



# MOLY UNIVERSAL GEAR LUBRICANT

- **BLENDED FROM QUALITY BASE OILS**
- **EXTREME PRESSURE APPROVED**
- **DRY FILM ADDITIVE**
- **ADHESIVE AND COHESIVE**
- **FOAM INHIBITORS**
- **PROTECTS AGAINST MOISTURE CORROSION**

MOLY UNIVERSAL GEAR LUBRICANT from Texas Refinery Corp. is formulated to meet the stringent requirements demanded by today's equipment. The added protection of molybdenum disulfide can extend the efficiency and life of equipment. With the increase in power output to gear systems, the importance of a superior gear lubricant is essential since there is greater stress on the bearing and gear teeth. MOLY UNIVERSAL provides protection from high speed and adverse conditions. In addition, MOLY UNIVERSAL GEAR LUBRICANTS provide exceptionally high film strength, tackiness and excellent water separation characteristics.

## **MOLY UNIVERSAL GEAR LUBRICANT Is Blended From Quality Base Oils**

Texas Refinery Corp. uses only 95 VI paraffinic base oils when blending MOLY UNIVERSAL. These are the most temperature stable. When compared to other base stocks, these oils have less tendency to thin out under high temperature and less tendency to thicken in cold temperatures. They're also highly resistant to oxidation. They act to transfer the heat from the gears to the unit case and to carry the performance additives that are incorporated, which makes this an exceptional gear lubricant.

## **MOLY UNIVERSAL GEAR LUBRICANT Is Extreme Pressure Approved**

Designed as an extreme pressure multi-purpose lubricant, MOLY UNIVERSAL is designed to carry the heavy loads on bearings and gears in today's equipment. It's formulated with sulphur phosphorous additives to provide desirable performance while not being high corrosive or toxic. The sulfur and phosphorous compounds react under heat and pressure



*MOLY UNIVERSAL GEAR LUBRICANT coats metal parts protecting against wear, rust and corrosion.*

with the metal surfaces to form a coating. This coating is microscopically thin and is an excellent load bearing surface that acts as a self-perpetuating lubricant.

Both bench testing and axle testing have been performed, analyzing these extreme pressure additives. The axle tests L-37 and L-42 showed excellent protection for gear sets. Bench testing verified the fact MOLY UNIVERSAL is an exceptional gear lubricant.

## **MOLY UNIVERSAL GEAR LUBRICANT Contains A Dry Film Additive**

To the blend of quality base oils and additives, an extremely effective dry lubricant has been added. Molybdenum disulfide ( $\text{MoS}_2$ ) is a unique compound which provides a very slick film to reduce friction. It has been tested in various functional test equipment to determine its performance characteristics. Measurements with  $\text{MoS}_2$  have been made with pressures as high as 500,000 psi - which is beyond the yield strength of most metals - without causing galling or seizing.  $\text{MoS}_2$  has been added to MOLY UNIVERSAL to provide a definite advantage when loads are high and the normal lubricating film cannot handle the pressure.

## **MOLY UNIVERSAL GEAR LUBRICANT Is Adhesive and Cohesive**

In most gear operations, the need for the lubricant to adhere and move with the gears is essential. MOLY UNIVERSAL has been formulated to provide increased adhesion and cohesion. These added qualities prevent excessive dripping and splattering of the lubricant and help to retain sufficient tackiness on the gear teeth, thus resisting the action of centrifugal force.

This "built-in" protection provides excellent lubrication while the gears are in motion . . . in addition, equipment sitting idle for several days or just overnight is still protected upon start-up. MOLY UNIVERSAL is still coating the gear teeth, preventing excessive wear. Even in the presence of moisture, MOLY UNIVERSAL will completely coat all metal parts, protecting against wear, rust, and corrosion.

## **MOLY UNIVERSAL GEAR LUBRICANT Contains Foam Inhibitors**

Under normal circumstances, enclosed gears are partially submerged in gear lubricant. As foam is produced, the level of gear lubricant drops, causing the gears to actually run dry, defeating the purpose of a gear lubricant altogether. In addition, foam in an enclosed gear case tends to trap heat, rather than transfer it from the gears to the casing. The end result can be distortion of metals, blown seals, and overall inadequate protection of gear parts.

MOLY UNIVERSAL contains foam inhibitors to keep foaming at a minimum. In the ASTM D-892 Foam Test, MOLY UNIVERSAL shows no tendency to foam.

## **MOLY UNIVERSAL GEAR LUBRICANT Protects Against Moisture Corrosion**

Even in a tightly sealed gear case, moisture can be formed by the constant heating and cooling the equipment undergoes. The normal day-night cycle can cause excessive moisture build-up simply through condensation. Moisture on gears cannot only cause rusting, but can also lead to inadequate protection by not allowing a gear lubricant to coat all metal surfaces. The seven day moisture corrosion axle test was run to show the performance characteristics of MOLY UNIVERSAL. The results of the test indicated MOLY UNIVERSAL provided excellent protection against moisture corrosion.

# **SPECIFICATIONS**

## **MOLY UNIVERSAL GEAR LUBRICANT**

MOLY UNIVERSAL GEAR LUBRICANT has been tested and performance proven in the field. This product is formulated to meet or exceed specifications and/or performance for API GL-4, API GL-5, MIL-L-2105B, MIL-L-2105C, MIL-L-2105D, Mack GO-G, Clark MS-8, Ford M2C-105A and IHC B-22.

Product Code	#8125	#8130
<b>SAE GRADE</b>	<b>SAE 80W/90</b>	<b>SAE 85W/140</b>
ISO Grade	220	460
API Gravity @ 60°F.	27.5	27.0
Flash Point, °F., COC, Minimum	400	410
Fire Point, °F., COC, Minimum	440	460
Channel Point, °F., Typical	-35	-20
Pour Point, °F., Maximum	-20	+5
Viscosity, SUS at 100°F.	950	1850
Viscosity, SUS at 210°F.	85/95	130/150
Viscosity Index, Minimum	95	95
Timken OK Load, Lbs., Typical	70	70
Three Hour Copper Strips Corrosion Test	Pass	Pass
Ash, Wt. % (ASTM D-482), Maximum	0.51	0.51
Sulfur, Wt. %, Typical	1.45	1.45
Phosphorous, Wt. %, Typical	0.06	0.06
Foam Test, ASTM D-892 - All Sequences - mL, Maximum	20.0	20.0
Color	Dark Greenish Gray	Dark Greenish Gray

Handling Information: For safe handling of the product, read the Safety Data Sheet (SDS).

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