

-Certificate / ProductInformation-

RAVENOL VMO SAE 5W-40

Art. 1111133

SYNTHETIC

MID SAPS

CleanSynto®

Description:

RAVENOL VMO SAE 5W-40 is a synthetic Mid SAPS low friction motor oil with CleanSynto® technology for passenger car gasoline and diesel engines with and without turbo-charging and direct injection.

RAVENOL VMO SAE 5W-40 achieves a high viscosity index through its formulation with special base oils. The excellent cold start behaviour provides an optimum lubricating safety during the cold run phase.

RAVENOL VMO SAE 5W-40 extends long life of DPF and TWC. Developed for fuel economy and energy conserving in EURO VI, EURO V and EURO IV Standard engines with normal and extended oil change intervals (until 50.000 km or 2 years possible).

RAVENOL VMO SAE 5W-40 minimizes friction, wear and fuel consumption with excellent cold start characteristics. Because of a considerable fuel saving **RAVENOL VMO SAE 5W-40** contributes to protect the environment by reducing the emissions.

Suitable for extended oil change intervals where recommended by manufacturer.

Application Directions:

RAVENOL VMO SAE 5W-40 is an universal, synthetic low friction motor oil especially developed for Pumpe-Düse-diesel engines. Moreover, this lubricant is excellent suitable for gasoline and diesel engines in passenger cars and vans with and without turbo charger. Due to the specific composition is **RAVENOL VMO SAE 5W-40** excellent suitable for use for several OEM requirements.

Quality Classification:

RAVENOL VMO SAE 5W-40 is approved, tried and tested for aggregates specifying:

Specifications: API SN/CF, ACEA C3

License: API SN

Approvals: BMW Longlife-04; GM dexos2™ (Lizenz-Nr. D20583HI081);

MB-Freigabe 229.31, MB-Freigabe 229.51; VW 505 00 / 505 01

Recommendations: Chrysler MS-11106; Fiat 9.55535-S2, Fiat 9.55535-GH2; Ford WSS-M2C917-A;

Porsche A40; VW 502 00

Technical Characteristics:

RAVENOL VMO 5W-40 offers:

- Fuel economy in part and full power operation
- MID SAPS = reduced Sulphated Ash, Phosphorous and Sulphur
- Excellent wear protection and high viscosity index also under high-speed driving conditions, the long life of the engine
- Excellent cold starting characteristics also at low temperatures below -30°C
- The function of the hydro tappet is ensure at all temperatures
- A safe lubricant film at high operating temperatures
- Low evaporative tendency, so lower oil consumption
- No deposits in combustion chambers, in the piston ring zone and valves because of oil conditioned
- Neutrality towards sealing materials
- Extended oil change intervals to protect natural resources

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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	14,4	DIN 51562-1
Viscosity at 40°C	mm²/s	87,5	DIN 51562-1
Viscosity Index VI		171	DIN ISO 2909
HTHS Viscosity at 150°C	mPa*s	3,75	ASTM D5481
CCS Viscosity at -30°C	mPa*s	6375	ASTM D5293
Low Temp. Pumping viscosity (MRV) at -35°C	mPa*s	21.100	ASTM D4684
Pourpoint	°C	-45	DIN ISO 3016
Noack Volatility	% M/M	8,8	ASTM D5800
Flashpoint	°C	242	DIN ISO 2592
TBN	mg KOH/g	7,2	ASTM D2896
Sulphated ash	%wt.	0,77	DIN 51575

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