Performance profile

Mobil Grease™

Performance by ExxonMobil

Mobil Polyrex™ EM Series

High-performance electric motor bearing grease

Energy lives here™

Key benefits

- Low oil release contributes to long-term lubrication
- Low bearing noise capability
- High-temperature performance
- Formulated with advanced polyuria thickener

When choosing a product to protect your electric motor or fan bearings, you need a grease that can take the heat. Mobil Polyrex™ EM greases are outstanding series specially formulated to deliver:

- **Outstanding long-life, high-temperature lubrication of ball and roller bearings, particularly in sealed-for-life applications**
- **Increased durability versus conventional polyurea greases when subjected to mechanical shear forces**
- **Mobil Polyrex™ EM and Mobil Polyrex™ EM 103 greases provide protection against rust and corrosion. Mobil Polyrex EM grease provides additional protection under mild salt-water wash conditions versus Polyrex EM 103 grease**
- **Mobil Polyrex EM grease is suitable for lubrication of ball bearings in many noise-sensitive applications**

Mobil Polyrex™ EM helps Oil Refinery to gain US$252,000 savings per year*

Electric motor and fan bearings | Oil refinery | Turkey

Situation

An oil refinery was using a competitor's conventional grease with extreme pressure (EP) additives to lubricate electric motor and fan bearings of processing units. High temperatures led to bearing failures, causing long, unscheduled downtime, even though the maintenance crews began using additional amounts of grease.

Recommendation

Following field studies conducted by the refinery's maintenance engineers and ExxonMobil engineers, the use of Mobil Polyrex™ EM was recommended.

Result

All the equipment that switched to Mobil Polyrex EM showed significant temperature drops. Due to its high mechanical stability and strong oxidation resistance, Mobil Polyrex EM reduced the level of bearing vibrations. The maintenance and failure logs since the switch showed a decline of 43% in bearings replaced in the electric motors and fans, saving the refinery US$252,000 per year in bearing costs. Production losses and labor costs due to bearing replacements have lessened considerably, and unscheduled downtime has been prevented.

* The Proof of Performance herein is 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.

Mobil Polyrex™ EM Series

Typical properties*

	Mobil Polyrex™ EM	Mobil Polyrex™ EM 103
Grease Low Noise Performance, SKF BeQuiet+, rating	GN2/GN3	GN3/GN4
NLGI Grade	2	3
Color	Blue	Blue
Base Oil Viscosity, ASTM D 445		
cSt @ 40°C	115	115
cSt @ 100°C	12.2	12.2
Base Oil Viscosity Index, ASTM D 2270	95	95
Penetration, ASTM D217 worked, 60x, mm/10	280	235
Penetration Change after 100.000 strokes, ASTM D217, mm/10	40	40
Dropping Point, ASTM D 2265, °C	260	270
Oil separation test, ASTM D 1742, mass %	0.5	0.1
High Temperature Grease Life, ASTM D 3336, Hours @ 177°C	750+	750+
4-Ball Wear Scar, ASTM D 2266, @ 40kg, 1200 rpm, 75°C, 1 hr., mm	0.4	0.6
Low Temperature Torque, ASTM D 1478, g.cm @ -29°C		
Starting	7500	9300
Running	800	1000
EMCOR Rust Test, Distilled Water, ASTM D6138, Rating	0 , 0	0 , 0
Rust Protection, ASTM D 1743, Distilled	Pass	Pass
Copper Corrosion Resistance, ASTM D 4048	1A	1A
Water Washout, ASTM D 1264, %	1.9	0.8

Mobil Polyrex™ EM meets or exceeds the requirements of:

	Mobil Polyrex™ EM
DIN: 51825: 2004-06	K2P-20

Optimum performance

Mobil Polyrex™ EM and Mobil Polyrex™ EM 103 greases offer exemplary long life and high temperature lubrication for ball and roller bearings, particularly in sealed-for-life applications. They also provide controlled oil release — another crucial priority when choosing a grease that will protect your equipment. And you can count on these remarkable greases to give you strong protection against rust and corrosion.

Low bearing noise capability

Our proprietary manufacturing processes also ensure reliable low bearing noise capabilities.

The roller and ball bearing greases in this series are measured and monitored via the SKF BeQuiet+ tester to assure product cleanliness, which contributes to low bearing noise, making them suitable for many noise-sensitive applications.

Key applications include:

- Electric motor bearings
- Fin fan bearings
- High-temperature pump bearings
- Factory-fi lled, sealed-for-life ball bearings
- Ball or roller bearings operating at high temperatures where low oil separation is required
- Mobil Polyrex EM grease for ball or roller bearings operating in noise sensitive environments

Industrial Lubricants

Advancing Productivity™

Safety

Long grease and equipment life, as well as optimum wear protection, can help minimize maintenance and the safety risks associated with employee equipment interaction.

Environmental Care**

Low oil release helps control your energy consumption, wasteoil generation and maintenance related waste.

Productivity

By helping you achieve trouble free equipment operation, Mobil Polyrex™ EM grease can help you achieve new heights of operational productivity.

*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 exxonmobil.com.

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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. MSDSs 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.

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