



Mobil SHC™

Mobil SHC Polyrex™ Series High-temperature synthetic polyurea greases



Advanced-technology greases for advanced equipment reliability.

Mobil SHC Polyrex Series greases are specifically designed to help improve equipment reliability by solving many high-temperature lubrication challenges in a wide variety of applications. The exceptional combination of scientifically engineered synthetic oils plus advanced ExxonMobil polyurea thickener, coupled with a high-performance additive system, helps provide problem-free equipment operation that can reduce maintenance costs and keep your productivity soaring. In addition to providing excellent severe-application lubrication, Mobil SHC Polyrex Series greases are NSF H1 registered for incidental food contact, making them particularly valuable for use in the food and beverage industry.

Outstanding performance in general industry and food processing applications.

Mobil SHC Polyrex Series greases are developed to bring high-temperature, severe-service solutions to the market. They have demonstrated excellent load-carrying capabilities, and rust and corrosion protection, without compromising long grease life in severe applications such as steam-saturated atmospheres or dusty environments with continuous operating temperatures up to 160°C (320°F). The polymer-enhanced formulation provides outstanding resistance to water washout and oil bleeding at high temperatures. And since Mobil SHC Polyrex Series grease can be applied up to 160°C–170°C (320°F–338°F), it is ideal for lubrication of equipment in the food processing, chemicals, plastics, and steel industries, such as kilns, ovens, and steam-heated machinery.

Approvals for use in the food industry.

Mobil SHC Polyrex Series greases are NSF H1 registered and also Kosher/Parve approved for use in the food, beverage, pharmaceutical, and packaging industries, and can help you support the transition to food-safe production processing through a HACCP (Hazard Analysis Critical Control Point) lubrication plan. Mobil SHC Polyrex Series grease is manufactured in facilities registered to the requirements of ISO 21469, as well as ISO 22000, one of the most recognized, stringent and comprehensive food and beverage safety standards. These certifications demonstrate our ongoing commitment to supporting your food safety assurance objectives.

High-Performance Benefits

Excellent high-temperature performance

Suitable for use up to 160°C (320°F). Frequent regreasing intervals support lubrication with temperature excursions to 170°C (338°F).

Outstanding load-carrying capabilities

The high-VI synthetic base oil combination provides enhanced film thickness to help protect metal surfaces from wear related failures and increase equipment reliability.

Exceptional water tolerance and protection against rust

Excellent wet stability and resistance to water washout help maintain effective lubrication that can lead to increased bearing life and reduce corrosion-related failures.

NSF H1 registered and Kosher/Parve approved

Manufactured in ISO 21469 registered facilities, helping maintain a food-safe production process and meeting global requirements in a demanding environment.

Mobil SHC Polyrex™ Series — Proofs of Performance

Mobil SHC Polyrex™ 462 saved a German sugar beet processing plant US \$23,000 annually.†

Situation

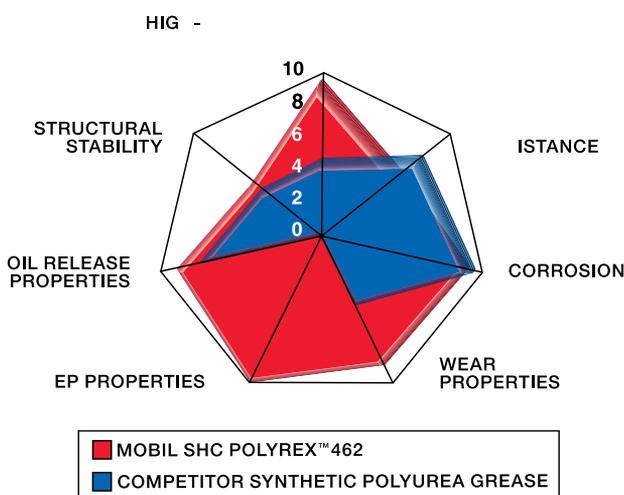
The product being used to lubricate the critical components of a steam dryer at continuously high temperatures of 150°C (302°F) in a humid environment was leading to excessive wear on sluice jaws and lubricating rings due to uncontrolled oil bleeding. Grease stiffening was causing a malfunction of magnetic valves of the centralized grease system.

Solution

Mobil SHC Polyrex 462 was used during an intense sugar campaign period. Inspection of the critical components showed no evidence of wear. The grease maintained its consistency, resulting in flawless operation of the centralized grease system. Mobil SHC Polyrex 462 was the only NSF H1 registered grease that performed under these severe conditions.

By using NSF H1 registered Mobil SHC Polyrex 462, this processing plant stated it was able to save \$23,000 annually in spare part and maintenance costs.

Balanced Performance



Mobil SHC Polyrex 462 saves a U.S. global printing company US \$33,900 annually.†

Situation

The printing company's Contiweb dryer was equipped with ¼" grease delivery lines and operated at slow speeds/high temperatures. They were having difficulty maintaining the dryer's fan bearings and despite the use of several competitive greases, they still suffered from 16 bearing failures per year.

Solution

After analysis of the Elastohydrodynamic lubrication parameters of the application and the dryer's grease delivery system, ExxonMobil engineers recommended use of Mobil SHC Polyrex 462 grease for excellent performance at temperatures as high as 170°C (338°F). After one year, use of Mobil SHC Polyrex 462 improved grease pumpability through the dryer's delivery lines and reduced bearing temperatures by as much as 15°F.

According to the company, this helped eliminate bearing failures, resulting in \$33,920 annual savings in bearing maintenance costs.

Typical Properties*

	Mobil SHC Polyrex™ 005	Mobil SHC Polyrex™ 221	Mobil SHC Polyrex™ 222	Mobil SHC Polyrex™ 462
NLGI Grade	00	1	2	2
Thickener Type	Polyurea	Polyurea	Polyurea	Polyurea
Viscosity, ASTM D445: 40°C, mm ² /s	220	220	220	460
100°C, mm ² /s	30	30	30	40
Color	White	White	White	White
Penetration, Worked, 25°C, ASTM D217, 0.1 mm	415	320	275	280
Dropping Point, ASTM D2265, °C	—	270	260	270
Water Washout, 79°C, ASTM D1264, % Weight Loss	37	7	7	5
Water Spray-Off, ASTM D4049, % Weight Loss	—	—	28	30
4-Ball Wear, ASTM D2266, Scar, mm	0.38	0.48	0.48	0.46
4-Ball Weld Point, ASTM D2596, kg	315	400	400	400
Bearing Corrosion, ASTM D1743, Rating	Pass	Pass	Pass	Pass
EMCOR Rust Test, Distilled Water, ASTM D6138, Rating	0,0	0,0	0,0	0,0
Wheel Bearing Leakage, 160 °C, ASTM D4290	—	<1	1	>1
FE9 Grease Life, 160°C, DIN 51821-160, F50, Hours	—	200	>350	>350
Pumpability, -18°C, USS DM-43, g/minute	40	30	18	7
DIN 51825: 2004-06	—	KPFHC1P-30	KPFHC2P-30	KPFHC2P-20
DIN 51826: 2005-01	GPFHC00K-30	—	—	—
NSF H1 Registration No.	141947	145674	141946	139558

*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. ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.

†These Proofs of Performance herein are based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.

For more information on Mobil SHC Polyrex™ Series and other Mobil-branded industrial lubricants and services, please contact your local company representative or visit mobilindustrial.com.

Health and Safety.

Based on available information, this product is not expected to produce adverse effects on health when used for the applications referred to above 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 the applications referred to above. If disposing of used product, take care to protect the environment.