

## **TECHNICAL DATA SHEET**

# Max-Gear HIGH-PERFORMANCE EXTREME PRESSURE GEAR OIL

Royal Purple<sup>®</sup> Max-Gear<sup>®</sup> is an ultra-tough, high performance gear oil designed to provide maximum protection to heavily loaded gears while maximizing power throughout the drivetrain. Max-Gear<sup>®</sup> is recommended for use in automotive front and rear differentials, manual transmissions and transfer cases that specify use of an API GL-4 or GL-5 fluid. This superior formulation is noncorrosive to soft yellow metals like brass, bronze and copper (synchronizer safe), and it contains the friction modifier additive needed for limited-slip differentials. Max-Gear<sup>®</sup> also works great in marine gear applications. Not for use in gear boxes, transmissions and lower units with wet clutches.

Max-Gear<sup>®</sup> outperforms ordinary gear oils by combining the highest quality synthetic base oils and advanced EP gear oil additives with Synerlec<sup>®</sup> additive technology. Royal Purple's advanced and proprietary Synerlec<sup>®</sup> technology provides an exceptional film strength increase compared to other engine oils. The protection provided by Synerlec<sup>®</sup> dramatically reduces metal-to-metal contact and frictional wear, helping to extended transmission life and reduce parasitic power loss through the vehicle drive train. Synerlec<sup>®</sup> also provides the lubricant with outstanding oxidation resistance to increase lubricant useful life and safely extend oil drains. The ionic attraction of Synerlec<sup>®</sup> to metal components provides unmatched wear protection, even before the oil is fully circulating.



New Bearing\*



After Leading Synthetic\*



After Royal Purple w/ Synerlec\*

#### **PERFORMANCE ADVANTAGES**

- · BETTER WEAR PROTECTION Prevents wear of gears and bearings beyond OEM specification requirements
- INCREASED EFFICIENCY Increased fuel economy and power benefits due to reduced parasitic loss through the drive train
- REDUCED TEMPERATURES Superior separation of metal surfaces and greater lubricity reduces friction and heat generation
- EXCELLENT DEMULSIBILITY Separates from water; water contamination of the axle cane be drained leaving serviceable gear oil
- · SUPERIOR CORROSION PROTECTION No rust observed in standard industry testing
- IMPROVED SHIFTING Lowered friction and improved metal surfaces provide smoother and more consistent shift performance
- LIMITED-SLIP PERFORMANCE Contains optimum concentration of friction modifier needed for limited-slip differentials

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### **RECOMMENDED SPECIFICATIONS**

- API GL-4
- API GL-5
- API MT-1

- SAE J2360
- Mack GO-J
- MIL-PRF-2105E

Typical Physical Properties					
Property	<b>Test Method</b>	75W-90	80W-90	75W-140	85W-140
Viscosity @ 40°C, cSt	ASTM D445	100	160	187	313
Viscosity @ 100°C, cSt	ASTM D445	16.5	17.4	27.5	28.5
Viscosity Index	ASTM D2270	179	118	185	123
Flash Point, °C (°F)	ASTM D92	163 (325)	177 (350)	191 (375)	177 (350)
Pour Point, °C (°F)	ASTM D97	-51 (-60)	-39 (-38)	-54 (-65)	-39 (-38)
Brookfield Viscosity, cP	ASTM D2983	65,000 @-40°C	57,000 @-26°C	135,000 @-40°C	22,000 @ -12°C
Copper Corrosion	ASTM D130	1A	1A	1A	1A
4-Ball EP, Load Wear Index	ASTM D2783	66.0	64.6	65.2	64.1
4-Ball EP, Weld Load, kg	ASTM D2783	315	315	315	315

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