

**Gasoline and Diesel engine oil  
Synthetic Technology**

## TYPE OF USE

High performance synthetic technology lubricant featuring Full SAPS (Sulfated Ash, Phosphorous, Sulfur) technology, specifically designed for powerful and recent cars fitted with large displacement engines, Gasoline or Diesel, direct or indirect injection, with or without turbo.

Multipurpose product featuring numerous car maker approvals, especially recommended for vehicles still under warranty.

Suitable for all type of fuels: Gasoline, Diesel, LPG, CNG and Biofuels.

Compatible for catalytic converters.

If in doubt, before use, refer to the owner manual or handbook of the vehicle.

## PERFORMANCES

The MERCEDES MB 229.5 standard is more stringent than 229.3 in terms of oil ageing and oil film resistance (extended drain interval: on-board computer), detergent/dispersant power (ACEA B4) and requests fuel economy performance: 1.7 % fuel economy improvement versus a 15W-40 reference.

The specification MB 229.5 applies to all MERCEDES Gasoline engines, including AMG and except SLR, and to all MERCEDES Diesel without DPF engines.

The Porsche A40 standard requires extreme high shear resistance from the lubricant. This specification applies to all PORSCHE engines, except Cayenne V6 and Diesel versions (for these specific engines, use an approved Porsche C30 lubricant such as MOTUL 8100 X-clean+ 5W-30).

The VW 502 00 and 505 00 standards are specially designed for vehicles of the VAG group (VOLKSWAGEN, AUDI, SKODA and SEAT) running on fixed oil drain intervals (15,000 km in Europe), fitted with Diesel engines, without Unit Pump Injector (Volkswagen PD), without Diesel Particulate Filter (DPF), or Gasoline engines.

The FORD WSS-M2C937-A specification requires an extra high oil film resistance for the lubricant to guarantee the viscosity capability over the whole oil drain interval even in severe and extreme conditions (sustained and sport driving,...). This specification applies to all FORD Focus RS 2.5L Turbo Duratec vehicles from MY2008.

MOTUL 8100 X-max 0W-40 meets the performance of the BMW Long Life-01 standard from the BMW Group for BMW, MINI and ROLLS-ROYCE vehicles until the model year 2019 i.e. up to End of 2018 only. For models from 2019 onward

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requiring an approved BMW LL-01 lubricant, products such as MOTUL 8100 X-cess 5W-30 or MOTUL 8100 X-cess GEN2 5W-40 must be used.

The performance level of FIAT 9.55535-Z2 in 0W-40 requires the lubricant to be both ACEA A3/B4 and 0W-40, in order to lubricate perfectly some very recent gasoline engines from FIAT, ALFA-ROMEO, and LANCIA.

MOTUL 8100 X-max 0W-40 meets all these very demanding requirements of performance and durability set by OEMs, as well as the latest level of international standard API.

The API SN standard requires from the lubricant performance an outstanding detergent/dispersant power, a better viscosity increase resistance against deposits, and high lubricating properties such as wear protection and high temperature resistance for better controlled oil consumption and perfect engine protection over the oil drain interval.

The viscosity grade SAE 0W-40 minimizes oil hydrodynamic friction, allowing fuel economy especially when oil is cold. Improves oil flow at start up, faster oil pressure build up, faster rev raisings and faster operating temperature reach.

Environment friendly, this type of oil allows fuel consumption reduction and therefore minimizes greenhouse gases (CO<sub>2</sub>) emissions.

Numerous OEMs such as NISSAN, JAGUAR, LAND-ROVER, etc... recommend using a lubricant with 0W-40 viscosity grade and at least API SM for most of their sporty vehicles like for example the NISSAN GT-R, 370Z, 350Z,...

MOTUL 8100 X-max 0W-40 formulation is the perfect balance between fuel economy linked to its viscosity grade and outstanding lubrication performance (high HTHS > 3.5 mPa.s).

## RECOMMENDATIONS

Drain interval: refer to manufacturers' recommendations and tune to your own use.

MOTUL 8100 X-max 0W-40 can be mixed with synthetic or mineral oils.

Before use always refer to the owner's manual or handbook of the vehicle.



## MOTUL 8100 X-MAX 0W-40

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### PROPERTIES

|                                 |            |                         |
|---------------------------------|------------|-------------------------|
| Viscosity grade                 | SAE J 300  | 0W-40                   |
| Density at 20°C (68°F)          | ASTM D1298 | 0.841                   |
|                                 | ASTM D445  | 81.0 mm <sup>2</sup> /s |
| Viscosity at 40°C (104°F)       |            |                         |
|                                 | ASTM D445  | 13.9 mm <sup>2</sup> /s |
| Viscosity at 100°C (212°F)      |            |                         |
| HTHS viscosity at 150°C (302°F) | ASTM D4741 | 3.6 mPa.s               |
|                                 | ASTM D2270 | 178.0                   |
| Viscosity Index                 |            |                         |
|                                 | ASTM D97   | -48.0 °C / -54.0 °F     |
| Pour point                      |            |                         |
| Sulfated Ash                    | ASTM D874  |                         |
|                                 |            | % weight                |
|                                 |            | 1.06                    |
| TBN                             | ASTM D2896 | 12.3 mg KOH/g           |
| Flash point                     | ASTM D92   | 226.0 °C / 439.0 °F     |

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| STANDARDS        |                                    |
|------------------|------------------------------------|
| ACEA             | A3/B4                              |
| API              | SERVICE SP                         |
| BMW              | LL-01                              |
| FORD             | WSS-M2C937-A                       |
| MERCEDES-BENZ    | MB-Approval 229.5                  |
| VW               | 502 00 505 00                      |
| OEM PERFORMANCES |                                    |
| CHRYSLER         | MS 12991                           |
| FIAT             | 9.55535-M2, 9.55535-N2, 9.55535-Z2 |
| RENAULT          | RN0710                             |

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