

## TECHNICAL DATA

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



## **260 PERMA MOLY EP**

Perma Moly EP is a versatile, multipurpose extreme pressure, anti-wear, bentone base high temperature grease that is specially formulated for use in the lubrication of industrial bearings and machinery operating under heavy loads and exposed to high temperatures.

Perma Moly EP is compounded from the finest high viscosity index solvent refined severely hydro-finished 100% pure paraffin base stocks available. Blended into these 100% pure paraffin base stocks is a bentone thickener system, which allows Perma Moly EP the ability to lubricate the bearings effectively up to temperatures of 500-600°F (260° to 316°C).

Incorporated into this blend of 100% pure paraffin base stocks and inorganic thickener is a unique combination of molybdenum disulfide, synthesized moly and other solid lubricants. This combination of molybdenum disulfide, synthesized moly and other solid lubricants allows Perma Moly EP the ability to act as "double-backstop" lubricant in the event the grease base is wiped away. This "double-stop" is created by the molybdenum disulfide's, synthesized moly's and other solid lubricant's affinity for metal surfaces. Both forms of moly and other solid lubricants plate themselves to the metal surfaces of the bearings to form a long lasting solid lubricant film. This solid lubricant film will withstand pressures up to 500,000 pounds per square inch, thus giving the metal surfaces of the bearings the protection they need during periods of high speeds, high shock loads and extreme pressures,

Perma Moly EP also has excellent rust and oxidation inhibiting characteristics, excellent water resistance and good mechanical stability. Perma Moly EP also has excellent adhesive properties. Because of its excellent adhesive properties, Perma Moly EP will not wash out, pound out, splatter or squeeze out even under the heaviest loads or vibrations.

Perma Moly EP can be applied either manually or by a heavy duty automatic lube system. Perma Moly EP #1 has an operating temperature of  $0^{\circ}$ F to  $600^{\circ}$ F (-18° to  $316^{\circ}$ C). Perma Moly EP #2 has an operating temperature of  $25^{\circ}$ F to  $600^{\circ}$ F (-4° to  $316^{\circ}$ C). Perma Moly EP #3 has an operating temperature of  $30^{\circ}$ F to  $600^{\circ}$ F (-1° to  $316^{\circ}$ C).

Perma Moly EP #2 has a base oil viscosity of ISO 460 and is recommended for those tough heavily loaded, low-to-moderate speed, high temperature applications that require the use of a grease that has a high base oil viscosity.

## **TYPICAL PROPERTIES**

<b>NLGI</b> Specific Gravity 60°F	<b>#1</b> 0.9479	<b>#2</b> 0.9591	<b>#3</b> 0.9539
Penetration 77°F/25°C ASTM D217	310-340	270-295	230-250
Type Thickener	Bentone	Bentone	Bentone
Roll Stability Test (ASTM D1831)			
% Loss in Consistency	20.3	20.3	20.2
Dropping Point ASTM D2265	None	None	None
Rust Inhibition Test ASTM D1743			
Rating	1,1,1	1,1,1	1,1,1
Oxidation Stability Test ASTM D942			
PSI Loss @ 100 hrs.	3.5	3.5	3.5
Timken EP Test Ok Load ASTM D2509	60 lbs.	60 lbs.	60 lbs.
Four Ball Wear Test (ASTM D2266)			
Scar Diameter	.68 mm	0.65 mm	0.7 mm
Four Ball EP Test (ASTM D2596)			
Weld Point, kg	315	400	315
Falex Continuous Load (ASTM D3233)			
Procedure A Failure, lbs.	1250	1900	1750
Water Washout Test (ASTM D1264)			
% Loss @ 175°F (79°C)	8.5	8	8

NLGI	#1	#2	#3
Water Spray-off (ASTM D4049) % Loss Wheel Bearing Leakage Test	38	35	35
(ASTM D1263) Leakage, grams	0.6	0.6	0.6
Oil Separation (ASTM D1742) % Wt. of Oil Separation	3	2.5	2.5
Evaporation Loss % Loss 22 hrs. @ 250°F (121°C)	0.9	0.9	0.9
Base Oil Properties			
Viscosity SUS 100°F ASTM D445 Viscosity cSt 40°C ASTM D445 Viscosity cSt 100°C ASTM D445 Viscosity Index Flash Point °F/°C ASTM D92 Fire Point °F/°C ASTM D92	1200 226.18 18.5 100 510°/266° 580°/304°	2513.2 470 31.5 100 560°/293° 630°/332°	1500 282.04 21.95 105 520°/271° 590°/310°