



# SPECIFIC MB 229.31 5W-40

Gasoline and Diesel oil for EURO IV engines

100% Synthetic

## TYPE OF USE

Specifically designed for Mercedes-Benz recent cars fitted with EURO IV engines that require "Mid SAPS" lubricants : low Sulphur (< 0.2%), low Phosphorus (< 0.08%) and low Sulphated Ashes (<0.8%).

Refer to carmaker oil specification.

## PERFORMANCES

STANDARDS                      ACEA A3 / B4 / C3 - API SL / CF  
APPROVALS                      Mercedes Benz 229.31

\* Engines compliant with EURO IV anti pollution regulation are fitted with sensitive systems for exhaust gas post treatment :

- Sulphur and Phosphorus inhibit catalytic convertors operation and can damage catalytic components : inefficient exhaust gas treatment.
- Sulphated Ashes clog diesel particulate filters : shorten regenerating cycle, higher fuel consumption and engine power loss.

Mercedes-Benz developed MB 229.31 standard for Mid SAPS lubricants (low Sulphur, Phosphorus and Sulphated Ashes) compatible with post treatment systems. Those oils allow reaching extended drain intervals managed by computer on board.

## RECOMMENDATION

Drain interval : refer to manufacturers' recommendations and tune to your own use.  
Do not mix with lubricants not MB 229.31 compliant.

## PROPERTIES

Viscosity grade	SAE J 300	<b>5W-40</b>
Density at 15°C (59°F)	ASTM D1298	0.851
Viscosity at 100°C (212°F)	ASTM D445	13.9 mm <sup>2</sup> /s
Viscosity at 40°C (104°F)	ASTM D445	84.9 mm <sup>2</sup> /s
Viscosity index	ASTM D2270	167
Pour point	ASTM D97	-36°C / -33°F
Flash point	ASTM D92	215°C / 419°F
TBN	ASTM D 2896	7.4 mg KOH/g
HTHS viscosity @150°C (302°F)	ASTM D4741	3.7 mPa.s
Noack volatility	NTF 60601	7.1% weight

BB00.40-P-0223-02A	Specified engine oils (service) - survey	For Mercedes-Benz and Smart	Sheet 223.2
		<b>i</b> For specified viscosity grades refer to ↓	
		Sheet 224.1 (passenger-car engines)	<a href="#">BB00.40-P-0224-01A</a>
		Sheet 224.2 (commercial-vehicle engines)	<a href="#">BB00.40-P-0224-02A</a>

The temperature ranges in the viscosity classes must be observed for the use of the engine oils

(see Sheets 224.1 and 224.2)!

Single-grade oils are listed on sheets: 228.0, 228.2 - only to be used in summer.

Multigrade oils are listed on sheets: 226.9, 228.1/.3/.5/.51, 229.1/.3/.31/.5 - can be used all year round.

**Passenger vehicle engines,  
Commercial vehicle engines from the passenger car division,  
Industrial engines from the car sector (series 100, series 600)**

MB Specifications for Operating Fluids Sheet 1.)	226.9 Multi-grade	228.0/.1 Single/multi-grade	228.2/.3 Single/multi-grade	228.5 Multi-grade	228.51 2.) Multi-grade	229.1 Multi-grade	229.3 Multi-grade	229.31 2.) Multi-grade	229.5 Multi-grade
<b>Gasoline engines</b>									
M 155 (SLR)	-	-	-	-	-	-	● 3.)	-	-
AMG engines except M 155 (SLR)	-	-	-	-	-	-	-	-	● 4.)
M 166	-	-	-	-	-	●	●	-	-
M 272, 273	-	-	-	-	-	●	●	-	●

M 112, 113, 134, 135 M 266 naturally aspirated engine	-	-	-	-	-	●	●	●	●
M 271, M 266 Turbo	-	-	-	-	-	-	●	●	●
M 122, 275	-	-	-	-	-	-	●	-	●
M 285 (Maybach), M 160, 160/1	-	-	-	-	-	-	-	-	●
Other M 1xx, M 2xx that are not listed above	-	-	-	-	-	●	●	-	●
<b>Diesel engines</b>									
<b>without particulate filter (DPF)</b>									
OM 660	-	-	-	-	-	-	-	-	●
OM 642	-	-	-/●	●	●	-	●	●	●
OM 646 in BR 639 and 906	-	-	-/●	●	●	-	●	●	●
OM 639, 646, 647, 648	-	-	-/●	●	-	-	●	●	●
OM 640	-	-/●	-/●	●	-	●	●	●	●
Other OM 6xx not listed above	-	-/●	-/●	●	-	●	●	●	●
<b>with particulate filter (DPF)</b>									
OM 629	-	-	-	-	● 5.)	-	-	● 5.)	-
OM 642	-	-	-	-	●	-	-	●	-
OM 646 in BR 639 and 906	-	-	-	-	●	-	-	●	-
Other OM 6xx with DPF not listed above	-	-	-	-	-	-	-	●	-

**Commercial vehicle engines,  
Industrial engines from the commercial vehicle sector (BR 300, BR 400, BR 500, BR 900)**

<b>MB Specifications for Operating Fluids, Sheet 1.)</b>	<b>226.9 Multi-grade</b>	<b>228.0/.1 Single/Multigrade</b>	<b>228.2/.3 Single/Multigrade</b>	<b>228.5 Multi-grade</b>	<b>228.51 2.) Multi-grade</b>	<b>229.1 Multi-grade</b>	<b>229.3 Multi-grade</b>	<b>229.31 2.) Multi-grade</b>	<b>229.5 Multi-grade</b>
<b>Commercial vehicles and buses without particulate filters</b>									
BR 300, 400, 500, 900; OM 457, 460 up to and including Euro 3	-	○/●	○/●	●	●	-	-	-	-
BR 500, 900; OM 457, 460 Euro 4/5	-	-	○/●	●	●	-	-	-	-
Gas engines	●	-	-	-	-	-	-	-	-
<b>Commercial vehicles and buses with particulate filters</b>									
BR 500, 900; OM 457, 460	-	-	○	○	●	-	-	-	-

This table only serves as an overview!

The detailed maintenance and oil change regulations can be found in the maintenance booklet for the respective vehicle/major assembly.

● Should be used.

○ Can only be used in exceptional cases or under certain operating conditions/in certain applications.

- Must not be used

**1.)** Sheets 227.0/.1 no longer exist! Replaced by engine oils in sheets 228.0/.1/.2/.3/.5/51.

**2.)** Use in combination with sulfur-free fuel! If this is not available, the oil change intervals must be reduced!

**3.) Restriction:** Only "Mobil 1 5W-50", SAE 5W-50, Sheet 229.3 is approved by AMG!

**4.) Restriction:** Only engine oils SAE XW-40 may be used!

**5.) Restriction:** Only engine oils SAE 10W-40, 15W-40, 20W-40, 5W-50, 10W-50, 15W-50, 20W-50 or oils with a higher viscosity may be used!

Engine oils SAE 0W-30, 5W-30, 10W-30, 15W-30, 0W-40, 5W-40 or oils with a lower viscosity may not be used!