



MOBILGEAR 600 XP SERIES

GEAR OIL

DESCRIPTION

The Mobilgear 600 XP Series are extra high performance gear oils having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems. Mobilgear 600 XP Series is designed to stay ahead of the changing needs of gearbox technology. Gearbox technology design trends are towards smaller units with similar power throughput. This increase in power density places increased demands on gear oils. Mobilgear 600 XP Series oils are formulated to meet the stress by providing extra protection for gears, bearings and seals.

Mobilgear 600 XP Series is formulated to protect gear teeth from wear at its earliest stages. Microscopic wear, called micropitting, can lead to significant gear tooth damage. Mobilgear 600 XP Series exceeds the industry requirement for bearing wear protection. In fact, Mobilgear 600 XP Series provides up to 15 times the wear protection as measured by the industry standard FAG FE 8 test. Mobilgear 600 XP Series' balanced formulation is able to provide maximum wear and corrosion protection while maintaining compatibility with common gearbox seal materials. Mobilgear 600 XP helps to maintain gearbox seal integrity thereby preventing oil leaks and keeping contamination out. By protecting the gears, bearings and seals, Mobilgear 600 XP can improve equipment reliability and increase productivity.

Mobilgear 600 XP Series oils are recommended for industrial spur, helical and bevel enclosed gears with circulation or splash lubrication, operating at bulk oil temperatures up to 100°C. They are particularly suitable for gear sets working under heavy or shock loads. Mobilgear 600 XP oils also find broad application in marine gearing applications. They may also be used in non-gear applications include highly loaded and slow speed plain and rolling contact bearings.

PROPERTIES & BENEFITS

Mobilgear 600 XP Series products are a leading member of the Mobil brand of industrial lubricants that enjoy a reputation for innovation and high performance capability. These mineral-based products are designed to provide high quality industrial gear oils, meeting the latest industry standards and with high versatility to lubricate a broad range of industrial and marine equipment.

Mobilgear 600 XP Series products offer the following features and potential benefits:

Properties	Potential advantages and benefits
Enhanced gear wear protection from micropitting.	Less gear and bearing wear resulting in less unexpected downtime.
Reduced debris denting from generated wear particles.	Up to 22% improvement in bearing life reducing bearing replacement costs and improving productivity.
Improved bearing wear protection.	Improved bearing life resulting in higher productivity.
Outstanding compatibility with a range of seal materials.	Reduced leakage, oil consumption and contamination ingress helping to reduce maintenance, extend gearbox reliability and higher productivity.
Excellent resistance to oil oxidation and thermal degradation.	Helps extend lubricant life with lower lubricant and lubrication costs and reduced scheduled downtime.
High resistance to sludge and deposit formation.	Cleaner systems and reduced maintenance.
Wide range of applications.	Fewer grades of lubricant required because of wide range of application, leading to lower purchase and storage costs and less danger of using wrong lubricant.
Optimised resistance to rust and corrosion of steel and corrosion of copper and soft metal alloys.	Excellent protection of machine parts, with reduced maintenance and repair costs.
Resistance to foaming and emulsion formation.	Effective lubrication and problem free operation in the presence of water contamination or in equipment prone to oil foaming.

APPLICATIONS

Mobilgear 600 XP lubricants are used in a wide range of industrial and marine applications, especially spur, helical, bevel and worm gearing. Specific applications include:

- Industrial gearing for conveyers, agitators, dryers, extruders, fans, mixers, presses, pulpers, pumps (including oil well pumps), screens, extruders and other heavy duty applications.
- Marine gearing including main propulsion, centrifuges, deck machinery such as winches, windlasses, cranes, turning gears, pumps, elevators and rudder carriers.
- Non-gear applications include shaft couplings, screws and heavily loaded plain and rolling contact bearings operating at slow speeds.

SPECIFICATIONS

MOBILGEAR 600 XP SERIES	68	100	150	220	320	460	680
Flender BA 7300 Table A		Approved	Approved	Approved	Approved	Approved	Approved
AGMA 9005-E02	2 EP	3 EP	4 EP	5 EP	6 EP	7 EP	-
DIN 51517 Part 3	CLP 68	CLP 100	CLP 150	CLP 220	CLP 320	CLP 460	CLP 680
ISO 12925-1 Type	CKD 68	CKD 100	CKD 150	CKD 220	CKD 320	CKC 460	CKC 680
Textron Power Transmission Grade	E2	E3	E4	E5	E6	E7	E8

TYPICAL CHARACTERISTICS

MOBILGEAR 600 XP SERIES	68	100	150	220	320	460	680
ISO Viscosity Grade	68	100	150	220	320	460	680
Viscosity, ASTM D445							
mm ² /s @ 40°C	68	100	150	220	320	460	680
mm ² /s @ 100°C	8,8	11,2	14,7	19,0	24,1	30,6	39,2
Viscosity Index, ASTM D 2270	101	97	97	97	97	96	90
Pour Point, °C, ASTM D97	-27	-24	-24	-24	-24	-15	-9
Flash Point, °C, ASTM D92	230	230	230	240	240	240	285
Density @ 15,6°C, ASTM D4052, kg/l	0,88	0,88	0,89	0,89	0,90	0,90	0,91
FZG Micropitting ¹ , FVA 54, Fail Stage / Rating		10 / alto	10 / alto	10 / alto	10 / alto	10 / alto	10 / alto
FE 8 wear test, DIN 51819-3, D7,5/80-80. Roller wear, mg	2	2	2	2	2	2	2
Timken OK Load, ASTM D 2782, lb	65	65	65	65	65	65	65
4-Ball EP test, ASTM D2783							
Weld Load, kg	200	200	200	250	250	250	250
Load Wear Index, kgf	47	47	47	48	48	48	48
FZG Scuffing, Fail Stage							
A/8,3/90	12+	12+	12+	12+	12+	12+	12+
A/16,6/90	12+	12+	12+	12+	12+	12+	12+
Rust protection, ASTM D 665, Sea Water	pass	pass	pass	pass	pass	pass	pass
Demulsibility, ASTM D 1401, Time to 3ml emulsion, minutes @ 100°C	1B	1B	1B	1B	1B	1B	1B
Demulsibility, ASTM D 1401, Time to 3ml emulsion, minutes @ 82°C	30	30	30	30	30	30	30
Foam Test, ASTM D 892, Tendency/Stability, ml/ml							
Sequence 1	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Sequence 2	30/0	30/0	30/0	30/0	30/0	30/0	30/0

HEALTH & SAFETY

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS).

The typical property values shown in the table are average figures given as a guide. They do not constitute a guarantee. Values may be modified without notice.

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