



TECHNICAL DATA

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228 MOLY SUPER HV RED

Moly Super HV Red is a high performance, premium, partial synthetic, extreme pressure aluminum complex base grease containing an ISO 460 base oil. Moly Super HV Red is specially formulated for use in heavy-duty heavily loaded bearing applications typically found in paper mills, steel mills, forestry construction, farming and mining industries especially those applications that are subject to the adverse conditions of excessive pressure, high shock loading and high water contamination. Moly Super HV Red can also be used in pin and bushing applications and fifth wheel applications.

Moly Super HV Red is compounded from a unique blend high viscosity index solvent refined, severely hydrofinished 100% paraffin base oils and synthetic base fluids. Blended into these para-synthetic base fluids is an aluminum complex base thickener, carefully selected extreme pressure, anti-wear and rust and oxidation additives and unique polymer base additive system. This formulation provides Moly Super HV Red with the following performance features:

1. Very good to excellent pumpability characteristics for use in centralized lubrication systems.
2. Very good low temperature properties.
3. Outstanding high temperature performance.
4. Enhanced thermal and oxidation stability.
5. Excellent resistance to water spray-off and water washout.
6. High base oil viscosity (ISO 460) provides high EHL viscosmetrics for excellent resistance to wear for heavily loaded components.
7. Superior anti-wear and extreme pressure protection and performance under heavily loaded and high shock loading conditions.
8. Excellent shear and mechanical stability.
9. Excellent reversibility characteristics. This property allows the Moly Super HV Red the ability to retain its' grease like consistency and remain in the bearings during periods of heat, high shock loading, extreme pressure and severe mechanical action.
10. Excellent resistance to bleeding.
11. Excellent rust and oxidation inhibiting characteristics.
12. A high dropping point (500°F/260°C) offers extra reliability at high operating temperatures.

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13. Excellent ability to seal bearings against water contamination and intrusion and to maintain consistency in the presence of water.
14. Excellent adhesive, cohesive and tackiness properties that provide the Moly Super HV Red with stay-put properties and improved film strength in order to resist wash-out, pound out, splatter and squeeze out during periods of high loads, vibration, shock loading, extreme pressure, severe mechanical action, high temperatures and in the presence of water spray.

Incorporated into this blend of para-synthetic base fluids, aluminum complex thickener, selected additives and the polymer base additive system is synthesized moly and a proprietary solid lubricant. The synthesized moly and this proprietary solid lubricant acting in synergism with each other plates themselves to the metal surfaces of the bearings. Once plated to the metal surfaces of the bearings, the synthesized moly and the proprietary solid lubricant form a long lasting solid lubricant film that is capable of withstanding pressures up to 500,000 pounds per square inch, thus giving the metal surfaces of the bearings the protection they need during periods of high speed, high shock loads and extreme pressure.

The solid lubricant film that is formed by the synergism of the moly and the proprietary solid lubricant also helps to reduce friction and acts as a “backstop” lubricant if the grease base is either destroyed or wipe away due to unexpected loads, start-up, or other conditions which exceed the capabilities of the grease base’s fluid film lubrication.

The reduction in friction and the ability to act as a “backstop” lubricant results in reduced wear and a reduction in contact area temperature. This in turn leads to increased equipment life, less downtime and extended lubrication cycles.

Moly Super HV Red has excellent rust and oxidation inhibiting characteristics, water resistance, shear and mechanical stability and good mechanical and pumpability properties. Moly Super HV Red also has superior adhesive and cohesive properties. Because of these adhesive and cohesive properties Moly Super HV Red will not wash out, pound out, splatter or squeeze out even under the heaviest loads or vibrations.

Due to its superior cohesive and adhesive properties and high base oil viscosity Moly Super HV Red is not recommended for use in passenger car automotive wheel bearing or in electric motor bearing applications.

Moly Super HV Red can be used in off-highway wheel bearing applications in equipment moving at speeds of 33 mph (55 km/h) or less.

Moly Super HV Red can be applied either manually or by a heavy-duty automatic lube system. Moly Super HV Red has an operating temperature of 0°F/-18° to 400°F/204°C.

Typical Applications:

- Felt roll bearings, wet end bearings, press section and calendar stack bearings on paper machines
- Construction, agricultural and mining equipment
- Steel mill bearings
- Roll neck bearings
- Extruders
- Hammer mills and crushers
- Ball mills and rod mills
- Kiln pinion support bearings.
- Filter presses and Dewatering presses

Moly Super HV Red meets and exceeds the following specifications and manufacturer's requirements: US Steel 346, 352, 355, 370 371 specifications, Caterpillar MPGM, Komatsu, MIL-G-234C, Case-IH 251H, John Deere, New Holland, Ford M1693A, General Motors, Chrysler, P&H 472B, 472C and 472D, Federal Specification VV-G-632A, MIL-G-4343C, MIL-23549C, DOD-G-24508A(Navy), JIS K2220, DIN 515825, Metso, SKF, Fag, INA, Torrington, Timken, Rexnord Link-Belt Bearing Division, NSK, Koyo, NTN Bearing, and Roller Bearing Company of America.

Typical Properties

NLGI Grade	#2
Appearance	Red and Tacky
Thickener Type	Aluminum Complex
Worked Penetration 77°F/25°C ASTM D-217	
60 strokes	275-290
10,000 strokes	286-301
Dropping Point °F/°C ASTM D-2265	500°/260°
Oxidation Stability ASTM D-942	
Psi Loss @ 100 hours	1.5
Water Washout Test ASTM D-2164	
% Weight Loss 175°F/79°C	1.4%
Water Spray Off Test ASTM D-4049	
% Weight Loss	8.5%
Timken Failure Load, lbs-f ASTM D2509	75
Four Ball EP D-2596	
Weld Point, kg-f	400
Load Wear Index, kg-f	64
Four Ball Wear Test ASTM D-2266	
Scar diameter, mm	0.35

Oil Separation ASTM D-1742 % Wt of Oil Separated	1
Pressure oil Separation, US Steel Method Grams of Oil Separation	0.7
Rust Inhibition Test ASTM D-1743 Rating	1,1,1
Copper Corrosion ASTM D-4048	1a
Emcor Rust Test ASTM D-6138 Distilled Water Synthetic Sea Water	Pass Pass
Lincoln Ventmeters @ 70°F/21°C @ 30°F/-1°C @ 0°F/-18°C	200 350 600
Base Oil Properties	
Viscosity @ 40°C, cSt ASTM D-445	470-555
Viscosity @100°C, cSt ASTM D-445	32.00 -36.50
Viscosity Index	102