



## Molub-Alloy OG 936 SF Heavy Spray

Open Gear Compounds (Solvent Free)

### Description

Castrol Molub-Alloy™ OG 936 SF Heavy Spray (previously called Molub-Alloy™ 936 SF Heavy Spray) is an open gear lubricant developed specifically for use on heavy duty equipment in mining and industrial service. Molub-Alloy OG 936 SF Heavy is compounded to help give maximum protection to gears and slides on large draglines and shovels while minimizing potential pollutants to the environment.

A proprietary blend of Molub-Alloy lubricating solids is included to promote anti-wear and load carrying properties. These 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.

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 thus minimize initial pitting which could lead to progressive and destructive pitting later.

A highly refined, viscous, paraffinic petroleum derivative is the foundation of a blended base fluid with excellent natural chemical and thermal stability. Molub-Alloy OG 936 SF Heavy Spray is compounded to flow readily in the film-forming process; yet it resists "squeeze-out" and clings tenaciously even to gear teeth in vertical orientation.

Rust and oxidation inhibitors are included in the formulation to protect the equipment and the lubricating film against the elements in severe climate.

### Application

Molub-Alloy OG 936 SF Heavy is suitable for use on all types of open gears, racks and pinions and sliding or skidding applications like in Draglines and Shovels.

This product is used extensively in mining , construction, onshore drilling operations and on offshore installations facilitating effective lubrication and protection on:

- Rack and pinion jacking mechanisms.
- Cantilever skidding systems.
- Mooring winch open gearing and slides.
- FPSO offloading systems.
- Crane slew ring & pinion.
- Exposed threads on penstock valves.
- Heavy duty top dressing for the ultimate protection of wire ropes.

### Advantages

- Formulated to address environmental concerns - it is free of solvents, lead, antimony and barium
- Forms tough durable film with "cushioning" effect, even under extreme pressures and at very slow speeds; film
- Resists erosion from rain or sleet, and resists peeling in dusty environments
- Resists film destruction by contaminating oils and greases migrating from nearby mechanisms

## Typical Characteristics

Name	Method	Units	Molub-Alloy OG 936 SF Heavy Spray
Specific Gravity @ 25°C / 77°F	ASTM D1298 / ISO 3675	-	1.002
Density of finished grease @ 15°C / 59°F	In-house test	lb/gallon	8.35
Consistency	ASTM D217 / ISO 2137	NLGI Grade	0
Worked Penetration (60 strokes @ 25°C / 77°F)	ASTM D217/ ISO 2137	0.1 mm	345-360
Brookfield Viscosity	ASTM D2983 / ISO 9262	cP	144,000
Base Oil Viscosity @ 40°C / 104°F	ASTM D445 / ISO 3104	mm <sup>2</sup> /s	2030
Base Oil Viscosity @ 100°C / 212°F	ASTM D445 / ISO 3104	mm <sup>2</sup> /s	57
Flash Point - open cup method	ASTM D92 / ISO 2592	°C/°F	158/316
Four Ball Weld Load test - Load Wear Index (27°C / 1770 rpm)	ASTM D2596 / ISO 11008	-	130
Four Ball Weld Load test - Weld Point	ASTM D2596 / ISO 11008	kgf	800
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ASTM D2266 / ISO 51350	mm	0.7
Rust Test (distilled water)	ASTM D1743	Pass	Pass
Copper Corrosion (24 hrs, 100°C / 212°F)	ASTM D4048	Rating	1b
Lubricating solids, particle size	-	microns	nominal 15, maximum 45

Subject to usual manufacturing tolerances.

## Additional Information

Molub-Alloy OG 936 SF Heavy Spray was not intended for general use in bushings and bearings except in slow moving heavily loaded applications. Contact Castrol Engineering for all new applications in bearings.

This product was previously called Molub-Alloy 936 SF Heavy Spray. The name was changed in 2015.

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