



Product Bulletin

FULL SYNTHETIC HYPOID GEAR LUBRICANTS

BRAD PENN[®] Full Synthetic Hypoid Gear Lubricants are premium heavy-duty, extreme pressure (EP), 100% synthetic GL-5 gear lubricants. They are compounded using a synthetic base stock which has a high viscosity index and an exceptionally low pour point. These lubricants contain extreme pressure additives, as well as rust, oxidation, and corrosion inhibitors to protect gears and bearings operated under a wide variety of load conditions. The high and low temperature performance of these products exceed those of conventional SAE 80W-90, SAE 90, and SAE 85W-140 hypoid gear lubricants.

BRAD PENN[®] Full Synthetic Hypoid Gear Lubricants outperform conventional gear lubricants to promote longer gear life and better operating economy. They offer extended gear and bearing life, improved fuel mileage, "all-season" lubrication, and extended drain intervals when used in conjunction with manufacturer recommendations, or the BRAD PENN[®] Lube Analysis Program. Additionally, they offer:

- Extremely high film strength
- Superior low temperature performance
- Excellent demulsibility and shear stability
- Resistance to oxidative sludge and varnish formations

BRAD PENN[®] Full Synthetic Hypoid Gear Lubricants are recommended for applications where heat and wear present major concerns. These applications include manual transmissions where EP type lubricants are recommended, differentials including limited-slip, and transfer cases for heavy equipment, trucks, tractors, and industrial gear drives. Additionally, these lubricants meet or exceed the performance requirements for:

- API Service GL-5 & MT-1
- MIL-L-2105D / MIL-PRF-2105E
- SAE J2360
- Dana SHAES-256 rev. C, SHAES-234 and SHAES 429, rev. A
- Extended warranty coverage at Eaton
- International TMS 6816
- Mack Truck GO-J PLUS (75W-90) and GO-J (80W-140)
- Eaton Axle Division PS-037, PS-163, and PS-109 (75W-90)
- Arvin Meritor O-76E & O-76N (75W-90) and O-76-B & O-80 (80W-140)



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BRAD PENN[®]
Full Synthetic Hypoid Gear Lubricants – Typical Properties

SAE Grade		75W-90	80W-140
API Service	Test Method	GL-5 / MT-1	GL-5 / MT-1
API Gravity, 60°F	ASTM D-1298	25.2	23.6
Density, lbs/gal (g/L)	Calculated	7.42 (891)	7.51 (902)
Viscosity, cSt @ 40°C	ASTM D-445	122	284
Viscosity, cSt @ 100°C	ASTM D-445	16.6	30.6
Viscosity, SUS @ 100°F	ASTM D-2161	626	1,470
Viscosity, SUS @ 210°F	ASTM D-2161	86.1	149
Viscosity Index	ASTM D-2270	147	146
Brookfield Viscosity, cP @ -26.1°C	ASTM D-2983	---	75,000
Brookfield Viscosity, cP @ -40°C	ASTM D-2983	125,000	---
Pour Point, °F (°C)	ASTM D-97	-50 (-45)	-40 (-39)
Flash Point, COC, °F (°C)	ASTM D-92	400 (204)	395 (200)
FZG Scuffing Test, stages	ASTM D-5182	12	12
Timken OK Load, lbs	ASTM D-2782	50	85
Product Code		7763	7765