



# HAVOLINE<sup>®</sup> PRODS<sup>®</sup> FULL SYNTHETIC MOTOR OIL

## SAE 5W-40, Euro 5W-40

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### PRODUCT DESCRIPTION

Fully synthetic motor oils formulated to provide exceptional wear protection in hot or cold operating temperatures. They provide protection for extended oil drains, heavy loads and for vehicles requiring a synthetic motor oil.

### CUSTOMER BENEFITS

Havoline<sup>®</sup> ProDS<sup>®</sup> Full Synthetic Motor Oils with Deposit Shield<sup>®</sup> Technology deliver value through:

- **Easy cold weather starting** due to excellent low temperature properties of the synthetic base oils.
- **Minimized engine deposit and emissions** under heavy duty and stop-and-go driving conditions.
- **Long engine life** due to extremely fast lubrication during starting, and outstanding wear protection during all other engine operating conditions.

### FEATURES

Havoline ProDS Full Synthetic Motor Oils with Deposit Shield Technology are specially engineered for the highest level of protection demanded by high-performance engines. They exhibit outstanding thermal and shear stability to control viscosity and performance during extended oil drain intervals. They provide an extra measure of protection for your investment in a sport utility vehicle and high performance European luxury car. Havoline ProDS Full Synthetic Motor Oils deliver advanced protection for high output, supercharged and turbocharged performance vehicles.



Havoline ProDS Full Synthetic Motor Oils with Deposit Shield Technology are formulated using 100% synthetic base stocks for top performance and durable service. The exceptional resistance to volatility and lasting stability of synthetic base stocks promotes low oil consumption, fast engine starting (especially in cold weather), and extremely rapid lubrication of all moving parts. In addition, a special blend of advanced additive technology protects the engine against harmful deposits and premature wear in high performance or extended service.

**SAE 5W-40** provides a broad range of protection in the Havoline ProDS Full Synthetic Motor Oils family. It offers European long drain service capability with exceptional TBN retention (acid neutralization). It is specifically formulated to provide outstanding oxidation stability and excellent wear protection. Havoline ProDS Full Synthetic Motor Oil protects the engine over a wide range of extreme temperatures, particularly in super-hot operating areas such as the turbocharger. Havoline ProDS Full Synthetic Motor Oil meets demanding European specifications. It is approved for select BMW, Mercedes-Benz and Volkswagen specifications. It meets or exceeds the requirements of API SN and ACEA A3/B3, A3/B4.

**Euro SAE 5W-40** offers superior formulating technology using select European synthetic base fluids, and its advanced additives system puts Havoline ProDS Full Synthetic Euro in a premium class of engine oils. Its lower levels of Sulfated Ash, Phosphorus and Sulfur (SAPS) fully protect emissions reduction systems while providing outstanding protection of the engine's

mechanical components.

Havoline ProDS Full Synthetic Euro is an ideal choice for gasoline engines equipped with three-way catalytic converters and newer, light duty diesel engines equipped with Diesel Particulate Filters (DPF) in passenger or



Product(s) manufactured in the USA.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

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commercial service. It is also licensed under the dexos2™ specification (License no. GB2E0601089).<sup>1</sup>

Havoline ProDS Full Synthetic Euro Motor Oil SAE 5W-40 provides a broad range of engine protection for most newer passenger car and light duty diesel applications ranging from SUVs, luxury and high performance vehicles to mid-size sedans and hybrid vehicles. It has specifically been formulated to meet the most demanding needs of the latest model European cars and is approved for BMW, Mercedes-Benz, Porsche, and Volkswagen service applications. It meets or exceeds the requirements of API SN and ACEA C3.

### FUNCTIONS

Havoline ProDS Full Synthetic Motor Oils are formulated with advanced antiwear additives that provide a protective layer on metal surfaces. This combination of synthetic base stocks and advanced anti-wear chemistry keep a lasting film that protects against wear and promotes long engine life.

Havoline ProDS Full Synthetic Motor Oils effectively control sludge that can restrict oil passages and intake screens and cause piston rings to stick. The superior stability of synthetic base oils allows them to resist degradation during high temperature operation and the exceptional level of detergent additives keep sludge and varnish deposits from forming in the engine, they also work to minimize ring and piston deposits that cause early oil consumption and power loss.

Havoline ProDS Full Synthetic Motor Oils provide excellent performance in both extreme cold and hot conditions. In cold temperatures, Havoline ProDS Full Synthetic Motor Oils flow easily, allowing for fast starts and quick lubrication. In today's high power density hotter running engines, Havoline ProDS Full Synthetic Motor Oils maintain their viscosity which is critical for engine fuel economy and resist oxidation better than conventional mineral oils.

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<sup>1</sup> dexos2 is a registered trademark of General Motors LLC.

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**TYPICAL TEST DATA**

<b>SAE Grade</b>	<b>5W-40</b>	<b>Euro 5W-40</b>
<i>Product Number</i>	223726	223504
<i>SDS/MSDS Number</i>		
<i>U.S.</i>	36693	36238
<i>Canada</i>	36710	36239
<i>Mexico</i>	36711	36240
<i>Colombia</i>	41483	41482
API Gravity	34.3	35.1
Density @15°C, kg/L	0.853	0.856
Viscosity, Kinematic		
mm <sup>2</sup> /s at 40°C	83.6	83.1
mm <sup>2</sup> /s at 100°C	13.4	13.8
Viscosity, Cold Crank, mPa.s @ -30°C	5600	5800
Viscosity Index	163	171
Pour Point, °C(°F)	-45(-49)	-45(-49)
Volatility, NOACK, 250°C, 1 h		
Evaporation Loss, %	9	9
Phosphorus, mass %	0.096	0.082
Zinc, mass %	0.105	0.093

Minor variations in product typical test data are to be expected in normal manufacturing.

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**APPLICATIONS, SPECIFICATIONS, MANUFACTURER APPROVALS**

Havoline® ProDS® Full Synthetic Motor Oils are recommended for European four-stroke gasoline and light duty diesel engines in passenger cars, sport utility vehicles, and light trucks.

<b>Specifications</b>	<b>5W-40</b>	<b>Euro 5W-40</b>
API CF†	Recommended	
API SM	Exceeds	Exceeds
API SN	Exceeds	Exceeds
ACEA A3/B3, A3/B4	Exceeds	Meets
ACEA C3		Meets
BMW Longlife-01	Approved	
BMW Longlife-04		Approved
FCA US LLC (formerly known as Chrysler Group LLC) MS-12991	Meets	
GM dexos2™ (License no. GB2E0601089)		Licensed
Daimler-MB Approval 229.30	Approved	
Daimler-MB Approval 229.50	Approved	
Daimler-MB Approval 229.51		Approved
Porsche A40	Meets	Approved
VW 501.01†	Recommended	
VW 502 00	Approved	Approved
VW 505 00	Approved	Approved
VW 505 01		Approved

† Obsolete specification.

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