



## Product Data

# MOLUB-ALLOY<sup>®</sup> 936 SFH

Open Gear Lubricant (Solvent Free)

### Description

**MOLUB-ALLOY<sup>®</sup> 936 SF** (Solvent-Free) lubricant is a uniquely compounded open gear lubricant developed specifically for use on heavy duty equipment in mining and industrial service. 936 SF is compounded to give maximum protection to gears and slides on large draglines and shovels while minimizing potential pollutants to the environment.

**MOLUB-ALLOY<sup>®</sup> 936 SF** is part of Tribol's Eco-Solutions<sup>TM</sup> product offering. Formulated to address environmental concerns, **MOLUB-ALLOY<sup>®</sup> 936 SF** is free of lead, antimony, barium, and chlorinated solvents. No solvents of any kind are used in 936 SF.

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<sup>®</sup> 936 SF** is compounded to flow readily in the film-forming process; yet it resists "squeezeout" and clings tenaciously even to gear teeth in vertical orientation.

A proprietary blend of 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. **MOLUB-ALLOY<sup>®</sup> 936 SF** may be applied either manually or by heavy duty automatic systems.

### Benefits and Qualities

Compounded for the protection of the ecology - the elimination of materials considered to be hazardous. 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.

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**PDSA 3580-8 11/01**  
**Bulk Item Code 114133**

## Method of Use

Molub-Alloy 936 SF was not intended for general use in bearings except in slow moving, heavily loaded applications. Contact Tribol Australasia for new applications of 96 SF in bearings.

## Technical Data

| Typical Properties   | Molub-Alloy 936 SFH<br>Open Gear Compound |
|--|---|
| Specific Gravity, ASTM D 1298 @ 15.6°C   | 0.998                                     |
| NLGI Grade   | 0   |
| Penetration, ASTM D 217, Worked 60   | 352                                       |
| Viscosity, Apparent ASTM D 2983 Brookfield<br>Spindle # 7 @ 10 rpm, @ 25°C, cP   | 134,000                                   |
| Base Fluid Properties<br>ISO Viscosity Grade, ASTM D 2422<br>Viscosity, ASTM D 445<br>@ 40°C, cSt<br>@ 100°C, cSt<br>Flash Point, ASTM D 92, COC, °C | 1280<br>53.0<br>160                       |
| Four Ball EP Test, ASTM D 2596<br>Load Wear Index, kg<br>Weld Load, kg   | 90<br>800                                 |
| Graphite Abrasion Test, ASTM D 1367 (Modified*)<br>Weight Loss, mg   | 0.5                                       |
| Copper Strip Corrosion, ASTM D 4048, 24 hrs @100°C   | Pass                                      |
| Pumpability/Dispensability, Lincoln Ventmeter<br>Psi @-1.1°C   | 800                                       |
| Molub-Alloy Solids Grade Classification  | Open Gear                                 |

Subject to Usual Manufacturing Tolerance  
Modified using 15% lubrication instead of 15% graphite

## Health, Safety & Environment

**Spillage:** Slippery when spilt. Avoid accidents, clean up immediately. Isolate leaking containers and stop leak if safe to do so. Use absorbent (soil or sand, sawdust, inert material, vermiculite). Sweep up.

**Disposal:** Collect and seal in properly labelled drums for disposal.

All reasonable care has been taken to ensure that the information contained in this publication is accurate as of the date of printing. However, such information may, nevertheless, be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol Industrial Australia Inc. products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.