

**PREMIUM MULTIGRADE PCMO**  
**[Passenger Car Motor Oil, API SM]**  
**SAE GRADES: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50**

Typical Properties

SAE GRADE Automotive	5W-20	5W-30	10W-30	10W-40	20W-50
Viscosity, cSt					
At 40 C	50.0	61.2	69.5	100.5	175.0
At 100 C	8.6	10.4	10.5	14.1	18.5
Viscosity Index	150	160	138	144	120
Viscosity, cP max @ -30C	6600	6600			
cP max @ -25C			7000	7000	
CP max @ -20C					9500
Flash Point, (COC) Deg F	+400	+405	+405	+415	+450
Pour Point, Deg F	-35	-35	-30	-30	-20
Neut. No., TBN-E, ASTM D-2896	7.0	7.0	7.0	7.0	7.0
Gravity, API @ 60 F	31.0	30.5	30.0	29.0	27.5
Sulfated Ash, %wt.	<1.0	<1.0	<1.0	<1.0	<1.0

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

These Premium Passenger Car Motor Oils (PCMO) are formulated to provide engine protection under severe operating conditions and meet the new maximum phosphorus limits provided by ILSAC GF-4 requirements. These changes are intended to extend automotive catalyst system life and provide minimum phosphorus levels that will ensure backward compatibility with older vehicles. They are blended from selected and highly refined base oils compounded to provide protection against wear and corrosion, prevent oxidative thickening, and inhibit promotion of engine acids, sludge, and varnish deposits. These multi-grades may be used over a wide temperature range. They permit easier cold weather starting and help minimize engine friction at startup.

### APPLICATIONS

Recommended for all major automotive gasoline engine applications, including those equipped with both superchargers and turbochargers, used in passenger cars, light trucks, power boats, motorcycles, and other mobile and stationary equipment. SAE grades 5W-20, 5W-30, and 10W-30 meet current ILSAC GF-4 requirements and API Classification SL, SM. All grades are suggested for use in place of former API Classifications SH, SJ. For optimum vehicle performance, operating under normal conditions, it is recommended that crankcase oil change intervals should not exceed 3,000 miles or three months for conventional mineral-based passenger car motor oil.