



Product Data

Molub-Alloy 4086 Range

High-performance bearing greases

Description

Castrol Molub-Alloy™ 4086 high-performance bearing greases are heavy-duty all-weather greases manufactured from high-quality components, carefully selected for their compatibility with Molub-Alloy lubricating solids. Molub-Alloy 4086 greases have good film strength and are formulated to protect against friction and wear under heavy loading due to a proprietary blend of Molub-Alloy solid lubricants.

Application

Castrol Molub-Alloy 4086 greases are designed for industries with applications most commonly requiring the heavy-duty, all-weather capabilities of this range including steel, mining, logging, chemical and construction. They are particularly useful where conditions require sealing against outside contaminants such as dust and water. The Molub-Alloy 4086 range operates effectively in plain, journal, and antifriction bearings. They exhibit adhesive and cohesive characteristics and are resistant to mechanical shearing. Typical applications are in ball and roller bearings, bushings, slides, screws and general lubrication where loads may be heavy and speeds low. Molub-Alloy 4086 bearing greases can be applied by any standard grease dispensing method.

Advantages

- Excellent friction reduction characteristics due to Molub-Alloy solid lubricants – easier start-up, reduced heat, and reduced energy leading to longer bearing life.
- Excellent EP and anti-wear properties – protects equipment against extreme/shock loading and helps minimize bearing component wear and therefore extends equipment life.
- Excellent mechanical stability and adhesion – the grease keeps its consistency in service ensuring long-term protection and reduced consumption as film stays between lubricated surfaces.
- Good water resistance – the coating film stays on the surface in the presence of water even when exposed to the action of hot and chemically active process water.
- Outstanding oxidation and thermal stability – provides reliable performance and extended lubricant life in high-temperature applications.

Typical Characteristics

Name	Method	Units	4086-1	4086/320-1	4086/460-2
Appearance	Visual	-	Dark grey	Dark grey	Dark grey
Thickener type	-	-	Lithium complex	Lithium complex	Lithium complex
Base oil	-	-	Mineral oil	Mineral oil	Mineral oil
Consistency	ISO 2137 / ASTM D217	NLGI Grade	1	1	2
Density @ 20°C / 68°F	ASTM D4052 / DIN 51757D	kg/m ³	890	886	896
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	310-340	310-340	265-295
Worked Penetration (100,000 strokes @ 25°C / 77°F) - change from 60 strokes	ISO 2137 / ASTM D217	0.1 mm	15	20	15
Dropping point	ISO 2176 / ASTM D566	°C/°F	260+/500+	260+/500+	260+/500+
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm ² /s	164	316	454
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm ² /s	12.3	23.2	29.6
Rust Test (distilled water)	ASTM D1743	Pass	Pass	Pass	Pass
Copper Corrosion (24 hrs, 100°C / 212°F)	ASTM D4048	Rating	1b	1b	1b
Four Ball Weld Load test - Load Wear Index (27°C / 1770 rpm)	ISO 11008 / ASTM D2596	-	65	60	60
Four Ball Weld Load test - Weld Point	ISO 11008 / ASTM D2596	kgf	400	400	400
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ISO 51350 / ASTM D2266	mm	0.45	0.45	0.45
Timken OK Load	ASTM D2509	kg / lbs	27 / 60	27 / 60	29.5 / 65
Water Wash-out	ISO 11009 / ASTM D1264	% wt loss	5	6	4
Roll Stability test - Shear Stability	ASTM D1831	0.1 mm	5	6	4
Grease Pumpability test - Lincoln Ventmeter	US Steel test method	psi	400 @ 10°F	580 @ 0°F	475 @ 30°F
ISO Classification	ISO 6743/9	-	-	L-XCDEB 1	L-XBDEB 2

Subject to usual manufacturing tolerances.

Additional Information

In order to minimize 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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