Mobil

Mobilith SHC™ PM Series

Grease

Product Description

Mobilith SHC™ PM greases are superior performance products designed specifically for severe paper machine applications, including extreme temperature environments and exposure to different qualities of water. Mobilith SHC PM greases combine the unique features of a synthetic base fluid with those of a high quality lithium complex thickener. The wax-free nature of the synthetic base fluid provides excellent low temperature pumpability and low starting and running torque compared to other non-synthetic oil products of the same viscosity. The high viscosity index of the synthetic base fluid ensures excellent film protection at high temperatures. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water. These properties are complemented by a special additive system to provide rust and corrosion resistance, wear protection, thermal/oxidative resistance and to enhance water resistance properties. Mobilith SHC PM 220 and Mobilith SHC PM 460 are both NLGI grade 1.5 with base fluids of ISO VG 220 and 460, respectively.

Mobilith SHC PM greases are designed for use in the most critical rolling element bearing applications in paper machines. They provide outstanding protection against rust and typical acid and alkali water corrosion, making them ideal for the wet end of the paper machine. The low volatility and excellent oxidation stability of the PAO base stock ensures excellent service at high temperatures typical of dry end conditions.

The Mobilith SHC PM series has become the technology of choice for many paper mill operators, worldwide. Its reputation is based on exceptional quality, reliability and the proven performance benefits they deliver.

Features and Benefits

The Mobil SHC brand of oils and greases is recognized and appreciated for their innovation and outstanding performance. The Mobilith SHC series symbolizes our continued commitment to using advanced technology to provide outstanding products. A key factor in the development of Mobilith SHC PM greases was the close contacts between our scientists and application specialists with key paper machine designers to ensure that our product offerings would provide exceptional performance in this continually evolving, and increasingly severe, equipment area.

Our work with equipment builders has helped confirm the results from our own laboratory tests showing the exceptional performance of the Mobilith SHC PM greases. These benefits include excellent resistance to acidic and alkaline water, enhanced bearing protection and bearing life, wide temperature range of application, and longer grease life.

To combat high thermal exposure our product formulation scientists chose proprietary synthetic base oils for Mobilith SHC PM grease because of their exceptional thermal and oxidative resistance. Our scientists developed a high performance lithium complex thickener technology and used specific additives to enhance Mobilith SHC PM greases to meet the needs of modern and future paper machines. Mobilith SHC PM greases offer the following features and benefits:

Features	Advantages and Potential Benefits
Outstanding high temperature and low temperature performance	Wide application temperature range, from -40ºC to 150°C with excellent protection at high temperatures and low torque, easy start-up at low temperatures
Excellent protection against wear, rust and corrosion, including acidic water	Reduced downtime and maintenance costs because of reduced wear, rust and corrosion even in acidic and alkaline water environments
Excellent structural stability and oxidation resistance	Extended service life with longer intervals between relubrication and improved bearing life
Excellent wear protection under heavy loads, slow speeds, and high temperatures	Outstanding protection of slow speed, heavily loaded bearings, with extended bearing life

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 maximize relubrication intervals and bearing life

Applications

Application Considerations: While Mobilith SHC PM 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 PM greases, it should be thoroughly cleaned out to achieve the maximum performance benefits. If dismantling the system for cleaning before changeover isn't feasible, then thorough purging and increased relubrication intervals are strongly recommended. Contact your local ExxonMobil Lube Engineer for consultation on this approach.

Mobilith SHC PM greases are recommended for critical rolling element bearing applications in paper machines. Included among these are:

- Wet end paper machine bearings.
- Highly loaded press section bearings.
- High-temperature felt roll and calendar stack bearings.

Specifications and Approvals

Mobilith SHC PM Series meets or exceeds the requirements of:	PM 220	PM 460
DIN 51825: (2004-06)	KPHC1-2N-40	KPHC1-2N-40

Typical Properties

Mobilith SHC	PM 220	PM 460
NLGI Grade	1.5	1.5
Thickener Type	Lithium Complex	Lithium Complex
Color, Visual	Off-White	Off-White
Penetration, Worked, 25^{o} C, ASTM D 217	305	305
Dropping Point. ^{o}C, ASTM D 2265	275	275
Viscosity of Oil, ASTM D 445, cSt @ 40^{o} C	220	460
4-Ball Wear, ASTMD 2266, Scar, mm	0.5	0.5
4-Ball Weld Load, ASTM D 2596, kg	250	250
Timken OK Load, ASTM D 2509, lbs	65	65
Roll Stability, ASTM D 1831, % Change	-5 to +5	-5 to +5
Water Washout, ASTM D 1264, 79^{o} C, % Loss	2	3
Rust Test, ASTM D 1743, Rating	PASS	PASS
Copper Corrosion, ASTM D 4048, Rating	1A	1A
EMCOR Rust Test, ASTM D 6138, Distilled Water, Rating	0/0	0/0
EMCOR Rust Test, ASTMD 6138, Acid Water pH 4.5, Rating	0/0	0/0
EMCOR Rust Test, ASTM D 6138, Alkaline Water pH 12.0, Rating	0/0	0/0
Oil Separation, ASTM D 1742, 0.25 psi, 24 hours @ 25^{o} C, % Wt. Loss	3	3

Health and 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 contract 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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Exxon Mobil Corporation
3225 Gallows Road
Fairfax, VA 22037

1-800-ASK MOBIL (275-6624)

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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