Description

Multigrade oil specially formulated for modern four-stroke onboard marine diesel engines and water-cooled off-board engines. Its balanced formula complies with the demanding requirements of marine engine manufacturers. It enables operations in leisure vessels under the most severe conditions.

Properties

- Avoids segment sticking by dispersing mud, varnishes and other high temperature oil oxidation products.
- Contains efficient anti-rust and anticorrosion inhibitors that protect the engine in the water.
- Good cold-flow which facilitates ignition and reduces engine wear.
- Its selected components endow it with enhanced shearing resistance, maintaining its design viscosity during the life of the oil.
- Excellent lubrication capacity, thus increasing the life of the engine.
- Avoids the appearance of mud, thanks to its dispersing additives. As a result, the engine and component cleanliness is optimal at all times.
- A highly stable alkaline reserve (TBN) gives great capacity to neutralise the acids formed in combustion.

Quality level

- API CI-4/CH-4/SL
- ACEA E7/E5
- MAN 3275
- VOLVO VDS-3
- CUMMINS 20076/20077/20078

Technical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>UNIT</th>
<th>METHOD</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE Grade</td>
<td></td>
<td></td>
<td>15W40</td>
</tr>
<tr>
<td>Density at 15ºC</td>
<td>g/cm³</td>
<td>ASTM D 4052</td>
<td>0.880</td>
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<tr>
<td>Viscosity at 100ºC</td>
<td>cSt</td>
<td>ASTM D 445</td>
<td>14.5</td>
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<tr>
<td>Viscosity at 40ºC</td>
<td>cSt</td>
<td>ASTM D 445</td>
<td>107</td>
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<tr>
<td>Viscosity at -20ºC</td>
<td>cP</td>
<td>ASTM D 5293</td>
<td>7000 maximum</td>
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<tr>
<td>Viscosity rate</td>
<td>-</td>
<td>ASTM D 2270</td>
<td>140</td>
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<tr>
<td>Flash point, open cup</td>
<td>ºC</td>
<td>ASTM D 92</td>
<td>215 minimum</td>
</tr>
<tr>
<td>Pour point</td>
<td>ºC</td>
<td>ASTM D 97</td>
<td>-27</td>
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<tr>
<td>T. B. N.</td>
<td>mg KOH/g</td>
<td>ASTM D 2896</td>
<td>10</td>
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<td>Bosch Injector Shearing:</td>
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<td></td>
<td></td>
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<tr>
<td>Viscosity at 100ºC after shear</td>
<td>cSt</td>
<td>CEC L014 93</td>
<td>12.5 minimum</td>
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<tr>
<td>Noack volatility, 1hr at 250ºC</td>
<td>% in weight</td>
<td>CEC L 040 93</td>
<td>12 maximum</td>
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</tbody>
</table>
■ Hazard Identification

This product is not classified as toxic or hazardous under current legislation.

■ Handling

Minimum precautions should be taken to avoid prolonged contact with the skin. The use of gloves, visors or glasses is recommended to avoid splashes.

■ Health and safety hazards

Inhalation: Given that it is not a particularly volatile product, the risk of inhalation is minimal.
Ingestion: Do not induce vomiting. Supply water. Seek medical advice.
Contact with the skin: Wash thoroughly with soap and water.
Eyes: Wash thoroughly with water.
General measures: Seek medical advice.

■ Fire-extinguishing measures

No special measures required.
Fire-extinguishing measures: Foams, dry chemicals, CO₂, water spray. Do not apply the jet of water directly as this could cause the product to disperse.

■ Environmental precautions

Risk of physical contamination when spilled (waterways, coastal areas, soils, etc.) due to its floatability and oily consistency; could cause harm to flora and fauna on contact. Avoid material getting into water outlets.
Decontamination and cleaning: Treat as an accidental oil spillage. Prevent dispersion using mechanical barriers and remove by physical or chemical means.

A safety information file is available on request.
repsolypf.com

Unless otherwise indicated, the figures cited in technical characteristics should be considered typical.

Technical data sheet for Lubricants. Review 2 October 2010