



## Mobil Polyrex 461 EP

Mobil Industrial , United States

Multi-purpose Grease

### Product Description

Mobil Polyrex™ 461 EP is a shear-stable polyurea grease with excellent extreme-pressure (EP) and load-carrying characteristics. The proprietary polyurea thickener system exhibits excellent resistance to oxidation and oil separation at operating temperatures as high as 160°C (320°F). With its outstanding high-temperature oxidation stability, load-carrying capability, shear stability, water resistance and wide operating temperature range, Mobil Polyrex 461 EP is an excellent heavy-duty grease for a wide array of industrial and construction applications.

### Features and Benefits

#### EXTREME-PRESSURE PROTECTION AND THERMAL STABILITY

Mobil Polyrex 461 EP contains a proprietary extreme-pressure (EP) additive package that provides load-carrying capability without degrading the thermal stability of the grease at high temperatures. Conventional sulfur- and phosphorus-base EP additives used in other multi-purpose greases begin to oxidize rapidly at temperatures above 250°F. Mobil Polyrex 461 EP, on the other hand, continues to provide a high level of wear and extreme-pressure protection up to 160°C (320°F) without rapid oxidation of the anti-wear or EP additives.

#### SUPERB SHEAR STABILITY

The proprietary polyurea thickener system in Mobil Polyrex 461 EP exhibits excellent durability and stability when subjected to a mechanical shearing force. For example, in the ASTM D 217 cone penetration test, the consistency of Mobil Polyrex 461 EP changed by approximately one NLGI grade after being worked for 100,000 strokes - similar to the performance of high-quality lithium-complex greases, which are the benchmark for excellent shear stability. By contrast, competitive polyurea greases containing shear-unstable thickener technology can soften by three NLGI grades under the same test conditions. Good mechanical shear stability is important in roller bearing applications where excessive grease softening may lead to grease leakage or purging from the bearing.

#### EXCELLENT WATER RESISTANCE

The Mobil Polyrex 461 EP formulation is enhanced with water-resistant polymers that enable it to form a tenacious protective film in applications that are heavily contaminated with water. The excellent results obtained for Mobil Polyrex 461 EP in the water washout (ASTM D 1264) and corrosion (ASTM D 6138) tests demonstrate the grease's ability to stay in place and protect bearings in wet environments.

In summary, Mobil Polyrex 461 EP offers the following features and benefits:

- Outstanding high-temperature oxidation stability
- Excellent mechanical shear stability
- Thermally stable extreme-pressure (EP) protection
- Wide operating temperature range -20°C (-4°F) to 160°C (320°F)
- Excellent dispensability in automatic grease systems
- Resistant to water washout and protects bearings from corrosion

### Applications

Mobil Polyrex 461 EP is an excellent heavy-duty grease for a wide array of industrial and construction applications.

### Properties and Specifications

Property	

Property	
Grade	NLGI 1
SKF Emcor Rust Test, Distilled Water, ASTM D6138	0,0
Copper Strip Corrosion, Rating, ASTM D4048	1B
Base Oil Viscosity of Greases @ 40 C, mm <sup>2</sup> /s, AMS 1697	460
Dropping Point, °C, ASTM D2265	249
Water Washout, Loss @ 79 C, wt%, ASTM D1264	1
Rust, Rating, ASTM D1743	Pass
Penetration, 60X, 0.1 mm, ASTM D217	327
Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2596	400
Four-Ball Wear Test, Scar Diameter, mm, ASTM D2266	0.5

### Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.aspx>

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