



## RAVENOL VMO SAE 5W-40

RAVENOL VMO SAE 5W-40 is universal fully synthetic low friction motor oil based on PAO Poly-alpha-olefins. Special formulation developed for use in passenger car with petrol and diesel engines (also with pump-jet technology Pumpe-Düse-Technik). Energy conserving.

RAVENOL VMO SAE 5W-40 achieves by its formulation with special base oils a high viscosity index. The excellent cold start behaviour ensures an optimal lubrication safety in the cold running phase. Due to a significant fuel economy RAVENOL VMO SAE 5W-40 contributes by reduction of emissions to conservation the environment. Minimal wear extends the lifespan of the engine. Extend oil change intervals according to manufacturer requirements.

RAVENOL VMO SAE 5W-40 extends long life of DPF and TCW. Fulfills EURO IV and EURO V standards for exhaust reducing.

### Application Notes

RAVENOL VMO SAE 5W-40 is universal synthetic low friction motor oil especially developed for pump-jet 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 of the latest OEM requirements.

### Quality Classifications

#### Specifications

API SN/CF, ACEA C3

#### Approvals

MB 229.31, VW 502 00 / 505 00 / 505 01, License: API SN

#### Practice and tested in aggregates with filling

BMW Longlife-04, Porsche A40, Ford WSS-M2C917-A, Fiat 9.55535-S2, Fiat 9.55535-GH2, Audi/Volkswagen G 052 167 M2, G 052 167 M4 (MX), G 052 167 M6 (MX), BMW 81 22 9 407 002, BMW 81 22 9 407 029, BMW 81 22 9 407 547, Mercedes Benz 000 989 82 01

### Characteristic

RAVENOL VMO 5W-40 offers:

- Fuel economy in part and full power operation
- 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

| Characteristics    | Unit               | Data      | Audit        |
|--------------------|--------------------|-----------|--------------|
| Colour             |                    | gelbbraun | visual       |
| Density at 20°C    | kg/m <sup>3</sup>  | 859       | EN ISO 12185 |
| Viscosity at -30°C | mPa.s              | 5800      | DIN 51 377   |
| Viscosity at 40°C  | mm <sup>2</sup> /s | 83        | DIN 51 562   |
| Viscosity at 100°C | mm <sup>2</sup> /s | 13,8      | DIN 51 562   |
| Viscosity index VI |                    | 182       | DIN ISO 2909 |
| Flash point (COC)  | °C                 | 225       | DIN ISO 2592 |
| Sulphated ash      | %wt.               | 0,77      | DIN 51 575   |
| Pourpoint          | °C                 | -39       | DIN ISO 3016 |
| TBN                | mg KOH/g           | 7.7       | DIN ISO 3771 |

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

All information correspond to the best of our knowledge to the actual situation of the cognitions and our development. Subject to alterations. All references made to DIN-norms are only for the description of the goods. There is no guarantee. In case there will be any problems please contact the technical service.

22.03.2016

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