



## MOBIL SHC™ GEAR 22M, 46M SERIES

Mobil industrial , United States

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Gear Oils

### Product Description

Mobil SHC Gear 22M and 46M are supreme performance ultra high viscosity synthetic lubricants designed specifically for use in heavily loaded, low speed open gears where boundary lubrication conditions often prevail. They are formulated from synthetic base stocks, which have remarkable low-temperature fluidity, even at such high viscosity grades. These ultra high viscosity products can be pumped over relatively long distances and use standard spray application equipment. The combination of a naturally high viscosity index and a unique additive system gives the products exceptional thermal/oxidative properties and provides outstanding performance under severe high and low temperature operating conditions even with very slow moving gears. The additive formulation also provides excellent gear scuffing protection, anti-wear performance and rust and corrosion inhibition.

Mobil SHC Gear 22M and 46M exceed Falk Corporation's minimum viscosity requirements for intermittent lubrication of gears - winter and summer grades, respectively. These grades also meet the viscosity requirements for AGMA lubricant numbers 14R and 15R, respectively, although they are not residual lubricants, but are leading edge synthetic products. Mobil SHC Gear 22M and 46M do not contain any solvent or any asphaltic-type base oil.

### Features and Benefits

Mobil SHC Gear 22M and 46M lubricants 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. Mobil SHC Gear 22M and 46M 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 innovative combinations of base oils plus a proprietary additive combination that fortifies the base oils 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 ultra high viscosity products 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 22M and 46M lubricants include:

| Features   | Advantages and Potential Benefits   |
|--|---|
| Thick EHL fluid film formation and selected additives provide outstanding load-carrying, antiwear and tackiness properties | Helps extend gear life, less downtime and reduce maintenance and replacement cost<br><br>Avoids potential for solvent retention and reduced viscosity with solvent-type products<br><br>Provides much thicker EHL film compared with semi-fluid grease products |
| Excellent pumpability at ambient temperatures  | Helps reduce in pump replacement costs  |
| Uses existing lubricant spray equipment  | Low-cost conversion from asphaltic of semi-fluid grease products  |

|   |  |
|---|--|
| Lower application rates than greases, less waste compared with asphalt/solvent products | Helps reduce lubricant consumption and disposal costs  |
| Does not contain solids or asphaltic resins   | Absence of hard-packed gear root deposits results in reduction in downtime and maintenance costs |
| Light colored product   | Helps avoid need for costly gear cleaning prior to inspection                                    |
| Solvent-free  | Helps avoid potential safety issues related to volatile, low flash solvent                       |

## Applications

Application Considerations: Normally, conversion to Mobil SHC Gear 22M or 46M from asphaltic or grease products will be a simple process with no change in lubricant spray equipment. It is recommended that the gears be thoroughly cleaned to take advantage of the light color of these synthetic products. Consult your Mobil representative for further details on lubricant conversion.

Mobil SHC Gear 22M and 46M are designed specifically for use in heavily loaded, low speed open gearing which drive stationary rotating machinery. Product is typically applied by intermittent by spray nozzle systems. Specific applications include:

- Kilns and mills in metal mining, cement and limestone production and in sugar plants
- Slow speed, heavily loaded plain and rolling contact bearings

## Properties and Specifications

| Property   | 22M   | 46M   |
|--|-------|-------|
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130      | 1B    | 1B    |
| Density @ 15.6 C, kg/l, ASTM D4052                         | 0.890 | 0.924 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92              | 240   | 240   |
| Kinematic Viscosity @ 100 C, mm <sup>2</sup> /s, ASTM D445 | 700   | 1375  |
| Kinematic Viscosity @ 40 C, mm <sup>2</sup> /s, ASTM D445  | 22000 | 46000 |
| Pour Point, °C, ASTM D97                                   | 6     | 15    |
| Viscosity Index, ASTM D2270                                | 180   | 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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### Exxon Mobil Corporation

22777 Springwoods Village Parkway  
Spring TX 77389

1-800-ASK MOBIL (275-6624)

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