Mobilgear 600 XP Series

Mobil Industrial , United Kingdom

Gear Oil

Product Description

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 100ºC. 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.

Features and 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:

Features	Advantages and Potential 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 and Approvals

This product has the following approvals:	68	100	150	220	320	460	680
Bundeswehr TL 9159-0105				X			
Flender			X	X	X	X	
Renk B19828 300		X					
Renk B19828 400			X				
Renk B19828 600				X			
SEW-Eurodrive			X	X	X	X	X
ZF TE-ML 04F				X			
ZF TE-ML 04H		X	X				
ZF TE-ML 27		X	X	X	X	X	

This product meets or exceeds the requirements of:	68	100	150	220	320	460	680
AGMA 9005-F16	X	X	X	X	X	X	
China GB 5903-2011, L-CKC							X
China GB 5903-2011, L-CKD		X	X	X	X	X	
DIN 51517-3:2018-09	X	X	X	X	X	X	X
DIN 51517-4:2025-05		X	X	X	X	X	
ISO L-CKC (ISO 12925-1:2024)							X
ISO L-CKD (ISO 12925-1:2024)	X	X	X	X	X	X	
ISO L-CKSMP (ISO 12925-1:2024)		X	X	X	X	X	

Properties and Specifications

Property	68		100		150		220		320		460		680	
Grade	ISO	VG	ISO	VG	ISO	VG	ISO	VG	ISO	VG	ISO	VG	ISO	VG

Property	68	100	150	220	320	460	680
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Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130	1B	1B	1B	1B	1B	1B	1B
Density @ 15.6 C, kg/l, ASTM D4052	0.88	0.88	0.89	0.89	0.9	0.9	0.91
EP Properties, Timken OK Load, lb, ASTM D2782	65	65	65	65	65	65	65
Emulsion, Time to 37 mL Water, 82 C, min, ASTM D1401	30	30	30	25	25	30	30
FE8 wear test, V50 roller wear, mg, DIN 51819-3	2	2	2	2	2	2	2
FZG Micropitting, Fail Stage, Rating, FVA 54		10	10	10	10	10	10
FZG Micropitting, GFT-Class, Rating, FVA 54		High	High	High	High	High	High
FZG Scuffing, Fail Load Stage, A/16.6/90, ISO 14635-1(mod)		12+	12+	12+	12+	12+	12+
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	12+	12+	12+	12+	12+	12+	12+
Flash Point, Cleveland Open Cup, °C, ASTM D92	230	230	230	240	240	240	285
Foam, Sequence I, Tendency/Stability, ml, ASTM D892	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Foam, Sequence II, Tendency/Stability, ml, ASTM D892	30/0	30/0	30/0	30/0	30/0	30/0	30/0
Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783	47	47	47	48	48	>55	48
Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783	200	200	250	250	250	250	250
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	8.8	11.2	14.7	19.0	24.1	30.6	39.2
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	68	100	150	220	320	460	680
Pour Point, °C, ASTM D97	-27	-24	-24	-24	-24	-15	-9
Rust Characteristics, Procedure B, ASTM D665	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Viscosity Index, ASTM D2270	101	97	97	97	97	96	90

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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You can always contact our Technical Help Desk engineers on Mobil lubricants and services related questions: https://www.mobil.co.uk/en-gb/contact-us-technical

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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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