

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

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*

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

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

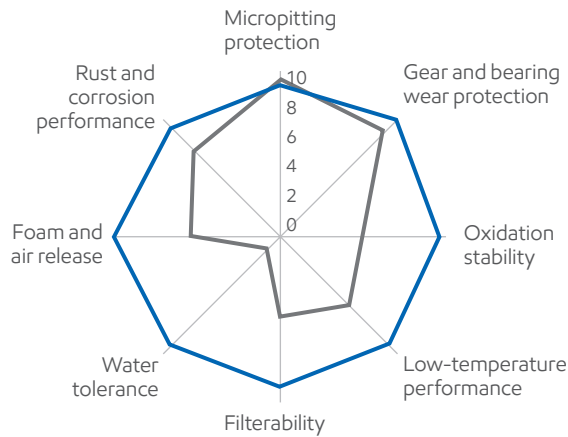
*Typical properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to 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.

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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



Spider chart indicates relative performance for synthetic gear oils.

- Mobilgear SHC™ XMP Series
- Competitor synthetic wind turbine gear oil

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

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

Specifications and approvals

Mobilgear SHC XMP Series meets or exceeds the requirements of:

- AGMA 9005-EO2 EP
- DIN 51517-3, 2009-06

40,000
turbines lubricated globally
with Mobilgear SHC XMP
Series oils

Industrial Lubricants



**Advancing
Productivity™**

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.

*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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