



Mobilgrease XHP™ 460 Series

Mobil Grease, Finland

Product Description

Mobilgrease XHP™ 460 greases are extended service lithium complex greases intended for a wide variety of heavy duty applications and operating conditions. These greases were designed to outperform conventional products by applying high performance proprietary lithium complex manufacturing technology. They are formulated to provide excellent high temperature performance with excellent adhesion, structural stability and resistance to water contamination. These greases have a high level of chemical stability and offer excellent protection against rust and corrosion. These greases feature high dropping points and maximum recommended operating temperature of 140° C (284°F). Mobilgrease XHP 460 greases are formulated with an ISO VG 460 base oil viscosity and are available in NLGI grades 1 and 2. Mobilgrease XHP 462 Moly is fortified with 3% molybdenum disulfide to provide enhanced EP and AW protection in heavily loaded and high sliding applications.

Mobilgrease XHP 460 greases are designed for a wide range of applications including the industrial, automotive, construction and marine sectors. Their performance features make them ideal choices for operating conditions including high temperature, water contamination, shock loading and extended re-lubrication operations. Mobilgrease XHP 462 Moly is an extreme pressure grease containing 3% molybdenum disulfide that provides protection from wear under pivoting and other heavily loaded sliding conditions that lead to lose of oil film.

Features and Benefits

A key factor in the excellent adhesion and cohesion properties and mechanical stability of the thickener of Mobilgrease XHP 460 greases is the proprietary manufacturing technology developed at our research facilities and adopted by our modern manufacturing facilities. These products use specially selected additives to provide excellent oxidation stability, rust and corrosion control, resistance to water contamination as well as anti-wear and EP protection. Mobilgrease XHP 460 Series products offer the following features and potential benefits:

Mobilgrease XHP 460 greases are leading members of the Mobilgrease brand of products. Mobilgrease XHP 460 greases are designed by our formulation technologists and backed by our world-wide technical support staff.

| Features | Advantages and Potential Benefits |
|---|--|
| Superb resistance to water washout and spray-off | Helps to assure proper lubrication and protection even in the most severe water exposure conditions |
| Highly adhesive and cohesive structure | Excellent grease tenacity helps reduce leakage and extend re-lubrication intervals to help reduce maintenance requirements. |
| Excellent rust and corrosion resistance | Protection of lubricated parts even in hostile aqueous environments. |
| Very good resistance to thermal, oxidative and structural degradation at high temperature | Helps extend grease life and enhance bearing protection in high temperature applications and offers reduced maintenance and replacement cost benefits. |
| Very good anti-wear and EP performance | Reliable protection of lubricated equipment, even under conditions of high sliding with potential for extended equipment life and reduced unanticipated downtime |
| Broad multi-purpose application | Provides potential for inventory rationalization and reduced inventory costs |

Applications

Mobilgrease XHP 460 greases are used in a wide range of equipment including industrial, automotive, construction and marine applications. The blue color of Mobilgrease XHP 461 and 462 enables easy verification of application. With its high, ISO VG 460 base oil viscosity, these greases are recommended for high load applications at slow-to-moderate speeds, including most bearing applications in the paper, construction, and mining industries, as well as off-highway vehicles.

Specific applications:

- Mobilgrease XHP 461 is recommended by ExxonMobil for use in industrial and marine applications, chassis components and farm equipment. It provides excellent low temperature performance. It is satisfactory for low speed flexible gear-type couplings.
- Mobilgrease XHP 462 Series is recommended for use in felt roll bearings, wet end bearings, and press section bearings. It is also a good multi-purpose grease for general mill applications and industrial and marine applications, chassis components and farm equipment.
- Mobilgrease XHP 462 Moly is fortified with 3% molybdenum disulfide and is particularly recommended by ExxonMobil for applications such as bucket pins and fifth wheels, where molybdenum disulphide provides an extra level of protection where sliding friction and oscillating motion can lead to rupturing of the oil film, resulting in metal to metal contact.

Specifications and Approvals

| This product meets or exceeds the requirements of: | Mobilgrease XHP 461 | Mobilgrease XHP 462 |
|--|---------------------|---------------------|
| DIN 51825:2004-06 - KP 1 N -20 L | X | |
| DIN 51825:2004-06 - KP 2 N -20 L | | X |

Properties and Specifications

| Property | Mobilgrease XHP 461 | Mobilgrease XHP 462 | Mobilgrease XHP 462 MOLY |
|--|---------------------|---------------------|--------------------------|
| Grade | NLGI 1 | NLGI 2 | NLGI 2 |
| Thickener Type | Lithium Complex | Lithium Complex | Lithium Complex |
| Color, Visual | Dark blue | Dark blue | Gray-Black |
| Copper Strip Corrosion, 24 h, 100 C, Rating, ASTM D4048 | 1A | 1A | 1A |
| Corrosion Preventive Properties, Rating, ASTM D1743 | Pass | Pass | Pass |
| Dropping Point, °C, ASTM D2265 | 270 | 300 | 300 |
| Four-Ball Extreme Pressure Test, Weld Point, kgf, ASTM D2596 | 315 | 315 | 315 |
| Four-Ball Wear Test, Scar Diameter, mm, ASTM D2266 | 0.5 | 0.5 | 0.5 |
| Molybdenum Disulfide Content, wt %, CALCULATED | | | 3 |
| Oxidation Stability, Pressure Drop, 100 h, kPa, ASTM D942 | 13.8 | 13.8 | |
| Penetration, 60X, 0.1 mm, ASTM D217 | 325 | 280 | 280 |
| Roll Stability, Penetration Consistency Change, 0.1 mm, ASTM D1831 | -5 | -5 | -5 |
| SKF Emscor Rust Test, Distilled Water, ASTM D6138 | 0, 0 | 0, 0 | 0, 0 |
| Timken OK Load, lb, ASTM D2509 | 50 | 50 | 50 |
| Viscosity @ 100 C, Base Oil, mm ² /s, ASTM D445 | 30.8 | 30.8 | 30.8 |
| Viscosity @ 40 C, Base Oil, mm ² /s, ASTM D445 | 460 | 460 | 460 |

| Property | Mobilgrease XHP 461 | Mobilgrease XHP 462 | Mobilgrease XHP 462 MOLY |
|-----------------------------|---------------------|---------------------|--------------------------|
| Viscosity Index, ASTM D2270 | 96 | 96 | 96 |

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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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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