Product Data

Molub-Alloy™ 1000 HT

Extreme Temperature Grease

Description

Castrol Molub-Alloy™ 1000 HT (previously called Molub-Alloy™ 1000) extreme temperature grease utilises synthetic base oils in conjunction with a blend of lubricating solids selected for high temperature service. The synthetic fluids in Molub-Alloy 1000 HT were selected for their controlled low volatility, minimum residue after evaporation and high VI for additional film strength at elevated temperatures.

The combination of synthetic fluids and a unique thickening system offers physical stability in prolonged service at high temperatures. Molub-Alloy 1000 HT remains more pliable than conventional high temperature greases.

As a result of the higher viscosity synthetic base fluids used in Molub-Alloy 1000 HT, the film strength at elevated temperature is superior to that of petroleum base oils.
It is also formulated with a combination of rust and oxidation inhibitors for prolonged service life without relubrication.

Application

Molub-Alloy 1000 HT is designed for use in applications where elevated temperatures are encountered, heavy and shock loading occurs, and where bearing speeds are low to moderate.
Molub-Alloy 1000 HT has been successfully used in a wide range of elevated temperatures industrial applications such as:

- In overhead sealed trolley wheel conveyor bearings passing through paint drying ovens in an air conditioner manufacturing plant. Temperatures reached 180°C/356°F and relubrication cycles were every 8 months
- In overhead sealed trolley wheel conveyor bearings passing through a paint drying oven in an automotive assembly plant. Temperatures reached 185°C/365°F with relubrication cycles every 6 months.
- In floor conveyor bearings passing 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 passing 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.
- In a cement rotary kiln as a gas-seal lubricant to minimise hot gas leakage

Advantages

- Excellent friction reduction characteristics due to Molub-Alloy solid lubricants – easier start-up, reduced heat, and reduced energy leading to longer bearing life

- Synthetic base fluid and unique thickening system – the combination of synthetic fluids and a unique thickening system offers physical stability in prolonged service at high temperatures. This combination makes Molub-Alloy 1000 HT more pliable than conventional high temperature greases, leading to longer bearing life, extended lubrication cycles and uninterrupted service

- Molub-Alloy 1000 HT grease is engineered for prolonged service from 177°C/350°F to 288°C/550°F. Molub- Alloy 1000 HT also withstands intermittent exposure to temperatures up to 343°C/650°

- Formulated to address environmental concerns – it is free of antimony, barium, lead, and zinc

Typical Characteristics

Name	Method	Units	Molub-Alloy 1000 HT
Appearance	Visual	-	Dark Grey
Thickner Type	-	-	Organic Sodium
Base Oil Type	-	-	PAO-Ester
NLGI Grade	-	-	1
Density @ 20°C / 68°F	ASTM D4052 / ISO 12185	kg/m³	939
Worked Penetration 60 Strokes @25°C / 77°F	ASTM D217 / ISO 2137	0.1mm	310 - 340
Worked Penetration 100,00 Strokes @25°C / 77°F Change from 60 strokes	ASTM D217 / ISO 2137	0.1mm	20
Dropping point	ASTM D2265 / ISO 2176	°C/°F	260 + / 500+
Base Oil Viscosity @ 40°C / 104°F	ASTM D445 / ISO 3104	mm²/s	540
Base Oil Viscosity @ 100°C / 212°F	ASTM D445 / ISO 3104	mm²/s	50
Flash Point - open cup method	ASTM D92 / ISO 2592	°C/°F	210 / 410
Rust test - Emcor	ASTM D6138 / ISO 11007	Rating	0 / 0
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1800 rpm / 1 hr)	ASTM D2266	mm	0.42
Four Ball Wear test - Weld Load	DIN 51350-2	N	2500
Four Ball Wear test - Weld Load	ASRM D2596	kg	250
Water Washout @ 79°C / 175°F	ASTM D1264	%loss	4
Bomb Oxidation @ 99°C / 210°F, Pressure drop @100h	ASTM D942 / DIN 51808	kPa / Psi	27.6 / 4
Oil separation, 24 hrs, 0.25 Psi, 25°C / 77°F	ASTM D1742	%	0
Oil separation, 100°C / 212°F, 30 hrs	ASTM D6184	%	8.9
Evaporation loss, 100°C / 212°F, 22 hrs	ASTM D2595	%	0.3
ISO Classification	ISO 6473/9	-	L-XDGFB

Subject to usual manufacturing tolerances.

Additional Information

Molub-Alloy 1000 HT should not be mixed with other greases or oils. In case of doubt please consult your local Technical Services.
Although approximate temperatures and relubrication cycles are denoted previously, these should be used only as general guidelines due to variation from application to application

This product was previously called Molub-Alloy 1000. The name was changed in 2015

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