

# **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 and a highly specialized, non-corrosive, thermally stable, thermally durable, multifunctional, extreme pressure additive package that provides the following performance advantages:

#### PERFORMANCE

- 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 seal compatibility and increased seal life.
- Excellent resistance to water and moisture and water separatibility characteristics.
- Excellent resistance to foaming.
- Lower operating temperatures.
- Less energy consumption.
- Longer lubricant and equipment life
- Reduced equipment downtime and maintenance costs.

#### **DEPOSIT PROTECTION**

- Prevention of the formation of sludge and carbon deposits that erode seals.
- Enhanced gear, bearing and seal cleanliness.
- A vast reduction in the formation of deposits.

#### WEAR PROTECTION

- Excellent extreme pressure properties to protect the gears and bearings from excessive wear and fatigue.
- Enhanced protection of copper, brass and bronze components from corrosion.
- Non-corrosivity to brass, bronze and other non-ferrous metal parts.
- Excellent protection of components from rust and corrosion.
- Excellent protection to the gears and bearings even under the most extreme thermally stressed operating conditions.

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

I FICAL FROFERINES	
SAE Grade	75W-90
Specific Gravity 60°F	0.8538
Viscosity at 40°C cSt (ASTM D445)	90-115
Viscosity at 100°C cSt (ASTM D445)	13.5-16.00
Brookfield Viscosity (ASTM D2983) @ -40°F/-40°C, cP	<130,000
Viscosity Index (ASTM D2270)	150
Flash Point °F/°C (ASTM D92)*	450°/232°
Fire Point °F/°C (ASTM D92)*	490°/254°
Pour Point °F/°C (ASTM D97)	-49°/-45°
Copper Strip Test, 3hrs. (ASTM D130)	1a
Rust Test (ASTM D665), Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Four Ball EP Test (ASTM D2783), Weld Point, kg Load Wear Index, kg.	315 55
Four Ball Wear Test (ASTM D4172), Scar Diameter, mm	0.25
Timken EP Test (ASTM D2782), OK load, lbs.	65
Failure Load, lbs.	70
F Z G (Four Sequence Gear Test (ASTM D5182, A/8.3/90)	13 <sup>th</sup> Stage
Oxidation Test (ASTM D2893),% Viscosity Increase after 312 hrs. at 95°C	3%
Demulsibility Test (ASTM D2711)	
Total Free Water, ml	81
% Water in Oil	1 Traca
Emulsion, ml Foam Tendency (ASTM D892)	Trace
	0/0
Sequence I 75°F, ml	
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