

Mobilgear XMP

Extra High Performance Industrial Gear Oils

Product Description

Mobilgear XMP Series extra high performance industrial gear oils are designed to provide optimum equipment protection and oil life even under extreme conditions. Mobilgear XMP Series are based on high quality mineral base stocks and an advanced proprietary additive system designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. It also offers the potential for improved lubrication of gearbox rolling element bearings. Mobilgear XMP Series products offer outstanding rust and corrosion protection versus conventional gear oils, including seawater and acidic water protection. They show no tendency to plug fine filters even when wet and excellent compatibility with ferrous and non-ferrous metals even at elevated temperatures.

Mobilgear XMP lubricants are recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears. It is especially recommended for applications that may be subject to micropitting: especially heavily loaded gearboxes with surface-hardened tooth metallurgies. It may also be used in gear applications and where corrosion may be severe.

Because of their unique mix of properties, including resistance to micropitting wear, and their performance in tough applications, Mobilgear XMP Series products enjoy a growing reputation among customers and OEMs around the world.

Features and Benefits

The Mobilgear brand of lubricants is recognised and appreciated around the world for innovation and outstanding performance. A key factor in the development of Mobilgear XMP Series was the close contacts between our scientists and application specialists with key OEMs to ensure that our product offerings will provide exceptional performance with the rapidly evolving industrial gear designs and operation.

Our work with equipment builders has helped confirm the results from our own laboratory tests showing the exceptional performance of the Mobilgear XMP Series lubricants. Not least among the benefits shown in work with OEMs is the ability to resist micropitting wear which can occur with some highly loaded, case-hardened gearing applications. This cooperative work also demonstrated the all-round balanced performance benefits for the new Mobilgear SHC XMP technology.

To address the issue of micropitting gear wear, our product formulation scientists designed a proprietary combination of additives which would resist traditional gear wear mechanisms as well as protecting against micropitting and providing other key performance features. The Mobilgear XMP Series lubricants offer the following benefits:

| Features | Advantages and Potential Benefits |
|--|--|
| Superb protection from micropitting fatigue wear as well as high resistance to traditional scuffing wear | Extended gear and bearing life in enclosed gear drives operating under extreme conditions of load, speed and temperature |



| Features | Advantages and Potential Benefits |
|--|---|
| | Reduced unexpected downtime and less maintenance - especially critical for difficult to access gearboxes. |
| Very good resistance to degradation at high temperatures | Extended oil life and drain intervals reduced oil consumption and manpower costs |
| Excellent resistance to rust and corrosion and very good demulsibility | Smooth, trouble-free operation at high temperatures or in water-contaminated applications |
| | Excellent compatibility with soft metals |
| No filter plugging, even in presence of water | Less filter changes and reduced maintenance costs |

Applications

Mobilgear XMP Series extra high performance, industrial gear oils are designed to provide optimum equipment and oil life even under extreme conditions. They are especially formulated to resist micropitting of modern, case hardened gearing and applications where extended oil life is desired. Typical applications include:

- Wind turbines
- Plastic extruder gearboxes
- Gearboxes found in the paper, steel, oil, textile, lumber and cement industries

Specifications and Approvals

| Mobilgear XMP Meets the following industry specifications | Mobilgear XMP 100 | Mobilgear XMP 150 | Mobilgear XMP 220 | Mobilgear XMP 320 | Mobilgear XMP 460 | Mobilgear XMP 680 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Meets DIN 51517 Part 3 (CLP) | X | X | X | X | X | - |
| Meets ISO 12925-1, Type CKD | X | X | X | X | X | - |
| Meets AGMA 9005-D94 -EP (at appropriate viscosity grade) | - | - | X | X | X | - |

| Mobilgear XMP has the following builder approvals | Mobilgear XMP 100 | Mobilgear XMP 150 | Mobilgear XMP 220 | Mobilgear XMP 320 | Mobilgear XMP 460 | Mobilgear XMP 680 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Hansen | X | X | X | X | X | - |
| David Brown | X | X | X | X | X | X |
| Flender | X | X | X | X | X | X |
| Jahnel-Kestermann | X | X | X | X | X | X |

Typical Properties

| | Mobilgear XMP 100 | Mobilgear XMP 150 | Mobilgear XMP 220 | Mobilgear XMP 320 | Mobilgear XMP 460 | Mobilgear XMP 680 |
|------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| ISO Viscosity Grade | 100 | 150 | 220 | 320 | 460 | 680 |
| Viscosity, ASTM D 445 | | | | | | |
| cSt @ 40° C | 100 | 150 | 220 | 320 | 460 | 680 |
| cSt @ 100° C | 11.1 | 14.6 | 18.8 | 24.1 | 30.6 | 36.9 |
| Viscosity Index, ASTM D 2270 | 96 | 96 | 96 | 96 | 96 | 89 |



| | Mobilgear XMP 100 | Mobilgear XMP 150 | Mobilgear XMP 220 | Mobilgear XMP 320 | Mobilgear XMP 460 | Mobilgear XMP 680 |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Pour Point, °C, ASTM D 97 | -30 | -27 | -24 | -18 | -12 | -9 |
| Flash Point, °C, ASTM D 92 | 250 | 258 | 272 | 268 | 270 | 272 |
| Density @15.6° C, ASTM D 4052, kg/l | 0.890 | 0.896 | 0.900 | 0.903 | 0.909 | 0.917 |
| FZG Micropitting, FVA Proc No. 54, Fail Stage | -- | -- | 10+ | 10+ | 10+ | 10+ |
| GFT-Class | -- | -- | High | High | High | High |
| FZG Scuffing, DIN 51534 (mod) | | | | | | |
| A/16.6/90, Fail Stage | 12 | 12 | 13+ | 14 | 14+ | 14+ |
| A/8.3/90, Fail Stage | 12+ | 12+ | 13+ | 14 | 14+ | 14+ |
| 4-Ball EP test, ASTM D 2783, Weld Load, kg | 250 | 250 | 250 | 250 | 250 | 250 |
| Load Wear Index, kgf | 45 | 45 | 45 | 45 | 45 | 45 |
| Rust Protection, ASTM D 665, Sea Water | Pass | Pass | Pass | Pass | Pass | Pass |
| Copper Strip Corrosion, ASTM D 130, 3 hrs @ 100° C | 1B | 1B | 1B | 1B | 1B | 1B |
| Water Seperability, ASTM D 1401, Time to 40/37/3 at 82° C, minutes | 10 | 10 | 10 | 10 | 10 | 10 |
| Foam Test, ASTM D 892, Seq I Tendency/Stability, ml/ml | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. 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 Mobil logotype, the Pegasus design and Mobilgear are trademarks of ExxonMobil Corporation, or one of its subsidiaries.