



Primetals™ Gear Oil Series

Mobil Industrial , Sweden

Premium Gear Oils



Product Description

Primetals Gear Oils are high performance lubricants offering outstanding extreme pressure and load carrying properties, specifically designed for use in the enclosed gear drives of Primetals Technologies rolling mill equipment. Primetals Gear Oils are formulated to meet the higher loads of newer gear drive designs by providing extra protection for gears, bearings and seals, as well as protecting gear teeth from micro-pitting wear which can lead to significant gear tooth damage.

Primetals Gear Oils exceed industry requirements for bearing wear protection, offering up to 15 times the wear protection as measured by the industry standard FAG FE 8 test. Their balanced formulation is able to provide maximum wear and corrosion protection while maintaining compatibility with common gearbox seal materials, thereby preventing oil leaks and reducing the ingress of contaminants.

Primetals Gear Oils are recommended for spur, helical and bevel enclosed gears on Primetals Technologies mills with circulating or splash lubrication, operating at bulk oil temperatures up to 100°C. They are particularly suitable for gears working under heavy or shock loads. Primetals Gear Oils are available in three viscosity grades.

Features and Benefits

Primetals Gear Oils utilize the same technology found in the Mobilgear 600 XP Series gear oils, whose demonstrated performance has made them the primary choice of Primetals Technologies equipment owners worldwide. These premium mineral oil-based lubricants meet the latest gear industry standards and enjoy a reputation for innovation and high performance. Primetals Gear Oils offer the following features and potential benefits:

| Features | Advantages and potential benefits |
|---|--|
| Enhanced protection from gear tooth micro-pitting wear | Less gear and bearing wear resulting in less unscheduled downtime |
| Reduced gear tooth denting from generated wear particles | Up to 22% improvement in bearing life, reducing replacement costs and improving productivity |
| Improved bearing wear protection | Improved bearing life resulting in higher productivity |
| Outstanding compatibility with a range of seal materials | Less oil leakage, consumption and contaminant ingress to improve maintenance, reliability and productivity |
| Excellent resistance to oil oxidation and thermal degradation | Helps extend lubricant life and reduce lubrication costs, with reduced scheduled downtime. |
| High resistance to sludge and deposit formation | Cleaner systems and reduced maintenance |
| Wide range of applications | Fewer lubricant grades required, allowing for lower purchase and storage costs and risk of misapplication |

| Features | Advantages and potential benefits |
|--|--|
| Strong resistance to rust and corrosion of steel, copper and soft metal alloys | Excellent protection of machine parts, with reduced maintenance and repair costs |
| Resistance to foaming and formation of emulsions | Robust lubrication and performance in the presence of water contamination or in equipment prone to oil foaming |

Applications

Primetals Gear Oils can be used in a wide range of industrial applications, especially spur, helical, bevel and worm gearing, as follows:

- Conveyers, fans, mixers, presses, pumps, extruders and other heavy duty applications
- Non-gear applications including shaft couplings, screws and heavily loaded plain and rolling contact bearings operating at slow speeds

Specifications and Approvals

| Primetals Gear Oils meet or exceed the requirements of: | 150 | 220 | 320 |
|---|-----|-----|-----|
| AGMA 9005-E02-EP | X | X | X |
| DIN 51517-3: 2009-06 | X | X | X |
| ISO L-CKD (ISO 12925-1:1996) | | X | X |

Typical Properties

| Primetals Gear Oil Series | 150 | 220 | 320 |
|---|---------|---------|---------|
| ISO Viscosity Grade | 150 | 220 | 320 |
| Viscosity, ASTM D 445, mm ² /s @ 40°C | 150 | 220 | 320 |
| mm ² /s @ 100°C | 14.7 | 19.0 | 24.1 |
| Viscosity Index, ASTM D 2270 | 97 | 97 | 97 |
| Pour Point, °C, ASTM D 97 | -24 | -18 | -15 |
| Flash Point, °C, ASTM D 92 | 230 | 240 | 240 |
| Density @15.6 °C, ASTM D 4052, kG/liter | 0.89 | 0.89 | 0.90 |
| FZG Micropitting, FVA 54, Fail Stage / Rating | 10/High | 10/High | 10/High |
| FE 8 wear test, DIN 51819-3, D7,5/80-80.Roller wear, mg | 2 | 2 | 2 |
| Timken OK Load, ASTM D 2782, lb | 65 | 65 | 65 |
| 4-Ball EP test, ASTM D 2783: Weld load, kG | 250 | 250 | 250 |
| Load Wear Index, kgf | 47 | 48 | 48 |
| FZG Scuffing, Fail Stage: A/8.3/90 | 12+ | 12+ | 12+ |

| Primetals Gear Oil Series | 150 | 220 | 320 |
|---|------|------|------|
| A/16.6/90 | 12+ | 12+ | 12+ |
| Rust Protection, ASTM D665, Sea water | Pass | Pass | Pass |
| Copper Strip Corrosion, ASTM D 130, 3 hrs. @ 100°C | 1B | 1B | 1B |
| Demulsibility at 82 °C, ASTM D1401 Minutes to 3ml emulsion | 30 | 30 | 30 |
| Foaming Characteristics, ASTM D 892 Tendency/Stability, ml/ml | | | |
| Sequence I | 0/0 | 0/0 | 0/0 |
| Sequence II | 30/0 | 30/0 | 30/0 |

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.aspx>

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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 www.exxonmobil.com

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