SINCE 1839 Schaeffer's SPECIALIZED LUBRICANTS

TECHNICAL DATA

102 Barton Street, St. Louis MO 63104
Ph: 800-325-9962 / Fax: 314-865-4107
www.schaefferoil.com

ISO 9001 CERTIFIED

219 SynForce™ Green

SynForce™ Green is an extreme pressure, heavy-duty, multi-purpose, aluminum complex base grease that is specifically formulated for use in all types of heavy duty automotive, marine, construction, mining, farming and industrial equipment. Expecially those that are exposed to the adverse conditions of extremely heavy loads, excessive pressures, high shock loading, exposure to high amounts of water, hot and cold ambient and operating temperatures and dirt contamination. SynForce™ Green is specifically designed in these applications to perform better than a calcium sulfonate and calcium sulfonate complex base greases.

SynForce™ Green is compounded from a blend of polyalphaolefin (PAO) synthetic base fluids, high viscosity index base oils and an aluminum complex base thickener system. Incorporated into this blend are a combination of extreme pressure, anti-wear, rust and corrosion, oxidation inhibiting and adhesive/cohesive additive systems that provide the following performance benefits and advantages:

- Excellent extreme pressure and load carrying capabilities – Four Ball E.P. Weld Point >800 kgs.
- Excellent protection against shock loading that protects and cushions against impact, vibration, stress and chatter during heavy loads and start-stop operations.
- Excellent anti-wear protection for reliable and long lasting protection even during high sliding.
- Excellent resistance to water washout and water sprayoff.
- Very good to excellent shear and mechanical stability.
- Excellent reversibility: This property allows SynForce™ Green to have the ability to retain its grease-like consistency and remain in the bearings during periods of heat, high shock loading, extreme pressures, and severe mechanical action
- Excellent rust and corrosion resistance and protection
- Excellent resistance to oxidation and thermal degradation during high temperature operation
- Very good adhesive and cohesive properties – This property holds the SynForce™ Green together and in place to prevent the entry of contaminants, squeeze-out, channeling and sling-off
- Wide temperature application range of -10ºF to 350ºF (-23° to 177°C)
- Extended re-lubrication intervals

Further blended into SynForce™ Green is Synthesized Moly. Synthesized Moly is an organic type of moly which, like molybdenum disulfide (MoS_2) plates itself to metal surfaces of the bearings. Once plated to the metal surfaces of the bearings, Synthesized Moly forms a long lasting solid lubricant film that further prevents friction and wear, especially during periods of high shock loads, vibration and extreme pressure. This solid 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 periods of high speeds, high shock loads and extreme pressures.

Synthesized Moly also helps to reduce friction. This reduction in friction 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.

SynForce™ Green has an operating temperature range of -10°F to 350°F. SynForce™ Green may also be used in wheel bearings, including passenger car automotive wheel bearings and electric motor bearings.

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SynForce™ Green meets, exceeds and is suitable for use in the following specifications and manufacturer's requirements: US Steel 340, 346,350, 352, 355, 370, 371 and 375 specifications, Caterpillar MPG, 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-G-10924G, MIL-G-23515, MIL-G-7722,MIL-DTL-23544D 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.

TYPICAL PROPERTIES

NLGI Grade	**2**
Worked Penetration @ 77°F (25°C) ASTM D-217	
60 Strokes	273
10,000 Strokes	296
% Change In Consistency	8.455
Roll Stability Test (With 1% Water) ASTM D-1831 Modified	
% Consistency Change	3.16%
Oxidation Stability ASTM D-942	
Psi Loss @ 100 hours	2
Dropping Point °F (°C) ASTM D-2265	500° (260°)
Rust Inhibition Test ASTM D-1743	
Rating	1,1,1
Four Ball E.P. ASTM D-2509	
Weld point, kg-f	>800
Load Wear Index	138.7
Four Ball Wear, 40kg, 1200 rpm, 167°F (75°C), 1 hour ASTM D-2226	
Scar diameter, mm	0.41
Falex Continous Load ASTM D-3233 Procedure A	
Failure Load, lbs-f	4500+
Water Washout ASTM D-1264	
% Loss @ 175°F (79°C)	5.57%
Copper Strip Corrosion ASTM D-4048	1A
Oil Seperation @ 100°C, 30 Hours (Conical Sieve Method) ASTM D-6184	
% weight Separation	4.4%
Base Oil Viscosity	
Viscosity, cSt @ 40°C ASTM D-445	142
Viscosity, cSt @100°C ASTM D-445	14.6
Viscosity Index ASTM D-2270	101
Flash Point ºF (ºC) ASTM D-92	530° (277°)