

Mobilith SHC Series

Grease

Product Description

Mobilith SHC Series greases are supreme performance products designed for a wide variety of applications at extremes of temperature. They combine the unique features of a polyalphaolefin (PAO) synthetic base fluid with those of a high quality lithium complex thickener. The wax-free nature of the PAO base oil and the low coefficient of traction (compared with mineral oils), provide excellent low temperature pumpability and very low starting and running torque. These products offer the potential for energy savings and can reduce operating temperatures in the load zone of rolling element bearings. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water. The greases have a high level of chemical stability and are formulated with special additive combinations to provide excellent protection against wear, rust and corrosion at high and low temperatures. Mobilith SHC Series greases are available in seven grades, varying in base oil viscosity from ISO VG 100 to 1500 and in NLGI grade from 2 to 00.

The Mobilith SHC Series of greases is used in the widest range of applications, and a broad range of operating temperatures, depending on grade. They are used not only in numerous industrial applications, but also find significant usage in automotive, marine and aerospace sectors.

Mobilith SHC Series greases have become the products of choice for many users, in many industries worldwide. Their reputation is based on their exceptional quality, reliability, versatility and the performance benefits they deliver.

Features & Benefits

The Mobil SHC brand of oils & greases are recognised and appreciated around the world for their innovation and outstanding performance. These molecular design PAO synthetic products, pioneered by ExxonMobil research scientists, symbolise the continuing commitment to using advanced technology to provide outstanding products. A key factor in the development of Mobilith SHC Series were the close contacts between our scientists and application specialists with key Original Equipment Manufacturers (OEMs) to ensure that our product offerings would provide exceptional performance in the continually evolving industrial equipment designs.

Our work with equipment builders has helped confirm the results from our own laboratory tests showing the exceptional performance of the Mobilith SHC Series lubricants. These benefits include longer grease life, enhanced bearing protection and bearing life, wide temperature range of application, and the potential for improved mechanical efficiency and energy savings.

To combat high thermal exposure of the oil our product formulation scientists chose proprietary synthetic base oils for Mobilith SHC Series oils because of their exceptional thermal/oxidative resistance potential. Our scientists developed a state-of-the-art lithium complex thickener technology and used specific additives to enhance the performance of each grade of the Mobilith SHC Series product family. The Mobilith SHC Series greases offer the following features and benefits:



Features	Advantages and Potential Benefits
Outstanding high temperature and low temperature performance	Wide application temperature ranges, with excellent protection at high temperatures and low torque, easy start-up at low temperatures
Excellent protection against wear, rust and corrosion	Reduced downtime and maintenance costs because of reduced wear, rust and corrosion
Excellent thermal stability and oxidation resistance	Extended service life with longer intervals between relubrication and improved bearing life
Low traction coefficient	Potential improved mechanical life and reduced energy consumption
Includes high viscosity grades with high VI, no wax base stocks	Outstanding protection of slow speed, heavily loaded bearings with good low temperature performance
Outstanding structural stability in the presence of water	Retains excellent grease performance in hostile aqueous environments
Low volatility	Helps resist viscosity increase at high temperatures to maximise relubrication intervals and bearing life

Applications

Application Considerations: While Mobilith SHC Series greases are compatible with most mineral oil based products, admixture may detract from their performance. Consequently it is recommended that before changing a system to one of the Mobilith SHC Series, it should be thoroughly cleaned out to achieve the maximum performance benefits.

While the Mobilith SHC Series greases share many performance benefits, their applications are best described in terms of each product grade:

- Mobilith SHC 100 is an anti-wear grease primarily recommended for higher speed applications such as electric motors, where reduced friction, low wear and long service life are required. It is an NLGI 2 Grade / ISO VG 100 grease with PAO synthetic base fluid. Its operating temperature range is -50°C to 180°C.
- Mobilith SHC 220 is a multipurpose, extreme pressure grease recommended for heavy-duty automotive and industrial applications. It uses an ISO VG 220 PAO synthetic fluid and although it is a NLGI 2 Grade product, it has the low temperature pumpability of most NLGI 0 Grade mineral oil based greases. Mobilith SHC 220 has a recommended operating temperature range of -40°C to 180°C.
- Mobilith SHC 460 is a NLGI 1.5 Grade grease with ISO VG 460 synthetic base oil and is an extreme pressure grease recommended for tough industrial applications. It provides outstanding bearing protection under heavy loads at low-to-moderate speeds and in applications where water resistance is a critical factor. Mobilith SHC 460 has demonstrated outstanding performance in steel mills, paper mills and marine applications. The recommended operating temperature range is -40°C to 180°C.
- Mobilith SHC PM is a NLGI 1.5 Grade grease with ISO VG 460 synthetic base oil and is an extreme pressure grease recommended for critical rolling element bearing applications in paper machines. It provides outstanding protection against rust and acid water corrosion, making it ideal for the wet end of the paper machine. The heavy viscosity base fluid and anti-wear additive make it an excellent grease for the highly loaded press section roll bearings. The low volatility and excellent high temperature oxidation stability of the synthetic base fluid maximise relubrication intervals and bearing life in the high temperature felt roll and calendar stack bearings. The recommended operating temperature range is -40°C to 180°C with appropriate relubrication intervals.



- Mobilith SHC 1000 Special is a NLGI 2 Grade grease with ISO VG 1000 synthetic base oil and strongly fortified with solid lubricants including micronised graphite and molybdenum disulphide for maximum protection of plain or rolling element bearings operating under boundary lubrication regimes. This product is designed to extend bearing life under conditions of extremely slow speeds, heavy loads and high temperatures. Mobilith SHC 1000 Special has a recommended operating temperature of -30°C to 180°C with appropriate relubrication intervals. The wax-free synthetic base fluid provides excellent low temperature mobility / pumpability.
- Mobilith SHC 1500 is a NLGI 1 Grade / ISO VG 1500 grease with PAO synthetic base fluid. It is intended for use in plain and rolling element bearings operating at extremely slow speeds, under heavy loads and high temperatures. Mobilith SHC 1500 has a recommended operating temperature range of -20°C to 180°C with appropriate relubrication intervals. Continuous lubrication with Mobilith SHC 1500 has been very effective in prolonging bearing life in a severe roll press application. Mobilith SHC 1500 has also provided excellent performance in rotary kiln roller bearings and in slag transfer rail car bearings.
- Mobilith SHC 007 is a NLGI 00 Grade / ISO VG 460 grease with PAO synthetic base fluid; it has a recommended operating temperature range of -50°C to 180°C with appropriate relubrication intervals. Its primary use is in non-driven heavy-duty truck trailer wheel hubs. It is also well suited for use in grease filled gear cases subject to high temperatures, where conventional semi fluid greases will not provide acceptable lubricant life.

Typical Properties

Mobilith SHC Series	100	220	460	007	PM	1000 Special	1500
NLGI Grade	2	2	1.5	00	1.5	2	1
Thickener Type	Lithium complex	Lithium complex	Lithium complex	Lithium complex	Lithium complex	Lithium complex	Lithium complex
Colour, Visual	Red	Red	Red	Red	Light tan	Grey Black	Red
Penetration, Worked, 25°C, ASTM D 217	280	280	305	415	305	280	325
Dropping Point, °C, ASTM D 2265	255	255	255	NA	250	255	255
Viscosity of Oil, ASTM D 445							
cSt @ 40°C	100	220	460	460	460	1000	1370 (1500 for oil + polymer)
Timken OK Load, ASTM D 2509, lb	-	50	55	55	55	45	40
4-Ball Weld, ASTM D 2596, Load, kg	250	250	250	250	250	620	250
Water Washout, ASTM D 1264, Loss at 79°C. % wt	6	4	10	-	10	5	2
Rust Protection, ASTM D 6138	0	0	0	-	0	0	0
US Steel Mobility @ -18°C	-	6	5	27	5	-	4

Health & Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contact office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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ExxonMobil Lubricants & Specialties

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