# Mobil SHC Gear 1500, 3200 and 6800

Mobil Industrial , Rep South Africa

Gear Oils

## Product Description

The Mobil SHC Gear 1500, 3200, and 6800 lubricants are supreme performance heavy-duty gear oils primarily designed for all kinds of enclosed gearing as well as plain and rolling element bearings. They are designed to provide outstanding service in terms of equipment protection, oil life, and problem-free operation enabling increased customer productivity. These scientifically engineered synthetic lubricants are formulated from synthetic base fluids that have exceptional oxidation and thermal properties and excellent low temperature fluidity. The combination of a naturally high viscosity index and a unique additive system enables these products to provide outstanding performance under severe high and low temperature operating conditions. The nature of the synthetic base fluids also contributes to the products' excellent low temperature performance. They have excellent protection against gear scuffing and resistance to shock loading. The synthetic base stocks have inherently low traction properties that result in low fluid friction in the load zone of non-conforming surfaces such as gears and rolling element bearings. Reduced fluid friction produces lower operating temperatures and improved gear efficiency.

The Mobil SHC Gear 1500, 3200, and 6800 find application in a wide range of enclosed gear applications, as well as plain and rolling element bearings. Because of the very high viscosities they can meet the lubrication needs of very slow speed and high load/high temperature gears and bearings; they are ideal for situations in which conventional products operate in the boundary regime. There may be situations where a lubricant bath or recirculation system is used to apply the oil.

Mobil SHC Gear 1500, 3200, and 6800 are the products of choice for many OEMs and customers world-wide based on their wide application range and superb performance in tough situations.

## Features and Benefits

The Mobil SHC Gear 1500, 3200, and 6800 are leading members of the Mobil SHC brand of products that are world-renowned for their innovation and performance. These scientifically engineered synthetic lubricants symbolize the continuing commitment to using advanced technology to provide outstanding lubricant products. The Mobil SHC Gear 1500, 3200, and 6800 lubricants provide benefits not possible with mineral stocks, particularly under extreme high and low temperature operating conditions, and deliver performance features and customer benefits.

Our formulation scientists have used a proprietary additive combination that fortifies the base fluids to provide excellent gear scuffing protection and anti-wear performance, even in shock load situations. The resulting finished products have shown exceptional performance in OEM evaluations, customer field tests and commercial use. These high viscosity grades are particularly effective in low-speed, high load, high temperature situations and provide excellent gear and bearing protection, longer oil life and excellent all-round service compared with conventional products.

Specific features and potential benefits for the Mobil SHC Gear 1500, 3200, and 6800 lubricants include:

| Features | Advantages and Potential Benefits |
|---|---|
| Outstanding load-carrying and antiwear properties | Helps extended gear life and reduce maintenance costs |
| Very high viscosity grades available, without reduction of properties or performance capability | Provides excellent EHL film protection of gears and bearings even at slow speeds, high loads and high temperatures<br><br>Can be used to convert all-loss systems to circulation<br><br>Can replace grease in some applications resulting in plant product consolidation |

| Features | Advantages and Potential Benefits |
|---|---|
| High viscosity index | Trouble-free operation over a wide temperature range particularly at extremely low temperatures. |
| Low traction properties | Can help improved gear efficiency and lower operating temperatures lead to lower operating costs |
| Outstanding thermal/oxidation resistance and long product life | Helps reduce lubricant consumption, helps reduce product and change-out costs |
| Light color | Helps avoid need for gear cleaning prior to inspections, helping to reduce maintenance costs |

## Applications

Application Considerations: While the Mobil SHC Gear 1500, 3200, and 6800 are compatible with mineral oil based products, admixture may detract from their performance. Consequently it is recommended that before changing a system to one of the Mobil SHC Gear 1500, 3200, or 6800 lubricants, it should be thoroughly cleaned out and flushed to achieve the maximum performance benefits.

Mobil SHC Gear 1500, 3200, and 6800 oils are recommended for all types of enclosed steel-on-steel gear drives. They are suitable for both circulation and splash lubrication systems. They are particularly recommended for gear sets operating under heavy or shock loads and low speeds where boundary lubrication may prevail. Applications for this product family are:

- Mobil SHC Gear 1500, 3200 and 6800 - Industrial enclosed spur, helical and bevel gears, especially slow speed, and/or high load units.
- Mobil SHC Gear 1500, 3200 and 6800 - Plain and rolling element bearings, especially in slow speed, and/or high load applications.
- Mobil SHC Gear 3200 and 6800 - Railroad DC Traction Motor drives.
- Mobil SHC Gear 3200 and 6800 - Certain open gear applications such as oiling pinions or specially designed circulation systems.

## Properties and Specifications

| Property | 1500 | 3200 | 6800 |
|---|---|---|---|
| Grade | ISO 1500 | ISO 3200 | |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130 | 1B | 1B | 1B |
| Density @ 15.6 C, kg/l, ASTM D1298 | 0.88 | 0.89 | 0.9 |
| FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1(mod) | 13+ | 13+ | 13+ |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 230 | 230 | 230 |
| Foam, Sequence I, Stability, ml, ASTM D892 | 0 | 0 | 0 |
| Foam, Sequence I, Tendency, ml, ASTM D892 | 0 | 0 | 0 |
| Foam, Sequence II, Stability, ml, ASTM D892 | 0 | 0 | 0 |
| Foam, Sequence II, Tendency, ml, ASTM D892 | 0 | 0 | 0 |
| Foam, Sequence III, Stability, ml, ASTM D892 | 0 | 0 | 0 |
| Foam, Sequence III, Tendency, ml, ASTM D892 | 0 | 0 | 0 |
| Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783 | 48 | 48 | 48 |

| Property | 1500 | 3200 | 6800 |
|---|---|---|---|
| Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783 | 250 | 250 | 250 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 113 | 183 | 365 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 1500 | 3200 | 8200 |
| Pour Point, °C, ASTM D5950 | -18 | -9 | -6 |
| Rust Characteristics, Procedure B, ASTM D665 | PASS | PASS | PASS |
| Viscosity Index, ASTM D2270 | 165 | 165 | 180 |

### 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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