# Mobil SHC™ Gear OH Series

Mobil Industrial , Australia

Exceptional Performance Gear Oils for Off-Highway Equipment

## Product Description

The Mobil SHC™ Gear OH Series lubricants are exceptional performance heavy-duty gear oils primarily designed to lubricate enclosed gearing as well as plain and rolling element bearings in off-highway equipment subject to shock and heavy loading. They are designed to provide outstanding service in terms of equipment protection, oil life, and problem-free operation helping to enable 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 helps enable 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 deliver outstanding gear scuffing protection in heavily loaded gearboxes. 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 OH Series is available in viscosity range from ISO VG 320 to 680, and are the products of choice for key OEMs and customers for demanding off-highway applications.

## Features and Benefits

The Mobil SHC Gear OH Series of lubricants is a member of the Mobil SHC brand of products. These scientifically engineered synthetic lubricants symbolize the continuing commitment to using advanced technology to provide outstanding lubricant products. The Mobil SHC Gear OH Series of lubricants provide benefits not possible with mineral stocks, particularly under extreme high and low temperature operating conditions.
Our formulation scientists have used a proprietary additive combination that fortifies the base fluids to provide excellent EP and anti-wear performance that protects equipment, even under heavy load situations. Specific features and potential benefits for the Mobil SHC Gear OH Series of lubricants include:

| Features | Advantages and Potential Benefits |
|---|---|
| Outstanding load-carrying and antiwear properties | Helps extend gear life and reduce maintenance costs |
| High viscosity index | Trouble-free operation over a wide temperature range particularly at extremely low temperatures. |
| Low traction properties | Helps improve gear efficiency and lower operating temperatures lead to lower operating costs |
| Outstanding thermal/oxidation resistance and long product life | Helps reduce lubricant consumption, which can reduce product and change-out costs |
| Light color | Helps minimize the need for gear cleaning prior to inspections, which can reduce maintenance costs |

## Applications

Application Considerations: While the Mobil SHC Gear OH Series 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 OH Series, it should be thoroughly cleaned out and flushed to achieve the maximum performance benefits.

Mobil SHC Gear OH Series oils are recommended for many types of enclosed steel-on-steel gear drives. They are suitable for both circulation and splash lubrication systems. Mobil SHC Gear OH Series is available in viscosities from ISO 320 to ISO 680, providing the right lubrication option for low temperature applications where pour points as low as -45°C (-49°F) are required to high temperature applications where operating temperatures of 121ºC (250ºF) are encountered. They are particularly recommended for lubricating gear sets in off-highway applications such as those found in mining, where heavy or shock loads and boundary lubrication conditions may prevail.

## Specifications and Approvals

| This product has the following approvals: | 460 | 680 |
|---|---|---|
| GE OHV D50E35A/B/C/D/E | | X |

| This product meets or exceeds the requirements of: | 460 | 680 |
|---|---|---|
| AGMA 9005-F16 | X | X |

## Properties and Specifications

| Property | 320 | 460 | 680 |
|---|---|---|---|
| Grade | ISO VG 320 | ISO VG 460 | ISO VG 680 |
| ASTM Color, ASTM D1500 | L0.5 | L0.5 | L0.5 |
| Brookfield Viscosity @ -28.9 C, mPa.s, ASTM D2983 | 60000 | 110000 | 170000 |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130 | 1B | 1B | 1B |
| Density @ 15.6 C, kg/l, ASTM D4052 | 0.86 | 0.86 | 0.86 |
| FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1(mod) | >13 | >13 | >13 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 233 | 233 | 233 |
| 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 | 62 | 62 | 62 |
| Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783 | 250 | 250 | 250 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 40.1 | 54.9 | 76.1 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 320 | 460 | 680 |
| Pour Point, °C, ASTM D5950 | -45 | -42 | -39 |
| Rust Characteristics, Procedure B, ASTM D665 | PASS | PASS | PASS |
| Total Acid Number, mgKOH/g, ASTM D664 | 0.6 | 0.6 | 0.6 |
| Viscosity Index, ASTM D2270 | 178 | 186 | 193 |

## 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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