E**∕**xonMobil

Mobilgard[™] 12 Series

ExxonMobil Marine , Venezuela

Diesel Engine Oils

Product Description

Mobilgard^m 12 Series by ExxonMobil are high performance diesel engine oils developed for use in trunk piston engines operating on low sulphur distillate fuels in r and industrial applications. They are formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. They have superior 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 resi 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 fi 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 may be used as crankcase lubricants in large crosshead type diesel engines operating on high sulphur fuels.

Specifications and Approvals

| This product has the following approvals: | 412 |
|---|-----|
| Wartsila 4-Stroke Medium Speed Engines for Distillate- and Dual-Fuel operations | Х |

Properties and Specifications

| Property | 312 | 412 |
|---|--------|--------|
| Grade | SAE 30 | SAE 40 |
| Ash, Sulfated, wt%, ASTM D874 | 2.1 | 2.1 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 266 | 272 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 12 | 14.5 |

Mobilgard™ 12 Series

| Property | 312 | 412 |
|--|-------|-------|
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 108 | 142 |
| Pour Point, °C, ASTM D97 | -9 | -9 |
| Specific Gravity, 15.6 C/15.6 C, ASTM D4052 | 0.896 | 0.899 |
| Total Base Number, mgKOH/g, ASTM D2896 | 15 | 15 |
| Viscosity Index, ASTM D2270 | 100 | 100 |

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.as All trademarks used herein are trademarks or registered trademarks of Exxon Mobil Corporation or one of its subsidiaries unless indicated otherwise.

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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

