



## Product Data

# Castrol Molub-Alloy® 1000

Extreme Temperature Grease

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** is a synthetic grease initially designed for extended service life without relubrication to lubricate bearings in high temperature ovens. The synthetic fluids in the **Castrol Molub-Alloy 1000** formulation were selected for their controlled low volatility, minimum residue after evaporation and high VI for additional film strength at elevated temperatures.

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** is part of Tribol's Eco-Solutions™ product offering. Formulated to address environmental concerns, it is free of lead, chlorinated solvents, and barium.

### Description

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** meets the NLGI Grade 1 Classification.

The load-carrying and antiwear capabilities of **Castrol Molub-Alloy 1000 Grease** are a result of chemical additive systems in conjunction with a blend of Molub-Alloy lubricating solids selected for high temperature service. Lubricating solids are especially effective at slow speeds, in start-stop conditions and where heavy and shock loading are present. The lubricating solids in Molub-Alloy 1000 can also protect newly machined bearing surfaces during initial commissioning which is essential for long component service life.

As a result of the higher viscosity synthetic base fluids used in **Castrol Molub-Alloy 1000 Grease**, the film strength at elevated temperature is superior to that of petroleum base oils.

The combination of synthetic fluids and a unique thickening system offers physical stability in prolonged service at high temperatures. In **Castrol Molub-Alloy 1000 Grease** remains more pliable than conventional high temperature greases. Benefits include extended lube cycles and uninterrupted service for extended bearing life.

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** is formulated with a combination of rust and oxidation inhibitors for prolonged service life without relubrication (see Notes).

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### Typical Applications

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** is designed for use in those applications where elevated temperatures are encountered, where heavy and shock loading occur, and bearing speeds are slow to moderate. Where a bearing application is suspected of being high speed, please consult your Tribol Engineering Service Representative prior to the installation of **Castrol Molub-Alloy 1000 Extreme Temperature Grease**.

**Castrol Molub-Alloy 1000 Extreme Temperature Grease** has been successfully used in a wide range of industrial applications where elevated temperatures are encountered:

- In overhead sealed trolley wheel conveyor bearings through paint drying ovens of an air conditioner manufacturing plant. Temperatures reached 180°C/356°F and relubrication cycles were every 8 months (see Notes).
- In overhead sealed trolley wheel conveyor bearings through a paint drying oven in an automotive assembly plant. Temperatures reached 185°C/365°F with relubrication cycles every 6 months (see Notes).
- In floor conveyor bearings through paint drying ovens in an automotive assembly plant. Temperatures of 190°C/374°F were reached with relubrication cycles every 6 months.
- In overhead sealed trolley wheel conveyor bearings through paint drying ovens of a motorcycle assembly plant. After 4 months without relubrication in temperatures of 180°C/356°F the bead of product on the outside of the trolley wheels was still soft and pliable. Relubrication cycles were every 6 months (see Notes).
- In a cement rotary kiln as a gas-seal lubricant to minimize hot gas leakage.
- **Castrol Molub-Alloy 1000 Grease** is engineered for prolonged service from 177°C/350°F to 288°C/550°F. 1000 also withstands intermittent exposure to temperatures up to 343°C/650°F.

### Notes/Reapplication Frequency

Although approximate temperatures and relubrication cycles are denoted above, these should be used only as general guidelines due to variation from application to application. For additional relubrication information refer to Technical Bulletin 3534.

For specific terms, conditions, warranty, and availability, refer to Tribol's Price List in effect at time of purchase.



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### Typical Characteristics

NLGI Grade	1
Worked Penetration, ASTM 217, mm/10	310-340
Thickener Type	Organic
Dropping Point, ASTM D 2265, °C/°F	260+/500+
Base Fluid Properties	
Viscosity, ASTM D 445, D 2161:	
@40°C, cSt	540
@100°C, cSt	50
@100°F, cSt/SUS	610/2825
@210°F, cSt/SUS	52/242
Flash Point, ASTM D 92, COC, °C/°F	285/545
Oxidation Stability, ASTM D 942:	
Pressure Drop @ 100 hrs., psi	4
Water Washout, ASTM D 1264, @ 79°C/175°F, % loss	4
Emcor Rust Test, DIN 51802, 1P 220/85, rating	Pass
Worked Penetration, ASTM D 217, 100M strokes, mm/10	
% change from 60 strokes	+6
Oil Separation, ASTM D 1742, percent	0
Four Ball EP Test, ASTM D 2596,	
Weld Load, kg	250
Four Ball Wear Test, (40 kg, 75°C/167°, 1800 rpm, 1 hr),	
Scar Diameter, mm	0.42
Molub-Alloy Solids, Grade Classification	Fluid Lubricant

Subject to Usual Manufacturing Tolerances.

All reasonable care has been taken to ensure that this information is accurate as of the date of printing. Nevertheless, such information may be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.