SINCE 1839 Schaeffer MANUFACTURING COMPANY

ISO 9001 CERTIFIED

TECHNICAL DATA

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#229 ULTRA RED SUPREME

Ultra Red Supreme is a para-synthetic, versatile, multipurpose extreme pressure aluminum complex base grease that is specially formulated for use in all types of heavy-duty automotive, construction, mining, farming and industrial equipment. Ultra Red Supreme protects equipment even under the most adverse conditions of excessive pressure, heat, cold, moisture and high and low speeds.

Ultra Red Supreme is compounded from a unique blend of the finest select severely hydrotreated Polyalphaolefin (PAO) synthetic base fluids and high viscosity index solvent refined, severely hydrofinished 100% paraffin base oils available. Blended into these para-synthetic base fluids is an aluminum complex base thickener, carefully selected extreme pressure, antiwear and rust and oxidation additives and unique polymer base additive system. This formulation provides Ultra Red Supreme with the following performance features.

1. Excellent pumpability characteristics for use in centralized lube systems.
2. Very good to excellent low temperature pumpability.
3. Excellent resistance to water washout and water spray off.
4. Excellent shear and mechanical stability.
5. Excellent antiwear and extreme pressure load carrying properties
6. Excellent reversibility. This property allows Ultra Red to retain its' grease like consistency and remain in the bearings during periods of heat, high shock loading, extreme pressure and severe mechanical action.
7. Excellent resistance to bleeding.
8. Excellent rust and oxidation inhibiting characteristics.
9. Excellent resistance to oxidation.
10. A high dropping point.
11. Excellent adhesive properties in order to provide the Ultra Red Supreme with the ability to resist washout, pound out, splatter or squeeze out during periods of high loads, vibration, shock loading, extreme pressure and severe mechanical action.

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.

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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.

Ultra Red Supreme has excellent rust and oxidation inhibiting characteristics, water resistance, shear and mechanical stability and good mechanical and pumpability properties. Ultra Red Supreme also has superior adhesive and cohesive properties. Because of these adhesive and cohesive properties Ultra Red Supreme 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 Ultra Red Supreme is not recommended for use in passenger car automotive wheel bearing or in electric motor bearing applications.

Ultra Red Supreme can be applied either manually or by a heavy-duty automatic lube system. Ultra Red Supreme #1 has an operating temperature of -20ºF to 350ºF. Ultra Red Supreme #2 has an operating temperature of -10ºF to 350ºF

Ultra Red Supreme 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, SKF, Fag, INA, Torrington, Timken, Rexnord Link-Belt Bearing Division, NSK, Koyo, NTN Bearing, and Roller Bearing Company of America.

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Typical Properties

NLGI GRADE	#1	#2
Type Thickener	Aluminum Complex	Aluminum Complex
Dropping Point ºF/ºC (ASTM D-2265)	500º/260º	500º/260º
Worked Penetration 77ºF/25ºC, 60 Strokes, (ASTM D-217)	310-340	285-295
Roll Stability Test (ASTM D-1831) % Consistency Change	14.52	12.36
Rust Inhibition Test (ASTM D-1743) Rating	1,1,1	1,1,1
Oxidation Stability (ASTM D-942) PSI Loss @ 100 hrs.	2	1.5
Water Spray Off Test (ASTM D-4049)	17%	15%
Water Washout Test (ASTM D-1264) % Loss 175ºF/79ºC	6.1%	5.78%
Oil Separation (ASTM D-1742) % Wt. of Oil Separated	1	1
Pressure Oil Separation, US Steel Method Grams of Oil separation	0.8	0.7
Timken EP (ASTM D-2059) Fail Load, lbs.	65	65
Four Ball EP (ASTM D-2596) Load Wear Index (kg)	54.91	55.08
Weld Point (kg)	400	400
Four Ball Wear Test (ASTM D-2266) Scar Diameter	.6mm	.6mm
Falex EP Continuous Load (ASTM D-3233) Failure Load, lbs.	3800	4325
Evaporation Loss (ASTM D-2595) % Loss 22 hrs. @ 250ºF	0.4	0.4
Wheel Bearing Leakage Tendency (ASTM D-1263) Leakage, grams	0.8	0.8
Deposits	No Deposits	No deposits
Mobility @ 0ºF/-18ºC Bethlehem Steel Method L-37 Flow Rate grams/minute	0.5	1.0
BASE OIL PROPERTIES		
Viscosity SUS @ 100ºF (ASTM D-445)	1300	1198.2
Viscosity cSt @ 40ºC (ASTM D-445)	244.96	226.17
Viscosity cSt @ 100ºC (ASTM D-445)	19.71	18.89
Viscosity Index (ASTM D-2270)	105	95
Flash Point ºF/ºC (ASTM D-92)	530º/276.7º	518º/270º