



# MOTUL® 6100 SYN-clean 5W-40

DPF

**Gasoline & Diesel lubricant - EURO 4, 5 and 6**

**Technosynthese®**

## TYPE OF USE

Advanced Technosynthese® lubricant for High Performance and High Protection.

Recommended by BMW, FORD, GM, MERCEDES, RENAULT and VAG (Volkswagen, Audi, Skoda and Seat).

Specially designed for the latest generation cars, powered by Gasoline and Diesel engines, naturally aspirated or turbocharged, indirect or direct injection, EURO 4, EURO 5 or EURO 6 emission regulation compliant and requiring an ACEA C3 engine oil i.e. high HTHS (> 3.5 mPa.s) viscosity and "Mid SAPS" with reduced content of Sulfated Ash ( $\leq 0.8\%$ ), Phosphorus ( $0.07 \leq x \leq 0.09\%$ ) and Sulfur ( $\leq 0.3\%$ ).

Compatible with catalytic converters (CAT) and Diesel Particulate Filters (DPF).

Always refer to the owner's manual if in doubt.

## PERFORMANCES

STANDARDS

ACEA C3  
API SERVICE **SN**

PERFORMANCES

BMW Long Life-04  
FORD WSS M2C 917A  
GM-OPEL dexos2® (replace GM-LL-A-025 & B-025)  
MB 229.51  
RENAULT RN0710  
RENAULT RN0700  
VW 502 00 – 505 01

RECOMMANDATIONS KIA / HYUNDAI, HONDA, MITSUBISHI, NISSAN, SUZUKI, SSANGYONG, TOYOTA,...

Engines compliant with EURO 4, EURO 5 and EURO 6 emission regulation are fitted with sensitive exhaust gas after treatment systems. Indeed, Sulfur and Phosphorus inhibit catalytic converters operation leading to inefficient exhaust gas treatment; and Sulfated Ashes clog DPFs leading to shorten regenerating cycle, quick oil aging, higher fuel consumption and engine power loss.

The ACEA C3 standard requests from the lubricant significant oil film resistance and low emission performance for powerful engines.

MOTUL 6100 SYN-clean 5W-40 has Technosynthese® synthetic base stocks coupled with specific friction modifier molecules and dedicated SAPS levels that generate outstanding oil film resistance, reduce friction in the engine and provide after treatment devices compatibility. MOTUL 6100 SYN-clean 5W-40 brings high lubricating properties such as wear protection and high temperature resistance for better controlled oil consumption. ACEA C3 lubricants achieve extended drain intervals managed by vehicles on-board computer.

Numerous OEMs such as KIA / HYUNDAI, HONDA, MITSUBISHI, NISSAN, SUZUKI, SSANGYONG, TOYOTA, ... recommend an ACEA C3 lubricant for most of their vehicles especially Diesels with DPF.

The BMW Long Life-04 specification imposes severe constraints to the lubricant particularly due to Valvetronic and after treatment systems compatibility. It covers all BMW engines from 2004 and also all BMW engines before 2004 as BMW LL-04 covers all the previous BMW specifications such as BMW LL-98 and BMW LL-01.

ATTENTION: BMW LL-04 product can be used for gasoline engines only in European Union countries, Switzerland, Norway and Liechtenstein. Outside those countries, a BMW LL-01 lubricant such as MOTUL 8100 X-cess 5W-40 or 8100 X-max 0W-40 is required. Refer to BMW recommendation.

The FORD WSS M2C 917A standard is required for FORD Galaxy 1.9L TDI until MY2006 ; and for FORD Ka from MY2008.

In countries with relevant Diesel passenger car market shares e.g. Europe, the GM-OPEL dexos2® standard is suitable for the whole range of GM-Opel Diesel engines (including DPF versions) and most of Gasoline engines from Model Year 2010. Also, GM-OPEL dexos2® fully supersedes and replaces the previous GM specifications: GM-LL-A-025 (Gasoline) and GM-LL-B-025 (Diesel).

The MB 229.51 requires among many other severe constrains from the lubricant a reduced content of Sulfated Ash, Phosphorus and Sulphur in order to be compatible with MERCEDES exhaust gas after treatment systems. The specification MB 229.51 applies to some MERCEDES Gasoline engines, and to all MERCEDES Diesel engines, with or without DPF (except for BlueTEC engines with SCR. In this case use a MB 229.52 lubricant such as MOTUL SPECIFIC 229.52 5W-30 or MOTUL 8100 X-CLEAN EFE 5W-30).

RENAULT has developed RN0700 and RN0710 standards for oils able to endure the most severe thermal constrains along with modern after treatment systems compatibility.

The Renault RN0700 standard applies to all Naturally Aspirated Gasoline engines (except Renault Sport) of RENAULT Group (Renault, Dacia, Samsung).

The RN0700 specification applies also to all RENAULT Diesel cars fitted with 1.5L dCi engines without DPF (Diesel Particulate Filter) having less than 100 hp output and 20 000 km or 1 year oil drain interval.

The Renault RN0710 standard applies to all Turbocharged Gasoline, Renault Sport and Diesel without DPF engines of RENAULT Group (Renault, Dacia, Samsung).

The RN0710 specification does not apply to RENAULT Diesel cars fitted with 1.5L dCi engines without DPF having less than 100 hp output and 20 000 km or 1 year oil drain interval which specifically require a RN0700 lubricant. For the 2,2L dCi with DPF, use only an approved RN0710 lubricant, not a RN0720.

Specifications VW 502 00 and VW 505 01 require outstanding detergent/dispersant power, high oil film resistance and better viscosity increase resistance due to soot in order to cover many Gasoline engines and most of Direct Injection Diesel engines (unit injector system, fixed oil drain interval, check owner's manual). Attention, do not use MOTUL 6100 SYN-clean 5W-40 when a VW 504 00 or VW 507 00 lubricant is required, in that case use MOTUL SPECIFIC 504 00 507 00 5W-30, MOTUL SPECIFIC 504 00 507 00 0W-30 or MOTUL 8100 X-CLEAN+ 5W-30.

## **RECOMENDATIONS**

Drain interval : according to manufacturers' recommendations and tuned to your own use.

Do not mix with lubricants not ACEA C3 compliant.

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

## **PROPERTIES**

Viscosity grade	SAE J 300	<b>5W-40</b>
Density at 20°C (68°F)	ASTM D1298	0.841
Viscosity at 40°C (104°F)	ASTM D445	85.1 mm <sup>2</sup> /s
Viscosity at 100°C (212°F)	ASTM D445	14.4 mm <sup>2</sup> /s
Viscosity HTHS at 150°C (302°F)	ASTM D4741	3.6 mPa.s
Viscosity index	ASTM D2270	170
Pour point	ASTM D97	-36°C / -33°F
Flash point	ASTM D92	231°C / 448°F
Sulfated ash	ASTM D874	0.81% weight
TBN	ASTM D2896	7.6 mg KOH/g