



HAVOLINE[®] MOTOR OIL

SAE 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 30

PRODUCT DESCRIPTION

Premium automotive motor oil with Deposit Shield[®] Technology protects against deposit and sludge formation and provides excellent wear protection of critical engine parts.

CUSTOMER BENEFITS

Havoline[®] Motor Oils with Deposit Shield[®] Technology deliver value through:

- **Excellent antiwear protection**
- **Protection against thermal breakdown**
- **Clean engines** and clean positive crankcase ventilation systems resulting from minimal deposit formation under heavy load and stop-and-go driving conditions.
- **Meets or exceeds warranty requirements** of car and light truck manufacturers relying on an API SN Plus motor oil.
- **Excellent high temperature control**

FEATURES

Havoline Motor Oils with Deposit Shield Technology are premium quality automotive engine oils.



All grades are formulated with high quality base stocks and contain detergent, dispersant, wear control, antioxidant, corrosion inhibitor, and foam suppressant additives. Multigrades contain a shear stable viscosity index improver.

Their antiwear additives provide excellent wear protection of critical engine parts.

A high level of dispersancy in Havoline Motor Oils with Deposit Shield Technology protects against deposit and sludge formation in stop-and-go driving and sustained high temperature operation, and protects against corrosion.

Product(s) manufactured in the USA, Colombia and El Salvador.

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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PCMO-70

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Their excellent high temperature oxidation stability helps prevent viscosity increase and oil gelling in the crankcase. They help keep PCV systems clean to maintain smooth engine performance.

APPLICATIONS

Havoline Motor Oils with Deposit Shield Technology are suitable for use in four-stroke gasoline engines used in passenger cars, light trucks, powerboats, motorcycles, and other mobile and stationary equipment. They are excellent for high-revving engines in small cars and light trucks. Havoline Motor Oils with Deposit Shield Technology are suitable for use in both new and high-mileage cars, and in turbocharged as well as normally aspirated engines. They may also be suitable for use in natural gas engines in small cars and light trucks after consulting with the appropriate original equipment manufacturer's lubrication recommendations.

SAE 5W-20 provides optimum fuel economy and durability performance. This synthetic blend engine oil, carrying the API Resource Conserving designation, is suitable for use in domestic and import passenger cars, trucks and SUVs specifying this viscosity grade.

SAE 5W-30 is recommended by the majority of later model domestic and import passenger cars, trucks and SUVs under a wide variety of weather conditions. This synthetic blend engine oil is also suitable for use at low temperatures involving cold starting, and for exceptional fuel economy.

SAE 10W-30 is suitable for use in many older vehicles and a few late model cars and trucks, often those with larger 6-cylinder and V-8 and/or high performance engines. SAE 10W-30 promotes increased fuel economy relative to heavier viscosity grades.

SAE 10W-40 is still a popular viscosity grade in warmer climates, though it is not recommended by most auto manufacturers for their late model North American vehicles. It is often used in older model cars that see regular high temperature operation.

SAE 20W-50 is suitable primarily for older engines for use in high temperature and heavy duty operations such as towing heavy trailers at highway speeds or up inclines for long periods of time. It is also recommended for some high performance engines used in racing and rallying.

SAE 30 can be used in engine applications where an SAE 30 passenger car motor oil of API SN Plus or any previous "S" category is recommended. It performs exceptionally well in small four-stroke engines found in lawn mowers, garden tractors, and snow blowers, and in refrigeration or air-conditioning engines on trucks and buses.

Note: Always consult your owner's manual regarding viscosity grade.

Havoline® Motor Oils meet:

- **API Service Categories**
 - SN PLUS
 - SM, SL, SJ and all previous API "S" categories
 - Resource Conserving for API SN PLUS (SAE 5W-20, 5W-30, 10W-30)
 - ILSAC GF-5 (SAE 5W-20, 5W-30, 10W-30)
- **manufacturers' performance requirements**
 - **FCA US LLC** (formerly known as Chrysler Group LLC)
MS-6395 (SAE 5W-20, 5W-30, 10W-30)
 - **FIAT**
9.55535-CR-1 (SAE 5W-30)
 - **Ford**
WSS-M2C945-A (SAE 5W-20)
WSS-M2C946-A (SAE 5W-30)
 - **General Motors**
GM 6094M (SAE 5W-20, 5W-30, 10W-30)

TYPICAL TEST DATA

SAE Grade	5W-20	5W-30	10W-30
Product Number	224101	224102	224103
SDS/MSDS Number			
USA	17808	17808	17808
Colombia	—	—	31063
El Salvador	—	—	31407
Density at 15°C, kg/L	0.8612	0.8604	0.8728
API Gravity	32.81	32.96	30.62
Viscosity, Kinematic			
mm ² /s at 40°C	51.35	64.3	71.0
mm ² /s at 100°C	8.5	10.4	10.3
Viscosity, Cold Crank, °C/Poise	-30/59	-30/61	-25/64
Viscosity Index	142	151	131
Flash Point, °C(°F)	226(439)	230(446)	224(435)
Pour Point, °C(°F)	-41(-44)	-37(-35)	-34(-33)
Sulfated Ash, mass %	0.8	0.8	0.8
Base Number, ASTM D2896, mg KOH/g	7.8	7.8	7.5
Phosphorus, mass %	0.068	0.068	0.068
Zinc, mass %	0.080	0.080	0.080
Magnesium, mass %	0.004	0.004	0.004

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

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.

TYPICAL TEST DATA

SAE Grade	10W-40	20W-50	30
<i>Product Number</i>	224104	224105	224100
<i>SDS/MSDS Number</i>			
<i>USA</i>	17808	17808	17808
<i>Colombia</i>	—	31063	—
<i>El Salvador</i>	—	31407	—
Density at 15°C, kg/L	0.8720	0.8758	0.8754
API Gravity	30.77	30.07	30.14
Viscosity, Kinematic			
mm ² /s at 40°C	94.85	153.45	77.8
mm ² /s at 100°C	13.6	18.2	10.0
Viscosity, Cold Crank, °C/Poise	-25/63	-15/52	—
Viscosity Index	145	133	110
Flash Point, °C(°F)	>205(>401)	>205(>401)	250(482)
Pour Point, °C(°F)	-30(-22)	-24(-11)	-30(-22)
Sulfated Ash, mass %	0.8	0.8	0.8
Base Number, ASTM D2896, mg KOH/g	7.5	7.5	7.5
Phosphorus, mass %	0.064	0.064	0.064
Zinc, mass %	0.076	0.076	0.076
Magnesium, mass %	0.004	0.004	0.004

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