SINCE 1839
Schaeffer's
SPECIALIZED LUBRICANTS

TECHNICAL DATA

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ISO 9001 CERTIFIED

228 SUPER HV RED

Super HV Red is a high performance, premium, para-synthetic, extreme pressure aluminum complex base grease containing an ISO 460 base oil. 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. Super HV Red can also be used in pin and bushing applications and fifth wheel applications.

Super HV Red is compounded from a unique blend of high quality para-synthetic base oils, and a specially selected additive system in an aluminum complex base thickener which provides the following performance features:

- PERFORMANCE
  - High base oil viscosity (ISO 460) for excellent resistance to wear for heavily loaded components.
  - Excellent reversibility characteristics. This property allows the 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.
  - Very good low temperature properties and outstanding high temperature performance.
  - Excellent adhesive, cohesive and tackiness properties that provide the 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.
- STABILITY
  - A high dropping point (500°F/260°C) offers extra reliability at high operating temperatures.
  - Enhanced thermal and oxidation stability.
  - Excellent shear and mechanical stability.
  - Excellent resistance to bleeding.
  - Excellent resistance to water spray-off and water washout.
  - Excellent ability to seal bearings against water contamination and intrusion and to maintain consistency in the presence of water.
- WEAR PROTECTION
  - Superior anti-wear and extreme pressure protection and performance.
  - Excellent rust and oxidation inhibiting characteristics.

Super HV Red uses an organic, Synthesized Moly which plates itself to metal surfaces of the bearings like molybdenum disulfide (MoS_2). Once plated, Synthesized Moly forms a long lasting lubricant film that further reduces friction and wear, especially during periods of high shock loads, vibration and extreme pressure. This lubricant film will withstand pressures up to 500,000 pounds per square inch, giving the metal surfaces of the bearings the protection they need during these extreme conditions.
Synthesized Moly also helps to reduce friction which results in reduced wear, reduced contact area temperatures, increased equipment life, less downtime and extended lubrication cycles.
The use of Synthesized Moly enables Super HV Red to be suitable for use in the lubrication of rolling element bearings and can be used in those rolling element bearing applications that have restrictions on the use of greases that contain molybdenum disulfide (MoS_2).

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

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

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

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**
Specific Gravity 60°F	0.8954
Appearance	Red and Tacky
Thickener Type	Aluminum Complex
Worked Penetration 77°F/25°C (ASTM D217), 60 strokes	275-300
Dropping Point °F/°C (ASTM D2265)	500°/260°
Oxidation Stability (ASTM D942) psi Loss @ 100 hours	1.5
Water Washout Test (ASTM D1264), % Weight Loss 175°F/79°C	8.68%
Water Spray Off Test (ASTM D4049), % Weight Loss	18.86%
Timken Failure Load, lbs-f (ASTM D2509)	75
Four Ball EP (D2596), Weld Point, kg-f	620
Load Wear Index	96.5
Four Ball Wear Test(ASTM D2266), Scar diameter, mm	0.63
Oil Separation (ASTM D1742), % Wt of Oil Separated	1
Pressure oil Separation, US Steel Method Grams of Oil Separation	0.7
Rust Inhibition Test (ASTM D1743), Rating	1,1,1
Copper Corrosion (ASTM D4048)	1a
Emcor Rust Test (ASTM D6138) Distilled Water/Synthetic Sea Water	Pass/Pass
Lincoln Ventmeters	
@ 70°F/21°C	200
@ 30°F/-1°C	350
@ 0°F/-18°C	600
Base Oil Properties	
Viscosity @ 40°C, cSt (ASTM D445)	470-555
Viscosity @100°C, cSt (ASTM D445)	32.00 -36.50
Viscosity Index	102