

HAVOLINE[®] MOTOR OILS SAE 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 30, 40

PRODUCT DESCRIPTION

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

CUSTOMER BENEFITS

 ${\sf Havoline}^{\circledast}$ Motor Oils with Deposit Shield $^{\circledast}$ 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 motor oil.
- · Excellent high temperature control

FEATURES

Děpošit Shield

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

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

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

A high level of dispersancy in Havoline Motor Oils with Deposit Shield protects against deposit and sludge formation in stop-and-go driving and sustained high temperature operation, and protects against corrosion. 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 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 highrevving engines in small cars and light trucks. All grades are suitable for use in both new and highmileage 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. It is suitable for use in Ford and Honda vehicles specifying this viscosity grade.

SAE 5W-30 is recommended by the majority of auto manufacturers for most of their late model North American vehicles, under a wide variety of weather conditions. It 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 very 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.

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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© 2007-2013 Chevron U.S.A. Inc. All rights reserved. Chevron, the Chevron Hallmark, Havoline and Havoline with Deposit Shield are trademarks owned by Chevron Intellectual Property LLC. All other trademarks are property of their respective owners. **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.

Havoline[®] Motor Oils **SAE 30** and **SAE 40** can be used in engine applications where an SAE 30 or SAE 40 passenger car motor oil of API SN or any previous "S" category is recommended. They perform 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
- SM, SL, SJ and all previous API "S" categories
- Resource Conserving for API SN (SAE 5W-20, 5W-30, 10W-30)
- ILSAC GF-5 (SAE 5W-20, 5W-30, 10W-30)
- manufacturers' performance requirements
 - 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)

SAE Grade	5W-20	5W-30	10W-30	10W-40
Product Number	223393	223394	223395	223396
MSDS Number USA Colombia El Salvador	17808 	17808 	17808 31063 31407	17808 — —
API Gravity	32.4	32.6	30.5	30.4
Viscosity, Kinematic cSt at 40°C cSt at 100°C	49.3 8.4	63.1 10.2	68.4 10.3	102.2 14.7
Viscosity, Cold Crank, °C/Poise	-30/60	-30/58	-25/62	-25/64
Viscosity Index	146	157	137	148
Flash Point, °C(°F)	>200(392)	>200(392)	>200(392)	>205(401)
Pour Point, °C(°F)	-36(-33)	-36(-33)	-36(-33)	-30(-22)
Sulfated Ash, wt %	0.9	0.9	0.9	0.9
Base Number, ASTM D2896	8.4	8.4	8.4	8.5
Phosphorus, wt %	0.076	0.076	0.076	0.077
Zinc, wt %	0.085	0.085	0.088	0.088
Magnesium, wt %	0.004	0.004	0.004	0.004

TYPICAL TEST DATA

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	20W-50	30	40
Product Number	223397	223391	223392
MSDS Number USA Colombia El Salvador	17808 31063 31407	17808 — —	17808 — —
API Gravity	29.0	29.3	28.8
Viscosity, Kinematic cSt at 40°C cSt at 100°C	157.8 17.3	88.8 11.0	127.1 13.8
Viscosity, Cold Crank, °C/Poise	-15/75	_	_
Viscosity Index	119	107	107
Flash Point, °C(°F)	>205(401)	>205(401)	>205(401)
Pour Point, °C(°F)	-24(-11)	-30(-22)	-30(-22)
Sulfated Ash, wt %	0.9	0.9	0.9
Base Number, ASTM D2896	8.5	8.5	8.5
Phosphorus, wt %	0.077	0.077	0.077
Zinc, wt %	0.088	0.088	0.088
Magnesium, wt %	0.004	0.004	0.004

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