Product Data

Molub-Alloy™OG 936 WT 680

Open Gear Lubricant

Description

Castrol Molub-Alloy™OG 936 WT 680 (previously called Molub-Alloy™ 936 WT 680) is a uniquely compounded open gear lubricant specifically formulated for extreme cold operating conditions and for use on heavy duty equipment in mining and industrial service. Molub-Alloy OG 936 WT 680 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 Castrol Molub-Alloy lubricating solids is included to promote antiwear and load carrying properties beyond those of conventional lubricants. The select lubricating solids work synergistically with chemical antiwear and extreme pressure (EP) additives to reduce contact temperatures while providing excellent antiweld protection under extreme pressure and shock loading. Rust and oxidation inhibitors are included in the formulation to protect the equipment and the lubricating film against the elements in severe climate.

Application

Mining applications include 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 open gear specification. 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 minimise initial pitting which could lead to progressive and destructive pitting later. Molub-Alloy OG 936 WT 680 may be applied either manually or by heavy duty automatic systems and can be pumped down to temperatures of -44°C/-47°F.

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 – pumpable in heavy automatic lubricating systems.

Typical Characteristics

Name	Method	Units	Molub-Alloy OG 936 WT 680
Appearance	Visual	-	Black, free of lumps or agglomerates
Adhesive properties	-	-	Product is tacky and adhesive
Thickener type	-	-	Lithium
Base oil	-	-	Mineral oil
Density @ 20°C / 68°F	ASTM D4052 / ISO 12185	kg/m³	1034
Base Oil Kinematic Viscosity @ 40°C / 104°F	ASTM D 445 / ISO 3104	mm²/s	687
Flash Point - open cup method (as applied w ith diluents)	ASTM D92 / ISO 2592	°C/°F	143/289
Flash Point - open cup method (w ithout diluents)	ASTM D92 / ISO 2592	°C/°F	191/376
Rust test - distilled w ater (24 hrs)	ASTM D1743	Pass	Pass
Copper Corrosion (24 hrs,100°C / 212°F)	ASTM D4048	Rating	1b
Four Ball Weld Load test - Load Wear Index	ASTM D2596 / ISO 11008	kgf	120
Four Ball Weld Load test - Weld Point	ASTM D2596 / ISO 11008	kgf	800
Four Ball Wear test - Wear Scar Diameter (15 or 40 kgf / 75°C / 1200 rpm / 1 hr)	ASTM D2266 / ISO 51350	mm	0.7
Grease Pumpability test - Lincoln Ventmeter @ - 10°C / 14°F	US Steel test method	psi	600
Lubricating solids, particle size	-	Microns	<15

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.
This product was previously called Molub-Alloy 936 WT 680. The name was changed in 2015.

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