Ravensberger Schmierstoffvertrieb GmbH Joellenbecker Strasse 2 33824 Werther

Tel.: 05203/9719-0 Fax.: 05203/9719-42

- Certificate / Product Information -

RAVENOL Super Fuel Economy SFE SAE 5W-20

Art. 1111110

FULLY SYNTHETIC USVO® & CleanSynto®

Description:

RAVENOL Super Fuel Economy SFE SAE 5W-20 is a PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with especially USVO® and proven CleanSynto® technology for passenger car petrol and diesel 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 Super Fuel Economy SFE SAE 5W-20 utilizes the positive properties of tungsten to smooth the surface structure of the motor, reducing friction and wear, and significantly improving mechanical efficiency.

RAVENOL Super Fuel Economy SFE SAE 5W-20 has a high viscosity index because of its formulation with special base oils. The formulation avoids premature fuel ignition LSPI (Low Speed Prevention), thereby avoiding engine damage. Recommended for turbo gasoline engines with direct injection (Turbo-GDI).

Because of a considerable fuel saving **RAVENOL Super Fuel Economy SFE SAE 5W-20** contributes to protect the environment by reducing the emissions.

RAVENOL Super Fuel Economy SFE SAE 5W-20 minimizes friction, wear and fuel consumption with excellent cold start characteristics.

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

Application Directions:

RAVENOL Super Fuel Economy SFE SAE 5W-20 is an universal fuel-efficient engine oil, a top-quality product for modern passenger cars with gasoline and diesel engines of the latest generation.

Quality Classification:

RAVENOL Super Fuel Economy SFE SAE 5W-20 is approved, tried and tested for aggregates specifying:

Specifications: API SP (RC), API SN Plus; ILSAC GF-6A, ACEA A5/B5

License: API SP Resource Conserving, API SN Plus; ILSAC GF-6A

Approval: Jaguar Land Rover STJLR.03.5004

<u>Recommendations</u>: FORD WSS-M2C930-A, FORD WSS-M2C930-B (extended drain capability), Ford WSS-M2C925-A/B, Ford WSS-M2C948-B, Chrysler MS-6395, Nissan, Mazda, Suzuki, Toyota,

Fiat 9.55535-CR1, Honda/Acura HTO-06

Technical Characteristics:

RAVENOL Super Fuel Economy SFE SAE 5W-20 offers:

- Guaranteed fastest possible lubrication of the engine.
- High fuel economy (FE) effect due to the base oils and additives used. Low volatilization tendency, thereby lower oil consumption.
- Provides protection against sludging, coking, varnish and corrosion even under unfavorable operating conditions.
- No oil-related deposits in combustion chambers in the piston ring zone and on valves.
- Ensures the function of the hydraulic tappets at all temperatures.
- Stable engine oil, no NOx oxidation.
- Good aging behavior, confirmed by the Hot Tube Test.
- Good soot absorption and dispersion.
- Neutral towards sealing materials.
- Protects turbocharger, EPS and engines running with ethanol-containing fuels up to E85.
- Compatibility with exhaust gas after treatment systems.

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	842,0	DIN 51757
Colour		yellowbrown	visual
Viscosity at 100°C	mm²/s	8,5	DIN 51562-1
Viscosity at 40°C	mm²/s	47,2	DIN 51562-1
Viscosity Index VI		160	DIN ISO 2909
HTHS at 150°C	mPa*s	2,9	CEC L-036-A-90
CCS Viscosity at -30°C	mPa*s	3640	ASTM D 5293
Low Temp. Pumping viscosity (MRV) at -35°C	mPa*s	9.700	ASTM D4684
Pourpoint	°C	-63	DIN ISO 3016
Noack Volatility	% M/M	8,3	ASTM D5800/b
Flashpoint	°C	238	DIN ISO 2592
TBN	mg KOH/g	8,0	ASTM D2896
Sulphated ash	%wt.	0,8	DIN 51575

All indicated data are approximate values and are subject to the commercial fluctuations.

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