SINCE 1839
Schaeffer's
SPECIALIZED LUBRICANTS

TECHNICAL DATA

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ISO 9001 CERTIFIED

209A MOLY RED INDUSTRIAL SMT GEAR LUBE

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

Moly Red Industrial SMT Gear Lube is blended from the finest, high quality, 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 Moly Red Industrial SMT 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 drive. This smooth finish minimizes the action of cold welding and vibration, which can occur during start up after 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 power cost savings.

Moly Red Industrial SMT Gear Lube contains an adhesive-cohesive additive that allows the product to tenaciously stick and cling to the gears and bearings. This ensures that Moly Red Industrial SMT Gear

Lube will retain a fine film that “stays put” on the metal surface of the gears and bearings, regardless of how thoroughly it is wiped away.

Moly Red Industrial SMT Gear Lube meets and exceeds the following specifications and manufacturer’s requirements: 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, P-59, P-74, and P-77.

TYPICAL PROPERTIES

ISO Rating	**150**	**220**	**320**	**460**	**680**
AGMA Rating	4EP	5EP	6EP	7EP	8EP
Specific Gravity 60°F	0.9028	0.898	0.8948	0.8988	0.9178
Viscosity 100°F SUS (ASTM D445)	785-838.8	1050-1261	1518-1857	2223-2623	3316-3896
Viscosity 40°C cSt (ASTM D445)	149-160	198-240	300-350	415-490.50	620-730
Viscosity 100°C cSt (ASTM D445)	14.00-16.00	16.5-22.5	22.5-27.50	28.00-33.00	32.00-49.00
Viscosity Index (ASTM D2270)	95	100	100	98	98
Flash Point °F/°C (ASTM D92)*	435°/224°	440°/227°	450°/232°	470°/243°	525°/274°
Fire Point °F/°C (ASTM D92)*	470°/243°	480°/249°	490°/254°	510°/266°	570°/299°
Pour Point °F/°C (ASTM D97)	-10°/-23°	5°/-15°	10°/-12°	10°/-12°	25°/-4°
Rust Test (ASTM D665)					
Procedure A (Distilled Water)	Pass	Pass	Pass	Pass	Pass
Procedure B (Salt Water)	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion (ASTM D130)					
Test, 3 hrs.	1a	1a	1a	1a	1a
Four Ball EP Test (ASTM D2783)					
Weld Point, kg.	400	400	400	400	400
Load Wear Index, kg	60	65.20	65.20	67	67.5
Four Ball Wear Test (ASTM D2266)					
Scar Diameter, mm	.3	.28	.28	.28	.28
Timken EP Test (ASTM D2782)					
OK Load, lbs.	70	70	70	70	70
Fail Load, lbs.	75	75	75	75	75
Falex EP Continuous Load (ASTM D3233) Procedure A					
Failure Load, Lbs.	2500	2500	2500	2500	2500
FZG (Four Square Gear Test)(ASTM D5182;A/8.3/90)	13th Stage	13th Stage	13th Stage	13th Stage	13th Stage
Oxidation Test (ASTM D2893)					
Viscosity Increase after 312 hrs @ 203°F/95°C	3%	3%	3%	3%	3%
L-60-1 Thermal Oxidation Test (ASTM D5704)					
% Viscosity Increase	24.5	24.5	24.5	24.5	24.5
Demulsibility Test (ASTM D2711)					
Free Water, ml	84.9	85	85	85	85
% Water in Oil	.5	.5	.5	.5	.5
Emulsion, ml	Trace	Trace	Trace	Trace	Trace
Foam Tendency (ASTM D892)					
Sequence I 75°F, ml	0/0	0/0	0/0	0/0	0/0
Sequence II 200°F, ml	0/0	0/0	0/0	0/0	0/0
Sequence III 75°F, ml	0/0	0/0	0/0	0/0	0/0