Mobilgear SHC™ XMP Series
Synthetic wind turbine gear oils

Extreme operating conditions are common in today’s wind industry, stressing your equipment and lubricants as never before. Mobilgear SHC™ XMP Series oils are formulated to meet these challenges through:

- Protection from micropitting and scuffing wear
- Strong rust and corrosion protection and demulsibility
- Excellent resistance to high temperature breakdown for long oil life

46,000+
used-oil samples of Mobilgear SHC XMP Series analyzed in our labs. Virtually no alerts due to oil aging, enabling extended equipment life

Key benefits

- Long oil life minimizes need for maintenance downtime
- Gear and bearing wear protection helps support long equipment life
- Outstanding stability in presence of water contamination

Typical properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Mobilgear SHC XMP Series 320</th>
<th>Mobilgear SHC XMP Series 460</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO Viscosity Grade</td>
<td>320</td>
<td>460</td>
</tr>
<tr>
<td>Viscosity, ASTM D 445</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cSt @ 40°C</td>
<td>335</td>
<td>460</td>
</tr>
<tr>
<td>cSt @ 100°C</td>
<td>38.3</td>
<td>48.7</td>
</tr>
<tr>
<td>Viscosity Index, ASTM D 2270</td>
<td>164</td>
<td>166</td>
</tr>
<tr>
<td>Pour Point, °C, ASTM D 97</td>
<td>-38</td>
<td>-36</td>
</tr>
<tr>
<td>Flash Point, °C, ASTM D 92</td>
<td>242</td>
<td>232</td>
</tr>
<tr>
<td>Specific Gravity @15.6°C kg/l, ASTM D 4052</td>
<td>0.86</td>
<td>0.863</td>
</tr>
<tr>
<td>FZG Micropitting, FVA Proc No. 54, Fail Stage</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>FZG Scuffing, DIN 51345 (mod) A/16.6/90, Fail Stage</td>
<td>14+</td>
<td>14+</td>
</tr>
<tr>
<td>4-Ball Wear test, ASTM D 4172, mm (Mod 1,800 RPM, 20kg, 54°C, 60 Minutes)</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Rust protection, ASTM D 665, Sea Water</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>Water Separability, ASTM D 1401,Time to 40/37/3 at 82°C, minutes</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Foaming Characteristics, ASTM D 892, Seq. II, Tendency/Stability, ml/ml</td>
<td>0/0</td>
<td>0/0</td>
</tr>
</tbody>
</table>

*Typical properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit exxonmobil.com. ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.
Mobilgear SHC™ XMP Series

### Performance comparison testing
Mobilgear SHC™ XMP Series gear oils demonstrated superiority to a leading competitor’s synthetic wind turbine gear oil in nearly all key performance dimensions [see chart]. The test results prove:

- Outstanding antiwear and load-carrying properties
- Exceptional protection against rust and corrosion
- Superb filterability and excellent water tolerance

### Equipment builder recognition*
- **Wind turbines**
  - Acciona, Alstom, Goldwind, MHI, Areva, Nordex, Senvion, Suzlon, Vestas
- **Gears**
  - Bosch Rexroth, Hansen, Moventas, Renk, Winergy
- **Bearings**
  - FAG, NSK, SKF, Timken

### Specifications and approvals
Mobilgear SHC XMP Series meets or exceeds the requirements of:

- AGMA 9005-EQ2 EP
- DIN 51517-3, 2009-06

### Recommended for:
- Enclosed industrial gear drives including steel-on-steel spur, helical and bevel gears
- Applications that may be subject to micropitting — especially heavily loaded gearboxes with surface-hardened tooth metallurgies
- Gear applications in which extreme low and/or high temperatures are encountered and applications where corrosion may be severe

### 40,000

Turbines lubricated globally with Mobilgear SHC XMP Series oils

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**Safety**
Long oil life and enhanced equipment reliability provided by Mobilgear SHC™ XMP Series oils help minimize the need for maintenance and its attendant risk of employee injury.

**Environmental Care†**
Powerful equipment protection and long oil life can help limit environmental impact by minimizing disposal of worn equipment and waste lubricant.

**Productivity**
Mobilgear SHC XMP Series gear oils can help maximize turbine availability for energy production through outstanding protection and performance even in extreme conditions.

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*Endorsed, approved or proven performance. This is not a complete listing.

†Visit mobilindustrial.com to learn how certain Mobil-branded lubricants may provide benefits to help minimize environmental impact. Actual benefits will depend upon product selected, operating conditions and applications.

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