

TECHNICAL DATA

2600 S. Broadway, St. Louis MO 63118 Ph: 800-325-9962 / Fax: 314-865-4107 www.schaefferoil.com



294A SUPREME INDUSTRIAL SMNT GEAR LUBE

Supreme Industrial SMNT Gear Lube is a multipurpose, thermally stable, thermally durable, parasynthetic gear lubricant recommended for use in all types enclosed industrial gear drives where extreme pressure characteristics are needed.

Supreme Industrial SMNT Gear Lube is blended from the finest, high 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

- 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 Industrial SMNT Gear Lube to provide boundary lubrication. Micron Moly®, a liquid soluble type moly, plates itself to the metal surfaces of the gears and bearings. Once plated, Micron Moly® forms 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 Industrial SMNT Gear Lube meets and exceeds the following specifications: US Steel 224; David Brown S1.53.101 Type E; AGMA 9005-E02, AGMA 9005-F16; DIN 51517 Part 3 (CLP); and Fives Machine P-34, P-35, and P-59.

TYPICAL PROPERTIES

AGMA Grade 6EP 7EP 8EP Specific Gravity @15°C (60°F) 0.8878 0.9058 0.9198 Viscosity SUS @ 38°C (100°F) (ASTM D445) 1530-1698 2300-2634 3313-3749 Viscosity GU9°C (ASTM D445) 220-325 435-500 616-745 Viscosity Index (ASTM D2270) 125 127 110 Flash Point "F"C (ASTM D92) 490"/254° 500"/260° 510"/266° Fire Point "F"C (ASTM D92) 450"/282° 550"/288° 560"/293° Pour Point "F"C (ASTM D92) 450"/282° 500"/280° 50"/286° 500"/233° 600"/293° Pour Point "F"C (ASTM D92) 450"/282° 500"/280° 500"/233° 600"/233° 10"/-23° to -15"/-26 -10"/-23° t	ISO Grade	320	460	680
Viscosity SUS @ 38°C (100°F) (ASTM D445) 1530-1698 2300-2634 3313-3749 Viscosity of the decomposity of the point of				
Viscosity CSL @ 40°C (ASTM D445) 290-325 435-500 616-745 Viscosity @ 100°C (ASTM D445) 25.00-32.00 35.00-42.00 34.50-51.50 Viscosity Index (ASTM D2270) 125 127 110 Flash Point "F/°C (ASTM D92) 490"/254" 500"/260" 510"/266" Fire Point "F/°C (ASTM D92) -150"/26 to -20"/-29" -10"/-23" to -15"/-26" 560"/293" Pour Point "F/°C (ASTM D97) -15"/-26 to -20"/-29" -10"/-23" to -15"/-26" -10"/-23" to -15"/-26 Rust Test (ASTM D665) Pass Pass Pass Pass Procedure A (Distilled Water) Pass Pass Pass Pass Procedure B (Salt Water) Pass Pass Pass Pass Pass Pour Ball EP Test (ASTM D2783) 400 40 400 400	• • • • • • • • • • • • • • • • • • • •			
Viscosify © 100°C (AŠTM D445) 25.00-32.00 35.00-42.00 34.50-51.50 Viscosity Index (ASTM D2270) 125 127 110 Flash Point °F/°C (ASTM D92) 490°/254° 500°/260° 510°/266° Fire Point °F/°C (ASTM D92) 540°/282° 550°/288° 560°/293° Pour Point °F/°C (ASTM D97) -15°/26 to -20°/-29° -10°/-23° to -15°/-26° -10°/-23° to -15°/-26 Rust Test (ASTM D665) Pass Pass Pass Pass Pass Procedure B (Salt Water) Pass Pass Pass Pass Copper Strip Corrosion Test (ASTM D130) 1a 1a 1a Four Ball EP Test (ASTM D2783) Pass Pass Pass Veld Point, kgs. 400 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 70 70 70 Scar Diameter, mm 0.28 75 75 75 Fallure Load, lbs 70 70 70 70 Fallure Load, lbs				
Viscosify Index (ASTM D2270) 125 127 110 Flash Point *F/°C (ASTM D92) 490°/254° 550°/268° 510°/266° Fire Point *F/°C (ASTM D92) 540°/282° 550°/288° 560°/293° Pour Point *F/°C (ASTM D97) -15°/-26 to -20°/-29° -10°/-23° to -15°/-26° -10°/-23° to -15°/-26° Rust Test (ASTM D665) Pass Pass Pass Pass Procedure A (Distilled Water) Pass Pass Pass Pass Pour Ball Water) Pass Pass Pass Pass Copper Strip Corrosion Test (ASTM D130) 1a 1a<	·			
Flash Point "FI"C (ASTM D92)				
Fire Point "F/"C (ASTM D92) 540°/282° 550°/288° 560°/293° Pour Point "F/"C (ASTM D97) -15°/-26 to -20°/-29° -10°/-23° to -15°/-26° -10°/-23° to -15°/-26° Rust Test (ASTM D665) Procedure A (Distilled Water) Pass Pass Pass Procedure B (Salt Water) Pass Pass Pass Procedure A (Distilled Water) 1a 1a 1a Four Ball EP Test (ASTM D2783) 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 8 0.28 0.28 Scar Diameter, mm 0.28 0.28 0.28 Timken EP Test (ASTM D2782) 70 70 70 Ok Load, Ibs 75 75 75 Failure Load, Ibs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182)	· · · · · · · · · · · · · · · · · · ·			
Pour Point °F/°C (ASTM D97) -15°/-26 to -20°/-29° -10°/-23° to -15°/-26° -10°/-23° to -15°/-26° Rust Test (ASTM D665) Pass Pass Pass Procedure A (Distilled Water) Pass Pass Pass Pocedure B (Salt Water) Pass Pass Pass Four Ball EP Test (ASTM D2783) 400 400 400 Weld Point, kgs. 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 50.28 0.28 0.28 Scar Diameter, mm 0.28 0.28 0.28 Ok Load, lbs 70 70 70 Failure Load, lbs 75 75 75 Falex EP Continuous Load (ASTM D3233) 70 70 70 Failure Load, lbs 2500 2500 2500 Failure Load, lbs 13°h 13°h 13°h Failure Load 13°h 13°h 13°h Oxidation Test (ASTM D283) 3 22° Viscosity increase a	,			
Rust Test (ASTM D665) Procedure A (Distilled Water) Pass Pass Pass Pass Pass Pass Pass Pas				
Procedure A (Distilled Water) Pass Pass Pass Pass Pass Pass Procedure B (Salt Water) Pass Pass Pass Copper Strip Corrosion Test (ASTM D130) 1a 1a 1a Four Ball EP Test (ASTM D2783) 400 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 5 5 0.28 0.28 Scar Diameter, mm 0.28 0.28 0.28 0.28 Timken EP Test (ASTM D2782) 70 70 70 75 76 76 76<		-13 /-20 to -20 /-29	-10 /-23 10 -13 /-20	-10 /-23 10 -13 /-20
Procedure B (Salt Water) Pass Pass Pass Copper Strip Corrosion Test (ASTM D130) 1a 1a 1a Four Ball EP Test (ASTM D2783) 400 400 400 Weld Point, kgs. 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 5 5 0.28 0.28 Four Ball Wear Test (ASTM D2782) 0 0 28 0.28 Timken EP Test (ASTM D2782) 70 70 70 75 76 76 76 76 76 76 76 76 76 76 76 76 76 76 76 76 76 76 78 78 78 78		Pass	Pass	Pass
Copper Strip Corrosion Test (ASTM D130) Four Ball EP Test (ASTM D2783)				
Four Ball EP Test (ASTM D2783) Weld Point, kgs. 400 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) Scar Diameter, mm 0.28 0.28 0.28 Timken EP Test (ASTM D2782) Ok Load, lbs 70 70 70 70 Failure Load, lbs 75 75 75 Falex EP Continuous Load (ASTM D3233) Procedure A Failure Load, lbs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) FZG A/8.3/90 (ASTM D2893) % Viscosity increase after 312 hours @ 3 3 3 3 203°F/95°C 1-60-1 Thermal Oxidation Test (ASTM D5704) % Viscosity Increase 22 22 22 Demulsibility Test (ASTM D2711) Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence II 0/0 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0 Sequence II 0/00 0/0 FCG A9.50 A9.				
Weld Point, kgs. 400 400 400 Load Wear Index 67.91 69.50 67.91 Four Ball Wear Test (ASTM D4172) 528 0.28 0.28 Scar Diameter, mm 0.28 0.28 0.28 Timken EP Test (ASTM D2782) 70 70 70 Ok Load, lbs 75 75 75 Failure Load, lbs 75 75 75 Failure Load, lbs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) 5 75 75 Failure Load 13th 13th 13th Oxidation Test (ASTM D2893) 3 3 3 % Viscosity increase after 312 hours @ 3 3 3 203°F/95°C 22 22 22 L-60-1 Thermal Oxidation Test (ASTM D5704) 5 22 22 Semulsibility Test (ASTM D2711) 83 83 83 Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace		-		
Four Ball Wear Test (ASTM D4172) Scar Diameter, mm 0.28 0.28 0.28 Timken EP Test (ASTM D2782) Ok Load, lbs 70 70 70 70 70 75 Falex EP Continuous Load (ASTM D3233) Procedure A Failure Load, lbs Failure Load, lbs 500 500 500 500 500 500 500 5	,	400	400	400
Scar Diameter, mm 0.28 0.28 0.28 Timken EP Test (ASTM D2782) Timken EP Test (ASTM D2782) 70 70 70 Ok Load, Ibs 70 75 75 75 Failure Load, Ibs 2500 2500 2500 Foilure Load, Ibs 2500 2500 2500 Failure Load (MSTM D5182) 13th 13th 13th Failure Load (MSTM D2893) 3 3 3 % Viscosity increase after 312 hours @ 3 3 3 3 203°F/95°C 22 22 22 22 L-60-1 Thermal Oxidation Test (ASTM D5704) 22 22 22 22 Sew Water in oil 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0 0/0	Load Wear Index	67.91	69.50	67.91
Timken EP Test (ASTM D2782) 70 70 70 Ok Load, Ibs 70 75 75 Failure Load, Ibs 75 75 75 Fallure Load (Ibs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) 5 75 75 Failure Load, Ibs 2500 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) 5 75 75 75 Failure Load, Ibs 2500	Four Ball Wear Test (ASTM D4172)			
Ok Load, Ibs 70 70 70 Failure Load, Ibs 75 75 75 Falex EP Continuous Load (ASTM D3233) Procedure A Failure Load, Ibs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) Failure Load 13th 13th 13th 13th Oxidation Test (ASTM D2893) % Viscosity increase after 312 hours @ 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2	Scar Diameter, mm	0.28	0.28	0.28
Failure Load, Ibs 75 75 75 Falex EP Continuous Load (ASTM D3233) Procedure A Failure Load, Ibs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) Failure Load 13 th 13 th 13 th 13 th Oxidation Test (ASTM D2893) % Viscosity increase after 312 hours @ 3 3 3 203°F/95°C L-60-1 Thermal Oxidation Test (ASTM D5704) % Viscosity Increase 22 22 22 Demulsibility Test (ASTM D2711) Free Water, ml 83 83 83 % Water in oil 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0	Timken EP Test (ASTM D2782)			
Falex EP Continuous Load (ASTM D3233) Procedure A Failure Load, lbs	,	70	70	70
Procedure A Failure Load, lbs		75	75	75
Failure Load, Ibs 2500 2500 2500 FZG A/8.3/90 (ASTM D5182) 13th 13th 13th Failure Load 13th 13th 13th Oxidation Test (ASTM D2893) 3 3 % Viscosity increase after 312 hours @ 3 3 203°F/95°C				
FZG A/8.3/90 (ASTM D5182) Failure Load 13 th 13 th 13 th Oxidation Test (ASTM D2893) % Viscosity increase after 312 hours @ 3 3 3 203°F/95°C L-60-1 Thermal Oxidation Test (ASTM D5704) % Viscosity Increase 22 22 22 Demulsibility Test (ASTM D2711) Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0				
Failure Load 13th 13th 13th Oxidation Test (ASTM D2893) 3 3 % Viscosity increase after 312 hours @ 3 3 203°F/95°C 20 22 L-60-1 Thermal Oxidation Test (ASTM D5704) 22 22 % Viscosity Increase 22 22 Demulsibility Test (ASTM D2711) 83 83 83 Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0 0/0		2500	2500	2500
Oxidation Test (ASTM D2893) 3 3 3 % Viscosity increase after 312 hours @ 3 3 3 203°F/95°C 2 2 2 22 L-60-1 Thermal Oxidation Test (ASTM D5704) 5 22 22 22 22 Demulsibility Test (ASTM D2711) 83 83 83 83 Free Water, ml 83 83 83 83 % Water in oil 0.65 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Trace Foam Tendency Test (ASTM D892) 5 0.00 0/0 0/0 Sequence I 0/0 0/0 0/0 0/0 Sequence III 0/0 0/0 0/0 0/0				4
% Viscosity increase after 312 hours @ 3 3 3 203°F/95°C L-60-1 Thermal Oxidation Test (ASTM D5704) 22 22 22 22 % Viscosity Increase 22 22 22 22 Demulsibility Test (ASTM D2711) 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Trace 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0 0/0		13 th	13 th	13 th
203°F/95°C L-60-1 Thermal Oxidation Test (ASTM D5704) % Viscosity Increase 22 22 22 Demulsibility Test (ASTM D2711) 83 83 83 Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Trace 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0 0/0				•
L-60-1 Thermal Oxidation Test (ASTM D5704) % Viscosity Increase 22 22 Demulsibility Test (ASTM D2711) Free Water, ml 83 83 83 % Water in oil 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0	•	3	3	3
% Viscosity Increase 22 22 22 Demulsibility Test (ASTM D2711) 83 83 83 Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0				
Demulsibility Test (ASTM D2711) Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0		22	22	00
Free Water, ml 83 83 83 % Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0		22	22	22
% Water in oil 0.65 0.65 0.65 Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0		92	02	02
Emulsion, ml Trace Trace Trace Foam Tendency Test (ASTM D892) 0/0 0/0 0/0 Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0				
Foam Tendency Test (ASTM D892) Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0				
Sequence I 0/0 0/0 0/0 Sequence II 0/0 0/0 0/0		Trace	Trace	Trace
Sequence II 0/0 0/0 0/0		0/0	0/0	0/0
· ·				
Sequence III 0/0 0/0 0/0	Sequence III	0/0	0/0	0/0