# Mobilgrease XHP™ 220 Series

Mobil Grease , Switzerland

Mobil grease

## Product Description

Mobilgrease XHP™ 220 greases are extended service lithium complex greases intended for a wide variety of applications and severe operating conditions. These greases were designed to outperform conventional products by applying cutting edge, proprietary, lithium complex manufacturing technology. They are formulated to provide excellent high temperature performance with superb 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 220 greases are available in NLGI grades 00, 0, 1, 2 and 3 with an ISO VG 220 base oil viscosity.

Mobilgrease XHP 220 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 222 Special is an extreme pressure grease fortified with 0.75% molybdenum disulfide that provides protection from wear under conditions pivoting and other conditions that lead to loss of oil film.

## Features and Benefits

Mobilgrease XHP 220 greases are leading members of the Mobilgrease brand of products, which have gained a reputation for innovation and performance excellence. Mobilgrease XHP 220 greases are high performance products designed by our formulation technologists and backed by our world-wide technical support staff.

A key factor in the excellent adhesion and cohesion properties and high drop point of Mobilgrease XHP 220 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 220 Series products offer the following features and potential benefits:

| Features | Advantages and Potential Benefits |
|---|---|
| Superb resistance to water washout and spray-off | Helps 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 for reduced 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 helping to reduce maintenance and replacement costs |
| 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 220 greases are used in a wide range of equipment including industrial, automotive, construction and marine applications. Their blue color enables easy verification of application:

Mobilgrease XHP 005 and 220 are softer, high-temperature greases recommended by ExxonMobil for centralized grease application systems, gear lubrication, and where extreme-cold-temperature pumpability is important.

Mobilgrease XHP 221 is recommended by ExxonMobil for use in industrial and marine applications, chassis components and farm equipment. It provides excellent low temperature performance.

Mobilgrease XHP 222 is recommended by ExxonMobil for industrial and marine applications, chassis components and farm equipment. Its sticky formulation stays in applications longer.

Mobilgrease XHP 223 is recommended by ExxonMobil for applications where good high temperature and anti-leakage properties are required. It is particularly recommended for severe truck wheel bearing applications or for rolling element bearings subject to vibration, or where higher speeds require a grease with higher consistency to provide channeling characteristics.

Mobilgrease XHP 222 Special contains 0.75% molybdenum disulfide, is grey in color and is recommended by ExxonMobil for moderate duty service in industrial applications, chassis components and farm equipment. It also finds application in king pins, U-joints, fifth wheels and bucket pins.

## Specifications and Approvals

| This product has the following builder approvals: | 220 | 221 | 222 |
|---|---|---|---|
| Fives Cincinnati P-64 | | | X |
| Fives Cincinnati P-72 | | X | |
| Fives Cincinnati P-79 | X | | |

| This product meets or exceeds the requirements of: | 220 | 221 | 222 |
|---|---|---|---|
| DIN 51825:2004-06 - KP 1 N -20 | | X | |
| DIN 51825:2004-06 - KP 2 N -20 | | | X |
| NLGI HPM+WR | | | X |

## Properties and Specifications

| Property | 005 | 220 | 221 | 222 | 222 SPECIAL | 223 |
|---|---|---|---|---|---|---|
| Grade | NLGI 00 | NLGI 0 | NLGI 1 | NLGI 2 | NLGI 2 | NLGI 3 |
| Thickener Type | Lithium Complex | Lithium Complex | Lithium Complex | Lithium Complex | Lithium Complex | Lithium Complex |
| Color, Visual | Dark blue | Dark blue | Dark blue | Dark blue | Grey-black | Dark blue |
| Copper Strip Corrosion, 24 h, 100 C, Rating, ASTM D4048 | 1B | 1B | 1B | 1B | 1B | 1B |
| Corrosion Preventive Properties, Rating, ASTM D1743 | Pass | Pass | Pass | Pass | Pass | Pass |

| Property | 005 | 220 | 221 | 222 | 222 SPECIAL | 223 |
|---|---|---|---|---|---|---|
| Dropping Point, °C, ASTM D2265 | | 260 | 275 | 290 | 290 | 290 |
| Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2596 | 46.7 | 46.7 | 46.7 | 46.7 | 46.7 | 46.7 |
| Four-Ball Extreme Pressure Test, Weld Point, kgf, ASTM D2596 | 315 | 315 | 315 | 315 | 400 | 315 |
| Four-Ball Wear Test, Scar Diameter, mm, ASTM D2266 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Molybdenum Disulfide Content, wt %, CALCULATED | | | | | 0.75 | |
| Oxidation Stability, Pressure Drop, 100 h, kPa, ASTM D942 | 35 | 35 | 35 | 35 | 35 | 35 |
| Penetration, 60X, 0.1 mm, ASTM D217 | 415 | 370 | 325 | 280 | 280 | 235 |
| Roll Stability, Penetration Consistency Change, 0.1 mm, ASTM D1831 | | 0 | 0 | 0 | 0 | 0 |
| SKF Emcor Rust Test, Distilled Water, ASTM D6138 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Timken OK Load, lb, ASTM D2509 | 40 | 40 | 40 | 40 | 40 | 40 |
| Viscosity @ 100 C, Base Oil, mm2/s, ASTM D445 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 |
| Viscosity @ 40 C, Base Oil, mm2/s, ASTM D445 | 220 | 220 | 220 | 220 | 220 | 220 |
| Viscosity Index, ASTM D2270 | 94 | 94 | 94 | 94 | 94 | 94 |
| Water Sprayoff, Loss, %, ASTM D4049 | | | 15 | 10 | 10 | 10 |
| Water Washout, Loss @ 79 C, wt%, ASTM D1264 | | | 8 | 5 | 5 | 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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