



# MOBILGEAR 600 SERIES

## DESCRIPTION

The Mobilgear 600 Series are 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. They are formulated from highly refined base stocks and a special additive system that provides an extremely high level of resistance to oxidation and chemical degradation. They have friction-modifying characteristics that reduce power consumption and lower bulk oil temperatures. The Mobilgear 600 Series oils protect against corrosion and rusting, including seawater. They have excellent water separating properties and they are strongly resistant to foaming in service.

Mobilgear 600 Series oils are recommended for marine and industrial spur, helical and bevel enclosed gears with circulation or splash lubrication, operating at bulk oil temperatures up to 100°C. For steel-on-steel applications, Mobilgear 600 Series are recommended whereas for bronze-on-steel worm gear applications, Mobil SHC 600 Series products are recommended. They are particularly suitable for gear sets working under heavy or shock loads. Minimum bulk oil temperatures are governed by the pour point of the oil. Suitable heating may be necessary for the heavier grades at ambient temperatures. Non gear applications include plain and rolling contact bearings - especially highly loaded and slow speed.

Mobilgear 600 Series gear oils are used in a wide range of applications. They are the product of choice for many users, worldwide, based on their outstanding performance, equipment protection and application versatility.

## PROPERTIES & BENEFITS

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

When used as recommended, Mobilgear 600 Series products offer the following features and potential benefits:

Properties	Potential advantages and benefits
Reduced gear tooth wear due to excellent load-carrying properties.	Lower operating costs, higher productivity and longer machine life because of outstanding antiwear characteristics.
Outstanding resistance to oil oxidation and degradation.	Extended lubricant life with lower lubricant and lubrication costs and reduced scheduled downtime.
	Cleaner systems and reduced maintenance because of minimal sludge and deposit formation.
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.
Superior 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.
Marked resistance to foaming and emulsion.	Effective lubrication and problem free operation in the presence formation of water contamination or in equipment prone to oil foaming.

## APPLICATIONS

Mobilgear 600 lubricants are used in a wide range of industrial and marine applications, especially spur, helical, bevel and worm gearing. Selection of the appropriate viscosity grade for marine enclosed spur, helical and bevel gear drives is based on speed, load, operating temperatures, and gear geometry. The viscosity required increases as the speed decreases, or as the operating temperature increases. Splash lubrication requires higher viscosity lubricants than similar units equipped with circulation systems because of the higher operating temperatures.

Mobilgear 600 Series lubricants are usable for ambient temperatures from -1°C to 110°C.

Specific marine applications include 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.

<b>SPECIFICATIONS</b>							
<b>MOBILGEAR 600 SERIES</b>	<b>626</b>	<b>627</b>	<b>629</b>	<b>630</b>	<b>632</b>	<b>634</b>	<b>636</b>
Meets AGMA 9005-D94 (at appropriate viscosity grade)	X	X	X	X	X	X	
Meets DIN 51517 Part 3 (CLP)	X	X	X	X	X	X	X
Meets ISO 12925-1 Type CKC	X	X	X	X	X	X	X

<b>TYPICAL CHARACTERISTICS</b>							
<b>MOBILGEAR 600 SERIES</b>	<b>626</b>	<b>627</b>	<b>629</b>	<b>630</b>	<b>632</b>	<b>634</b>	<b>636</b>
ISO Viscosity Grade	68	100	150	220	320	460	680
Viscosity, ASTM D 445							
cSt @ 40°C	68	100	150	220	320	460	680
cSt @ 100°C	9.2	12.0	15.8	19.5	24.5	29.9	39.2
Viscosity Index, ASTM D 2270	98	98	98	98	97	96	90
Pour Point, °C, ASTM D 97	-27	-27	-27	-24	-18	-12	-9
Flash Point, °C, ASTM D 92	225	235	245	255	265	275	285
Density @ 15.6 °C, ASTM D 4052, kg/l	0.89	0.89	0.89	0.89	0.89	0.89	0.91
Timken OK Load, ASTM D 2782, lb	65	65	65	65	65	65	65
4-Ball EP test, ASTM D 2783, Weld Load, kg	250	250	250	250	250	250	250
Load Wear Index, kgf	48	48	48	48	48	48	48
FZG Scuffing, DIN 51534, A/8.3/90, Fail Stage	12+	12+	12+	12+	12+	12+	12+
Rust protection, ASTM D 665, Sea Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion, ASTM D 130, 3 hrs @ 100°C	1B	1B	1B	1B	1B	1B	1B
Demulsibility, ASTM D 1401, @ 54°C Time to 3ml emulsion, minutes @ 82°C	30	30	30	30	30	30	30
Foam Test, ASTM D 892, Seq I and II, Tendency/Stability, ml/ml	0/0	0/0	0/0	0/0	0/0	0/0	0/0

## **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.