

TECHNICAL DATA

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293 75W90 SUPREME GEAR LUBE SAE 75W-90

Supreme Gear Lube SAE 75W-90 is a para-synthetic, shear stable, thermally stable, thermally durable, multi-grade gear lubricant recommended for use in all types of automotive gear drive applications that require a gear oil to operate under severe, wide ambient temperature ranges.

Supreme Gear Lube SAE 75W-90 is blended from the finest quality, severely hydro-treated, polyalphaolefin (PAO) synthetic base fluids and severely solvent refined, severely hydro-finished, high viscosity index, 100% pure paraffin base oils available. Supreme Gear Lube SAE 75W-90 also contains a a highly specialized, proprietary, non-corrosive, thermally stable, thermally durable, multifunctional, extreme pressure additive package.

This unique combination provides Supreme Gear Lube SAE 75W-90 with the following advantages:

- Excellent low temperature properties which results in the bearings and gears being instantly lubricated at sub-zero temperatures the moment they start turning.
- Enhanced thermal and oxidative stability and durability to handle operating temperatures of 300°F to 350°F.
- Excellent protection to the gears and bearings even under the most extreme thermally, stressed operating conditions.
- Excellent hydrolytic and demulsibility characteristics
- Excellent extreme pressure properties to protect the gears and bearings from excessive wear and fatigue.
- Prevention of the formation of sludge and carbon deposits that erode the seals.
- Enhanced protection of copper, brass and bronze components from corrosion.
- Excellent protection of components from rust and corrosion.
- Excellent resistance to water and moisture.
- Low coefficients of traction, which result in fuel economy benefits.
- A high viscosity index
- Increased wear protection and longer gear life
- Compatibility with all types of seals for increased seal life
- Excellent water separability characteristics.
- Enhanced gear, bearing and seal cleanliness
- Excellent resistance to foaming.
- Longer lubricant and equipment life
- Reduced equipment downtime and maintenance costs

Supreme Gear Lube SAE 75W-90 contains an extremely shear stable, polymer type, viscosity index improver which provides the Supreme Gear Lube SAE 75W-90 with a high viscosity index. These polymers expand as temperature rises and contract as the temperature is lowered allowing the Supreme Gear Lube SAE 75W-90 to exhibit low temperature properties that allow the gears and bearings to be safely started at low ambient temperatures and to have the proper viscosity needed at operating temperature and high ambient temperatures in order to minimize wear. This temperature selectiveness also enhances the Supreme Gear Lube SAE 75W-90's high temperature oxidation stability.

The trend among automotive and industrial gear drive manufacturers is to operate the equipment at higher speeds, loads, power densities and increased torque which results in higher operating temperatures and extreme thermal stress on the gear lubricants. Therefore, it is important that gear lubricants possess thermal stability and thermal durability characteristics.

Micron Moly®, a proven friction reducer, is added to Supreme Gear Lube SAE 75W-90 to provide boundary lubrication when hydrodynamic lubrication conditions are not present. This may occur during periods of cold start up, extremely high operating temperatures or high shock loading conditions Micron Moly®, a liquid soluble type moly, plates itself to the metal surfaces of the gears and bearings to form an indestructible, long-lasting, solid lubricant film capable of withstanding pressures up to 500,000 psi. This solid lubricant film, once plated to the gears and bearings, will reduce friction, vibration, and wear, thus extending equipment life.

Micron Moly® also provides a smooth finished surface on all moving parts of the gear drives. This smooth finish minimizes the action of cold welding and vibration, which can occur during start up after the gears have been standing idle and during periods of high shock loading. This in turn lessens starting loads and peak power demand; thus, resulting in a realistic fuel economy cost savings.

Supreme Gear Lube SAE 75W-90 contains the proper additive system to function and lubricate limited slip, positraction, and high offset hypoid gear rear ends and differentials.

Supreme Gear Lube SAE 75W-90 meets and exceeds the following specifications: API Service Classifications: GL-5, MT-1, and PG-2; United States Military Specifications: MIL-PRF-2105E, SAE J2360; Mack GO-J; Clark MS-8 Rev. 1; Ford Specifications: M2C-119A, M2C-197-A, MC2108C, M2C158A; General Motors Specifications: 9985476, 9985044; Chrysler Specification MS8987; Mercedes MB 235.7; John Deere J11D; Komatsu/Dresser B22-0003, B22-0005; Meritor/Rockwell Standard O-76E; David Brown ET-19; Terex EMS 19003; VME Americas Specifications: EEMS19003F, EEMS19107; Eaton-Roadranger; Dana-Spicer; White Motors MS0016, Volvo; and Volkswagen.

TYPICAL PROPERTIES

SAE Grade	75W-90
Specific Gravity 60°F/15°C	0.875
Viscosity at 40°C cSt (ASTM D445) Viscosity at 100°C cSt (ASTM D445) Brookfield Viscosity (ASTM D2983) @ -40°F/-40°C, cP	90-115 13.5-16.00 <130,000
Viscosity Index (ASTM D2270) Flash Point °F/°C (ASTM D92)* Fire Point °F/°C (ASTM D92)*	150 450°/232° 490°/254°
Pour Point °F/°C (ASTM D97)	-49°/-45°
Copper Strip Test, 3hrs. (ASTM D130) Rust Test (ASTM D665), Procedure A (Distilled Water)	1a Pass
Procedure B (Salt Water) Four Ball EP Test (ASTM D2783), Weld Point, kg	Pass 315
Load Wear Index, kg.	55
Four Ball Wear Test (ASTM D4172), Scar Diameter, mm Timken EP Test (ASTM D2782), OK load, lbs.	0.25 65
Failure Load, lbs. F Z G (Four Sequence Gear Test (ASTM D5182, A/8.3/90)	70 13 th Stage
Oxidation Test (ASTM D2893),% Viscosity Increase after 312 hrs. at 95°C	3%
Demulsibility Test (ASTM D2711) Total Free Water, ml % Water in Oil Emulsion, ml Foam Tendency (ASTM D892)	81 1 Trace
Sequence I 75°F, ml	0/0
Sequence II 200°F, ml	10/0
Sequence III 75°F, ml	0/0
L-60-1 Thermal Oxidation Test (ASTM D5704), % Viscosity Increase	22