

Mobilith SHC Series

Grease

Product Description

Mobilith SHC Series greases are high-performance products designed for a wide variety of applications, especially 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 fluid and its 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 additives to provide excellent protection against wear, rust and corrosion at high and low temperatures. Mobilith SHC Series greases are available in five grades, varying in base oil viscosity from ISO VG 100 to 1500 and in NLGI grade from 00 to 2.

The Mobilith SHC Series greases are not only used in a wide range of industrial applications, but also find significant usage in automotive, marine and aerospace sectors. Their reputation is based on their exceptional quality, reliability, versatility and the performance benefits they deliver.

Features and Benefits

Oils and greases bearing the Mobil SHC brand are recognised around the world for their innovation and outstanding performance. These PAO-based synthetic products, pioneered by ExxonMobil, symbolise our continuing commitment to using advanced technology to provide exceptional products. Close contact between ExxonMobil scientists and application specialists and key Original Equipment Manufacturers (OEMs) ensures that our products are designed to meet the needs of the latest industrial equipment designs.

To combat degradation caused by high thermal stress on the oil, our product formulation scientists chose proprietary synthetic base oils with exceptional thermal and oxidative resistance. We also developed innovative lithium complex thickener technology and used special additives to enhance the performance of each grade of the Mobilith SHC Series greases. 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



Features	Advantages and Potential Benefits
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 antiwear 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 an NLGI 1.5 Grade grease with an ISO VG 460 PAO synthetic base fluid. It is an extreme pressure grease and is 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 1500 is an 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° 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 an 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. It is 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	1500	007
NLGI Grade	2	2	1.5	1	00

Mobilith SHC Series	100	220	460	1500	007
Thickener Type	Lithium complex	Lithium complex	Lithium complex	Lithium complex	Lithium complex
Color, Visual	Red	Red	Red	Red	Red
Penetration, Worked, 25°C, ASTM D 217	280	280	305	325	415
Dropping Point, °C, ASTM D 2265	255	255	255	255	NA
Viscosity of Oil, ASTM D 445					
cSt @ 40°C	100	220	460	1370	460
Timken OK Load, ASTM D 2509, lb.	--	50	70		70
4-Ball Weld, ASTM D 2596, Load, Kg	250	250	250	250	--
Water Washout, ASTM D 1264, Loss at 79°C. % wt	6	4	3	2	--
Rust Protection, ASTM D 6138	0	0	0	0	--
US Steel Mobility @ -18°C	--	6	5	4	27

Precautions

Mobilith SHC is manufactured from high quality synthetic base oil, carefully blended with selected soaps and additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. High-pressure injection of any grease under the skin can cause serious delayed soft tissue damage and should be treated immediately by a physician. To avoid injection injuries, inspect greasing equipment regularly for worn hoses and fittings. Keep fingers away from the nozzle and ensure the nozzle is firmly in place before discharging the grease. Please refer to our Imperial Oil Material Safety Data Sheet for further information.

Note: This product is not controlled under Canadian WHMIS legislation.

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