

512M | **Armor Plate with Moly-D** XHP Gear Lubricant

DESCRIPTION:

A multi-grade gear oil that provides excellent lubrication for both the axle and transmission in summer and winter has long been desired by equipment manufacturers. The great success and public acceptance of multi-grade motor oils has emphasized the need for similar viscosity features in gear oils.

Armor Plate with Moly-D XHP 512M Gear Lubricant is a fully balanced multi-grade gear lubricant which provides superior shear stability and thermal stability, and protects critical drivetrain components at temperatures 100°F. above the operating capability of conventional GL-5 gear lubricants. These gear lubricants suffer no significant viscosity loss even after 50,000 miles of operation in hypoid axles, and wide operating temperature range is provided with its low temperature flow characteristics. 512M far exceeds the performance level most widely demanded by equipment manufacturers. No. 512M passed a 300,000 mile plus field test in an eaton DSP40 differential. The differential started the test at 450,000+ miles of life already on the gearbox.

COMPOSITION:

The XHP formulation of 512M is based on completely shear stable and thermally stable lubricant components and additive chemistry to give the necessary oxidation stability, rust protection, extreme pressure properties, and controlled chemical activity to meet full scale and laboratory tests required by the MIL-L-2105D specification. This product contains dispersants and anti-oxidants which provide a level of thermal stability and deposit control not found in other GL-5 gear lubricants without sacrificing demulsibility. In addition, it contains a special adhesive/cohesive additive for more positive lubrication and a seal swell agent to condition seals and help reduce leakage.

- Oxidation Inhibitors
- Corrosion Inhibitors
- Rust Inhibitors
- Anti-foam Agents

PERFORMANCE CHARACTERISTICS:

Armor Plate with Moly-D XHP 512M is a thermally stable, extra high performance automotive gear oil. Below are the superior features of the XHP additive system:

- | | |
|------------------------------|-------------------------------------|
| ■ Superior Thermal Stability | ■ Exceptional Component Cleanliness |
| ■ Corrosion Protection | ■ Reduces Operating Temperature |
| ■ Complete Shear Stability | ■ Reduced Wear |
| ■ Excellent Water Resistance | ■ GL-5+/MT-1 |
| ■ Extended Oil Seal Life | ■ Extreme Pressure Rating |

USES:

Armor Plate with Moly-D XHP 512M is recommended for heavy-duty hypoid and spiral bevel axles, manual transmissions, transfer cases or power dividers, limited slip differentials, automotive and industrial worm gears, and for axles using phosphate treated gears where MIL-L-2105D products are specified.



PRIMROSE PLUS

512M Armor Plate with Moly-D XHP Gear Lubricant

APPLICATIONS:

512M is designed for use where most any SAE 80W, 90, or 80W-90 weight gear lubricant is recommended. The SAE weight recommended for any particular piece of equipment is found in the owners manual or Check Chart.

This product will blend readily with most 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.

Meets, then, exceeds the following specifications (SFU):

API GL-4	API MT-1	API GL-5	SAE J2360
SAE J2360	DAF Truck Axles	DFS 93K219.01	DTFR 12B 140
Ford M2C-175A	IVECO 18-1805 (Replaces RAS1)	Mack GO-J Plus	MB 235.8 / MB 235.0
MAN 341 Type E3	MAN 341 Type GA2	MAN 341 Type Z-2	MAN 342 Type M3
MAN 342 Type S-1	Meritor O-76N	MIL-L 2105 E/D	Scania STO 2:0A FS
Scania STO 1.1G	Volvo 97312	VW G 052 911	
ZF TE-ML 02B / 05A / 05B / 07A/ 12B/ 12L / 12N / 16F / 17B / 19C / 21B			

TYPICAL SPECIFICATIONS:

SAE Viscosity	80W-90
Viscosity Index	100
Brookfield Viscosity at -40°C, cp	120,000
Flash Point, °F	475
Pour Point, °F	-15
Density at 15.6 degrees C, g/cm ³	0.8870
Foam, Passed all sequence tests (1/11/111)	0/0
Copper Strip Rating, 3hr at 100 degrees C	1b
Rust Test in L-33-1, ASTM D7038	Pass
Precipitation Number	None
Timken Load Test, ASTM D2782, lbs	65
4 Ball Wear Scar, ASTM D4172	0.4
Weld Point, ASTM D2783 (kg)	400
High Temp/High Shear @ 150°C	5.02
Demulstibility, ASTM D2711	
Free Water	83 mL
Emulsion	0 mL
Water in Oil	0.1%
Thermal & Oxidative Stability, L-60-1 Test and S-200 Test	Pass
KRL Shear Viscosity - CEC L-45-A-99, 20 Hours (min is 13.5)	14
L-42 Shock Load Test	Pass
ASTM D8165 Wear Test	Pass
FZG 14 Stage Rating, ASTM D5182	14
Total Wt. Loss	41.6 mg