



## Product Data

# Castrol Molub-Alloy 936 SF Heavy A

Open gear lubricant

## Description

Castrol Molub-Alloy™ 936 SF Heavy A is a uniquely compounded solvent-free open gear lubricant developed specifically for use on heavy-duty equipment in mining and industrial service. It is compounded to give maximum protection to gears and slides on large draglines and shovels while minimizing potential pollutants to the environment. A highly refined, viscous, paraffinic petroleum derivative is the foundation of a blended base fluid with excellent natural chemical and thermal stability.

A proprietary blend of Molub-Alloy lubricating solids is included to promote anti-wear and load carrying properties beyond those of conventional lubricants. The select lubricating solids work synergistically with chemical anti-wear and extreme pressure (EP) additives to reduce contact temperatures while providing excellent anti-weld protection under extreme pressure and shock loading.

## Application

Molub-Alloy 936 SF Heavy A is suitable for use on all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines. It is certified to Bucyrus International SD 4713 specification for open gear lubricants.

The structural integrity and strength of the lubricating film is particularly valuable in the critical process of seating new gears because of the natural occurrence of high spots (asperities) in newly machined surfaces. The lubricating film must separate the mating surfaces sufficiently to cushion the effect of the impact of asperities, and minimize initial pitting which could lead to progressive and destructive pitting later.

Molub-Alloy 936 SF Heavy A may be applied either manually or by heavy-duty automatic systems.

## Advantages

- Forms a tough durable film with 'cushioning' effect – even under extreme pressures and at very slow speeds, the semi-dry working film resists erosion from rain or sleet, resists peeling in dusty environments, and resists film destruction by contaminating oils and greases migrating from nearby mechanisms.
- Excellent rust and oxidation resistance – protects the equipment and the lubricating film against the elements in severe climates.
- Unique compounding technology – flows readily in the film-forming process yet it resists 'squeeze-out' and clings tenaciously even to gear teeth in vertical orientation.
- Good pumpability and set-back resistance – pumpable in heavy automatic lubricating systems and does not 'heavy up' over time.
- Formulated to address environmental concerns – it is free of solvents, lead, antimony and barium.

## Typical Characteristics

Test	Method	Unit	936 SF Heavy A
Appearance, Visual	-	-	Black, free of lumps or agglomerates
Thickener Type	-	-	Lithium
Base Oil Type	-	-	Mineral Oil
NLGI Grade	DIN 51818	-	0.5
Density @ 20°C/68°F	ASTM D1475	g/ml	1.014
Worked Penetration, 60 Strokes @ 25°C/77°F	ISO 2137 ASTM D217	0.1mm	330-360
Base Oil Viscosity @ 40°C/104°F	ISO 3104 ASTM D445	mm <sup>2</sup> /s	1890
Base Oil Flash Point	ISO 2592 ASTM D92	°C/°F	194/381
Rust Test, 48 hrs @ 52°C/126°F	ASTM D1743	Rating	Pass
Copper Corrosion, 24 hrs, 100°C/212°F	ISO 2160 ASTM 4048	Rating	1b
Four Ball EP Test Load Wear Index Weld Load	ASTM D2596	kg	120 800
Four Ball Wear Test (1 hr, 40 kg, 1200 rpm, 75°C/167°F), Scar Diameter	ASTM D2266	mm	0.7
Pumpability by Lincoln Ventmeter @ -1°C/30°F	US Steel	Psi	500
Lubricating Solids, Particle Size	-	Microns	<15
DIN Classification	DIN 51826	-	OGPF 0 G-10
ISO Classification	ISO 6743/9	-	L-XABEB-0

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.

Castrol Molub-Alloy 936 SF Heavy A  
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