



Castrol Molub-Alloy 6080 Range

High-performance Grease

Description

Castrol Molub-Alloy™ 6080 grease is a High Performance multi-service lubricants designed to give outstanding performance in a wide variety of applications. It may be used in either journal or antifriction bearings in the most demanding industrial applications under extreme environmental conditions.

Molub-Alloy 6080 is manufactured from the highest quality petroleum oil and thickened with a unique calcium complex sulphonate unsurpassed for mechanical shear stability.

Molub-Alloy 6080 grease is compounded with chemical additives for EP characteristics and with select Molub-Alloy lubricating additives for thin-film, high-pressure anti-wear protection. These additives are dispersed evenly throughout the grease and provide superior protection against component wear, resulting in long service life.

It is also inhibited against high temperature oxidation and corrosion, and blended and compounded to withstand the heavy loads and shock loading commonly found in the steel/primary metals, construction, mining, and forest products industries.

The lubricating solids work synergistically with chemical anti-wear and extreme pressure (EP) additives to reduce contact temperatures and wear whilst providing the ultimate in extreme pressure and shock load anti-weld protection.

Application

Typical applications for Molub-Alloy 6080 grease is bearings that are under heavy water or aggressive process fluid contamination.

Advantages

- The load carrying and anti-wear capabilities of Molub-Alloy 6080 exceed conventional complex greases.
- Excellent friction reduction characteristics due to Molub-Alloy solid lubricants – easier start-up, reduced heat, and reduced energy leading to longer bearing life.
- Molub-Alloy 6080 multi-service greases offer excellent oxidation resistance and resist washing out, even under adverse water contamination. This product has been designed to work with aggressive process waters.
- Reduced friction due to the effect of the Molub-Alloy additives is most evident under boundary and mixed-film lubrication conditions. This benefit is most pronounced where frequent start up, slow speeds or high and unexpected heavy loads are encountered.
- Overall savings are derived from the above and result from less labor and downtime, smoother, more efficient operation with longer parts life and extended lubrication cycles.

Typical Characteristics

| Name | Method | Units | 6080/460-1.5 | typical data |
|--|-----------------------|----------|----------------------------|----------------------------|
| Colour | Visual | - | Dark grey | Dark grey |
| Thickener Type | - | - | Calcium-complex Sulphonate | Calcium-complex Sulphonate |
| Base Oil Type | - | - | Mineral oil | Mineral oil |
| NLGI Grade | - | - | 1.5 | 1.5 |
| Density @ 20°C / 68°F | ASTM D 1475 | g/ml | ~1,031 | 1.029 |
| Worked Penetration, 60 strokes @ 25°C/ 77°F | ISO 2137 / ASTM D217 | 0.1 mm | 295-310 | 301 |
| Worked Penetration, 100,000 Strokes @ 25°C/77°F, Pen. Change From 60 Strokes | ISO 2137 / ASTM D217 | % Change | +/- 10.0 | 5.3 |
| Dropping Point, minimum | ISO 2176 / ASTM D2265 | °C | Min. 260 | 295 |
| Base Oil Viscosity, ISO Grade | ISO 3104 / ASTM D445 | - | ISO 460 | ISO 460 |
| Base Oil Flash Point | ISO 2592 / ASTM D 92 | °C | Min. 200 | Min. 200 |
| Rust test, 48 hrs @ 52°C/126°F | ASTM D1743 | Rating | Pass | pass |
| Emcor | DIN 51802 | Rating | Max. 0/1 | 0 / 0 |
| Copper Corrosion, 24 hrs, 100°C/212°F | ISO 2160 / ASTM D4048 | Rating | Max. 1b | 1a |
| Four Ball Wear Test (1 hr, 40 kg, 1200 rpm, 75°C/167°F), Scar Diameter | ASTM D 2266 | mm | < 0.60 | 0.45 |
| Four Ball EP test, Weld Load | ASTM D 2596 | kg | Min. 500 | 620 |
| Water Washout: @ 79°C/175°F, distilled water, Dried @ 93°C | ASTM D1264 | % Loss | max. 5.0 | 1.1 |
| Water Spray off: @ 38°C/100°F, tap water | ASTM D4049 | % Loss | max. 30.0 | 16.9 |
| Bomb Oxidation @ 99°C/210°F, Pressure Drop @ 100h | ASTM D942 / DIN 51808 | psi | Max. 10 | 6.5 |
| Roll Stability, 2 hours, 25°C/77°F, Penetration Change | ASTM D1831 | % Change | +/-10.0 | 0.3 |
| Roll Stability, 2 hours, 25°C/77°F, 10% distilled water, Penetration Change | ASTM D1831 | % Change | +/-10.0 | 1.7 |
| Oil Separation, 24 hrs, 0.25 Psi, 25°C/ 77°F | ASTM D1742 | % | +/- 2.0 | 0 |
| Flow Pressure at -20 °C | DIN 51805 | hPa | <700 | 535 |

delete 6080/220-2. Update update master PDS - Values to be updated- water wash ot and water spray off values by technology

Additional Information

- At temperatures above 121°C/250°F, regular reapplications of MA6080 must be considered.
- At temperatures near 177°C/350°F, weekly reapplications of MA6080 are suggested.
- For continuous service near 204°C/400°F, reapply MA6080 daily or once each shift.
- Molub-Alloy MA6080 greases can be used above 232°C/450°F. However, frequent reapplication of grease is necessary to prevent deterioration of the petroleum base oil. Reapply before the grease in the bearing stiffens.
- In order to minimise potential incompatibilities when converting to a new grease, all previous lubricant should be removed as much as possible prior to operation. During initial operation, relubrication intervals should be monitored closely to ensure all previous lubricant is purged.

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