



SG Series Synthetic Extreme-Pressure Gear Oil

Industrial-Grade Performance & Protection

AMSOIL SG Series Synthetic Gear Oil's advanced synthetic formulation is fortified with extreme-pressure (EP) additives to provide industrial-grade performance and protection. It is designed to exceed the increased protection needs of gears and bearings operating under severe-service and shock-loading conditions. SG Series Gear Oil delivers complete gear box protection, with an emphasis on extreme-pressure gear protection, heat resistance and cold-temperature operability.

Anti-Wear Formulation

SG Series Gear Oil is engineered to prevent metal-to-metal contact and inhibit corrosion. Its shear-stable, high-viscosity-index formulation features excellent anti-foam and air-release properties (passes the Flender Foam Test). SG Series Gear Oil maintains a thick lubricating film and is fortified with a heavy treatment of specialized sulfur/phosphorus EP and anti-corrosion additives. Under extreme pressures that may breach the lubricant film, an iron-sulfide barrier protects gear surfaces and inhibits wear, pitting and scuffing. SG Series Gear Oil demonstrates exceptional extreme-pressure performance in the industry-standard Timken OK Load Test and FZG Scuffing Load Test (exceeded machine limits in both) and the Falex Procedure B Test.

High-Temperature Durability

SG Series Gear Oil is formulated with durable base oils that are naturally resistant to oxidation. It also contains oxidation inhibitors and thermally stable additives for increased resistance to sludge formation, deposits, acid build-up and thermal degradation. AMSOIL SG Series Gear Oil is designed to deliver clean gears and housings throughout a long service life.

Excellent Cold-Temperature Fluidity

SG Series Gear Oil's wax-free, high-viscosity-index base oils demonstrate excellent cold-flow properties and extremely low pour points. It helps improve cold-temperature efficiency, reducing the need for sump heaters and seasonal oil changes, while providing easier start-up for equipment.



- **Helps reduce maintenance costs due to excellent extreme-pressure protection**
- **Promotes long fluid and component life by resisting thermal breakdown and water intrusion**
- **Increases cold-temperature efficiency and protection due to low pour point**
- **Designed to inhibit wear due to excellent film strength and foam suppression**

TYPICAL TECHNICAL PROPERTIES

AMSOIL SG Series Extreme-Pressure Gear Oil

	ISO 150 (SGL)	ISO 220 (SGM)	ISO 320 (SGN)	ISO 460 (SGO)
AGMA EP Gear	4 EP	5 EP	6 EP	7 EP
Kinematic Viscosity @ 100°C, cSt (ASTM D 445)	21.0	28.6	38.7	51.8
Kinematic Viscosity @ 40°C, cSt (ASTM D 445)	153.0	222.7	324.6	468.3
Viscosity Index (ASTM D 2270)	161	166	166	174
Specific Gravity (ASTM D 1298)	0.8473	0.8493	0.8524	0.8504
Density (ASTM D 1298)	7.055	7.072	7.098	7.081
Flash Point °C (°F) (ASTM D 92)	236 (457)	236 (457)	234 (453)	234 (453)
Fire Point °C (°F) (ASTM D 92)	268 (514)	264 (507)	262 (504)	260 (500)
Pour Point °C (°F) (ASTM D 97)	-46 (-51)	-45 (-49)	-43 (-45)	-35 (-31)
Copper Strip Corrosion Test, 121°C, 3 hrs. (ASTM D 130)	1B	1B	1B	1B
Foam (ASTM D 892, Sequence I, II & III)	0/0/0	0/0/0	0/0/0	0/0/0
Four-Ball Wear Test (ASTM D 4172 @ 40kgf 1200 rpm, 75°C, 1 hr) scar, mm	0.41	0.41	0.41	0.42
Four-Ball Weld Point, kgf (ASTM D 2783)	250	250	315	315
Four-Ball Load Wear Index, kgf (ASTM D 2783)	57	62	65	73
Falex Procedure B (ASTM D 3233) (failure load, lbf)	2500	2500	2500	3000
Timken OK Load, lbf (ASTM D 2782)	>90	>90	>90	>90
FAG FE-8 Bearing Test [DIN 51819-3]	Pass	Pass	Pass	Pass
FZG Scuffing Load Test (A/8.3/90)	Pass	Pass	Pass	Pass

APPLICATIONS & SPECIFICATIONS

The appropriate viscosity grade of AMSOIL SG Series Synthetic EP Gear Oil is recommended for applications requiring any of the following specifications:

- AGMA 9005-E02
- AGMA 250.04
- US Steel 224
- DIN 51517 Part 3
- ISO 12925-1 (CKD)
- David Brown S1.53.101

APPLICATION RECOMMENDATION

AMSOIL SG Series Synthetic EP Gear Oil is recommended for industrial applications operating under heavy loads and shock-loading conditions and specifying an extreme-pressure lubricant. This includes, but is not limited to, enclosed industrial spur, bevel, herringbone and helical gears, chain drives and sprockets requiring extreme-pressure additives. It is excellent for use in severe operating conditions and its synthetic properties make it a good all-season lubricant.

NOTE: AMSOIL SG Series Synthetic EP Gear Oil is not recommended for automotive hypoid gears. It is not recommended for use with yellow metals (copper, brass, bronze) above 100°C (212°F) without further testing in the application. AMSOIL SG Series Synthetic EP Gear Oil is not compatible with polyglycol (PAG)-type gear oils. Thorough flushing prior to changeover is required.



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AMSOIL products and Dealership information are available from your local AMSOIL Dealer.