specifically for medium-speed engines

Mobilgard™ M440 is a high performance 40 BN engine oil recommended for use on deep-sea vessels, coastal and river ships operating on heavy fuel oil (HFO).

This product provides:

- Excellent high temperature oxidation
- Outstanding residual fuel compatibility
- Good thermal stability
- Low volatility
- High load carrying properties
- Outstanding corrosion protection.

Corrosion protection

Mobilgard M440's high alkalinity reserves provide superior protection in neutralising the strong acids resulting from the use of high sulphur fuels, reducing corrosion and in turn maintenance and repair costs.

Unsurpassed engine cleanliness and protection

Mobilgard M440 oil offers excellent BN retention and resistance to viscosity increase, helping to maximise component life and cleaning intervals as well as minimise filter changes and purifier maintenance. It also:

- Helps protect piston under-crowns from deposits caused by raw fuel dilution
- Optimises the life of critical wear surfaces through outstanding anti-wear properties
- Minimises oil consumption thanks to low volatility base stocks

Features and Benefits

Mobilgard M440 oil has outstanding thermal and oxidation stability. It has excellent TBN retention and

resistance to viscosity increases over long operating periods. It also promotes a high level of engine cleanliness with protection against wear. Compared to other medium speed engine oils, it has excellent lube/fuel compatibility and separates easily from water.

When used as recommended, Mobilgard M440 oil provides the following benefits:

Features	Advantages and Potential Benefits
Excellent thermal and oxidation stability	Reduced deposits in piston undercrown and ring belt areas
Improved anti-wear properties	Extends the life of critical wear surfaces
Advanced detergency/dispersancy	Clean camshaft and crankcase spaces
Outstanding rust and corrosion properties	Protects wear surfaces from water and acidic corrosion
High residual fuel compatibility	Reduced sludge formation, longer oil life, cleaner engines
Low volatility base stocks	Reduced lubricant consumption
Excellent TBN reserve and retention	Combats fuel/combustion related corrosion and deposits

Applications

Mobilgard M440 oil can be used in most medium-speed trunk piston engine applications. It is recommended for use in main propulsion and auxiliary engines on deep-sea vessels; in main propulsion engines on coastal and river ships; and in stationary power plants. This oil is the result of an extensive research and development program, incorporating ExxonMobil's patented DAC (Detecting Asphaltene Contamination) Test.

Mobilgard M440 oil is designed to meet the needs of engines operating on heavy fuel. It is recommended for use in the latest model medium speed diesel engines and are especially beneficial in engines having low crankcase oil consumption or operating with low cylinder liner temperatures. Relatively high alkalinity reserves in this oil provides superior protection in neutralising the strong acids resulting from the use of high sulphur fuels that find access to the crankcase to promote oil degradation and ring, cylinder, and bearing corrosion.

Typical Properties

Mobilgard	M440
SAE Grade	
Specific Gravity at 15°C	0.915
Flash Point, °C, ASTM D 92	242
Pour Point, °C, ASTM D 97	-6
Viscosity, ASTM D 445	
cSt, at 100°C	14.0
TBN, mg KOH/g, ASTM D 2896	40
Sulphated Ash, wt%, ASTM D 874	5.0

Health and Safety

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

The ExxonMobil logo and Mobilgard are trademarks of Exxon Mobil Corporation, or one of its subsidiaries.

09-2017

ExxonMobil Marine Limited

Ermyrn Way
Leatherhead, Surrey
United Kingdom KT22 8UX

<http://www.exxonmobil.com>

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

© Copyright 2003-2017 Exxon Mobil Corporation. All Rights Reserved.