



## PRODUCT INFORMATION & DATA SHEET

# FS1 SAE 0W-40

Our proprietary P-9 ester-based, high-performance fully synthetic motor oil, engineered with an advanced High Polarity + Low Volatility (HPLV) composition and cutting-edge additive technology, enhancing performance in the latest gasoline and diesel engine technology without sensitive exhaust after-treatment systems (GPF, DPF). This first-rate oil features superior low-temperature and winter capabilities, ensuring the quickest oil circulation and oil pressure buildup to provide instant protection at start-up. Its advanced additives provide unmatched protection, combating corrosion, wear and deposits even under the harshest driving conditions and temperatures.

FS1 exceeds API SP performance benchmark and delivers the added performance benefits needed to meet the demanding modern gasoline engine technology, including downsizing, turbocharging, gasoline direct injection, gasoline particulate filter (GPF), and catalytic converter. This oil offers elevated protection against stochastic pre-ignition event (LSPI) and wear protection for timing chains, and bearing components. It features significantly improved thermal and oxidation stability versus SN oils, providing exceptional shields against power-robbing piston deposits and sludge in vital engine parts to ensure utmost engine durability and efficiency.

### Performance Levels

API SP, API CF, ACEA A3/B4, BMW LL-01, Ford WSS-M2C937-A, MB 229.3, MB 229.5, Porsche A40, VW 502.00, VW 505.00

### Key Benefits

- A strong lubricating film offers superior engine protection against heat and pressure.
- Advanced anti-wear technology protects sensitive engine parts ensuring their longevity.
- Exceptional oil performance across all temperatures with a high viscosity index.
- Superior shear stability maintains viscosity and oil film strength under stressful conditions.
- Excellent thermal stability and oxidation resistance extend both oil and engine life.
- Low pour point enables rapid oil circulation and immediate wear protection in winter.
- Low volatility ensures lower evaporation loss for a better oil consumption control.
- Optimized friction reduces fuel consumption and enhances driving smoothness.
- Unmatched engine cleanliness with our unique detergent and dispersant formulation.
- Tested safe on catalytic converters and gasoline particulate filters in modern vehicles.

## Areas of Application

Primarily crafted for high-performance, naturally aspirated, supercharged and turbocharged gasoline engines in many sport vehicles. This oil is a superior alternative to 5W-40 viscosity for winter use. Ideal for application in gasoline, hybrid, LPG, and diesel engines (without EGR, DPF, SCR Nox Reduction system). The API SP specification is backward compatible with earlier standards.

## Service Recommendation

Follow the manufacturer's recommended oil drain interval and refer to the owner's manual. We recommend flushing the engine before adding new oil and replacing the oil filter during the oil change.

## Commercially Available Product Compatibility

Our PCMO is fully compatible with any synthetic and conventional engine oil. Maximum performance is assured only when used on its own, without being mixed with other oils.

## Typical properties

<b><u>SAE Viscosity</u></b>		<b><u>0W-40</u></b>
Viscosity Index (VI)	ASTM D2270	183
Viscosity at 100 °C; mm <sup>2</sup> /s	ASTM D445	13.5
Viscosity at 40 °C; mm <sup>2</sup> /s	ASTM D445	77.3
Density at 15 °C; kg/m <sup>3</sup>	ASTM D4052	842.0
HTHS Viscosity at 150 °C; mPa.s	ASTM D4683	> 3.5
CCS Viscosity at -35 °C	ASTM D5293	< 6200
Flash Point; °C	ASTM D92	233
Pour Point; °C	ASTM D97	-48
Sulfated Ash; mass%	ASTM D874	1.23
Total Base Number; mgKOH/g	ASTM D2896	8.0

The information show herein is subject to change without noticed. The product indicated here have been developed by PRINCE LUBRICANTS for use in the areas of applications shown. We reserve all right to alter the characteristics and product properties to align with continually technical development.

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