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TECHNICAL DATA SHEET

HB-1177

STARFILM E.P. GEAR LUBE

With Moly

SAE Grades 80, 90, 140, 250, 80W/90 & 85W/140

DESCRIPTION:

- Green colored superior multi-purpose gear lubricant
- Contains extreme pressure additives and full bodied cohesive and adhesive agents
- Oil soluble organic molybdenum added
- Maintains maximum protection and increases service life of manual transmissions, differentials, worm gears, power dividers and similar equipment using a gear lubricant as a primary lubricant

ADVANTAGES:

- Provides maximum lubricity, protection from extreme pressures, shock impact loading and waterproofing
- Prevents expensive replacements and down time caused by structural failure of teeth, bearings, and other vital parts caused by galling, corrosion, overheating, and shearing of gears in gear reduces, transmissions and differentials throughout a wide range of temperatures

COMPOSITION:

Blended with premium quality base stocks, wear preventing additives, anti-foam agents, silicones, corrosion inhibitors, extreme pressure additives and oil soluble organic molybdenum.

Performance levels and qualifications of the additive package alone, provide a comfortable safety margin over the protection required by normal service in heavy duty equipment operating under high stress conditions.

PERFORMANCE CHARACTERISTICS:

Contains an oil soluble molybdenum additive, consisting of sulphur and phosphorous which together function as an anti-oxidant, anti-wear, and extreme pressure agent with low toxicity. Oil soluble molybdenum will not settle out of solution.

Addition of the oil soluble organic molybdenum provides many additional operating characteristics. As the molybdenum penetrates and plates out, it: reduces friction up to 38% reduces beading wear up to 60% reduces operating temperature

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Meets or exceeds these important specifications:

Mil-L-2105B/C	ASTM E)-665B Rust Protection
API Service Classifications	U.S. Steel 220,224
GL2, GL3, GL4, and GL5	AGMA Specifications CS 3000 A/B
DCEA (French Army)	SQM 2C9002 - AA (Ford Germany)
FIAT (LS Differentials)	Borg/Warner

RECOMMENDED FOR:

Axles, Manual transmissions, Differentials, Transfer cases & power dividers, All Heavy Duty hypoid and spiral bevel axles, All automotive and industrial worm gears, Especially conventional axles using phosphate treated gears.

APPLICATIONS:

The S.A.E. weight selected for any particular type of equipment should correspond with the recommended weight and temperature recommendations in the owner's manual or current check chart of the equipment.

AVAILABLE VISCOSITIES:

Four single viscosities:	S.A.E. 80, 90, 140 and 250
Two multi viscosities:	S.A.E. 80W/90 and 85W/140

TYPICAL SPECIFICATIONS:

S.A.E, Grade Number	80	90	140	250	80W/90	85W/140
Viscosity SUS@ 210°F	70	100	155	226	80	155
Viscosity Index	115	115	115	106	105	110
Flash Point, C.O.C. °F	515	540	565	585	545	565
Fire Point, C.O.C. °F	570	590	615	635	575	625
Pour Point °F	-20	-15	-5	+ 10	-15	-15
Gravity °F	28	26	26	25	29.5	26
ASTM D 982 58T Foam Test	No foam	No foam	NO foam	No foam	No foam	No foam
Sulphur % by weight	1.8	t.8	1.9	1.9	1.9	1.9
Phosphorus % by weight	0.17	0.17	0.17	0.17	0.17	.017
Thermal Stability	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Timken Load Test, lbs	70	70	70	70	70	70

SAFETY:

Label use directions should be followed carefully. OSHA Material Safety Data Sheet available.

Note:

Will blend readily with any approved petroleum base gear lubricant of the same SAE weight; however, it delivers optimum performance when used exclusively in any gear box or application to which it is introduced.