Ravensberger Schmierstoffvertrieb GmbH Postfach 1163 33819 Werther

Tel.: +49/5203/9719-0 Fax.: +49/5203/9719-42

Certificate / ProductInformation -

RAVENOL High Fuel Economy HFE SAE 5W-16

Art. 1111104

FULLY SYNTHETIC

USVO® & CleanSynto®

Description:

RAVENOL High Fuel Economy HFE SAE 5W-16 is a PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with especially USVO® and proven CleanSynto® technology for passenger car petrol engines with and without turbo-charging and direct injection.

Due to the USVO® technology we achieve an extremely high viscosity stability. We avoid the disadvantages of polymeric viscosity improvers while taking advantage of them. This improves engine protection, performance, engine cleanliness and oil drain intervals. The USVO® technology makes it possible that the product has no shear losses during the entire change interval and is extremely stable to oxidation. This unique technology helps oil to be lubricated faster, thereby minimizing friction while keeping the engine clean and efficient.

RAVENOL High Fuel Economy HFE SAE 5W-16 was formulated with tri-nuclear molybdenum and OFM (Organic Friction Modifiers), in order to achieve minimal friction, wear and fuel consumption with excellent cold start characteristics.

With its new formulation, **RAVENOL High Fuel Economy HFE SAE 5W-16** provides a safe layer of lubrication even at very high operating temperatures and protects from corrosion and loss of oil through oxidation or coking. The excellent cold start behavior ensures optimum lubrication safety during the cold running phase.

By significantly reducing fuel consumption, **RAVENOL High Fuel Economy HFE SAE 5W-16** helps to protect the environment by reducing emissions.

Extended oil change intervals according to the manufacturer's instructions.

Application Directions:

RAVENOL High Fuel Economy HFE SAE 5W-16 is suitable as a high performance, smooth-running engine oil for sophisticated engines. It is recommended for modern passenger car petrol engines, if the engine manufacturer recommends using a low viscosity oil with the viscosity category SAE 5W-16.

Quality Classification:

RAVENOL High Fuel Economy HFE SAE 5W-16 is approved, tried and tested for aggregates specifying: Specification: API SN

Recommendations: Honda 08215-99974, 08216-99974, 08232-P99S1LHE, Honda Ultra Next, Ultra Green, Hybrid Engine, Nissan KLANM-01A04 Extra Save X Eco, Mitsubishi MZ102661, MZ102662, Mitsubishi DiaQueen ECO Plus, Toyota 08880-11005

Technical Characteristics:

RAVENOL High Fuel Economy HFE SAE 5W-16 offers:

- Fuel saving in partial and full load operation
- Excellent wear protection and a high viscosity index ensure the long service life of the engine even under high speed driving conditions.
- Excellent cold start properties even at low temperatures of below -30°C.
- A reliable lubrication film even at high operating temperatures.
- · Low volatility, resulting in low oil consumption.
- No oil-related deposits in combustion chambers, in the piston ring zone and on valves.
- Compatible with sealing materials.
- Extended oil change intervals protect natural resources.

To the best of our knowledge all information reflects the current state of findings and our development. Subject to change. Any reference to DIN standards are solely for product description purposes and do not represent a guarantee. If problems occur please consult a technician.

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Technical Values:

Characteristics	Unit	Data	Test according to
Density at 20°C	kg/m³	848,0	EN ISO 12185
Colour		yellow brown	visual
Viscosity at 100°C	mm²/s	7,5	DIN 51562-1
Viscosity at 40°C	mm²/s	41,6	DIN 51562-1
Viscosity Index VI		148	DIN ISO 2909
HTHS Viscosity at 150°C	mPa*s	2,5	ASTM D5481
CCS Viscosity at -30°C	mPa*s	4461	ASTM D5293
Low Temp. Pumping viscosity (MRV) at -35°C	mPa*s	11.040	ASTM D4684
Pourpoint	°C	-50	DIN ISO 3016
Noack Volatility	% M/M	7,2	ASTM D5800
Flashpoint	°C	240	DIN ISO 2592
TBN	mg KOH/g	8,2	ASTM D2896
Sulphated ash	%wt.	0,9	DIN 51575

 $\overline{\mbox{All}}$ indicated data are approximate values and are subject to the commercial fluctuations.

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