

# SG SERIES SYNTHETIC EXTREME-PRESSURE GEAR OIL

Industrial-Grade Performance & Protection

Product Profile

## DEVOTED TO 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 gearbox protection, with an emphasis on extreme-pressure gear protection, heat resistance and cold-temperature operability.

### EXTREME-PRESSURE 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. 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 FZG Scuffing and micropitting tests.

### 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 buildup 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 high-viscosity-index demonstrates 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.

### APPLICATIONS & SPECIFICATIONS

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

	SGJ	SGK	SGL	SGM	SGN	SGO	SGP
DIN 51517-3			X	X	X	X	X
Cincinnati Machine	X	X	X	X	X	X	X
AGMA 9005-E02	X	X	X	X	X	X	X
ISO 12925-1 (CKD)	X	X	X	X	X	X	X
David Brown S1.53.101 (Type E)	X	X	X	X	X	X	X
US Steel 224	X	X	X	X	X	X	X
AGMA 250.04	X	X	X	X	X	X	X

### SG Series Synthetic Extreme-Pressure Gear Oil

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

## TYPICAL TECHNICAL PROPERTIES

### AMSOIL SG Series Synthetic Extreme-Pressure Gear Oil

	SGJ	SGK	SGL	SGM	SGN	SGO	SGP
ISO Viscosity Grade (ASTM D2422)	68	100	150	220	320	460	680
AGMA EP Gear	2 EP	3 EP	4 EP	5 EP	6 EP	7 EP	8 EP
Kinematic Viscosity @ 100°C cSt (ASTM D445)	11.7	14.8	19.6	27	36.1	49.6	75.4
Kinematic Viscosity @ 40°C cSt (ASTM D445)	73.2	101.3	147.5	220.3	322.7	454	680.6
Viscosity Index (ASTM D2270)	155	151	152	157	158	170	192
Acid Number (ASTM 664)	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Specific Gravity (ASTM D1298)	0.8529	0.8571	0.8607	0.8654	0.8676	0.8686	0.8633
Density – lb/gal (ASTM D1298)	7.102	7.137	7.167	7.207	7.224	7.223	7.189
Flash Point °C (°F) (ASTM D92)	238 (460)	238 (460)	238 (460)	240 (464)	244 (471)	246 (475)	254 (489)
Fire Point °C (°F) (ASTM D92)	280 (536)	282 (540)	286 (547)	282 (540)	288 (550)	286 (547)	312 (594)
Pour Point °C (°F) (ASTM D97)	-52 (-62)	-50 (-58)	-45 (-49)	-42 (-44)	-40 (-40)	-35 (-31)	-33 (-27)
Copper Strip Corrosion Test 121°C, 3 hours (ASTM D130)	1B	1B	1B	1B	1B	1B	1B
Rust procedure (ASTM D665 A&B)	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Oxidation Testing 121°C 13 days, % viscosity increase @ 100°C (ASTM 2893)	2.57%	2.63%	2.06%	3.04%	3.64%	3.58%	3.58%
Foam Seq I, II, III (ASTM D892)	0/0, 10/0, 0/0	0/0, 10/0, 0/0	0/0, 10/0, 0/0	0/0, 10/0, 0/0	0/0, 10/0, 0/0	0/0, 10/0, 0/0	0/0, 30/0, 0/0
Demulsibility (ASTM D1401)	40-40-0 (25)	40-40-0 (25)	40-40-0 (25)	40-40-0 (25)	40-40-0 (25)	40-40-0 (25)	40-40-0 (25)
Micropitting @ 90°C Load Stage, GFT Classification (FVA 54)	-	-	>10 GFT = High	>10 GFT = High	>10 GFT = High	>10 GFT = High	>10 GFT = High
FZG Failure Stage (A/8.3/90)	>12	>12	>12	>12	>12	>12	>12
FZG Failure Stage (A/16.6/90)	-	-	>12	>12	>12	>12	>12
FAG FE-8 Bearing Test (DIN 51589-3)	-	-	Pass	Pass	Pass	Pass	Pass

## APPLICATION RECOMMENDATION

AMSOIL SG Series Synthetic EP Gear Oil is recommended for industrial gearboxes, including wind-turbine pitch and yaw systems, 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 from polyglycols is required.

## COMPATIBILITY

AMSOIL SG Series Synthetic EP Gear Oil is compatible with conventional petroleum oils and other synthetic lubricants, including brands popular in wind turbine operations. Contact your wind representative to discuss specific compatibility scenarios.

## HEALTH & SAFETY INFORMATION

For recommendations on safe handling and use of these products, please refer to the Safety Data Sheet (SDS), which is available upon request through the AMSOIL Wind Group at [windsalesgroup@amsoil.com](mailto:windsalesgroup@amsoil.com) or (715) 399-6305.