

# **BMW 5 Series**

**5201 M SPORT PETROL RWD AUTOMATIC** 



## **Sustainability Rating**

2025



46%



Clean Air

6.5



**Energy Efficiency** 

4.7 /10



Greenhouse Gases

2.7

## **Driving Experience**



Consumption & Range

ADEQUATE



Cold Winter Performance

NOT APPLICABLE



Charging Capability

NOT APPLICABLE

### **Our verdict**

Tested here is the BMW 520i - a premium limousine equipped with a 2 litre turbocharged petrol engine supported by a 48 V-mild hybrid system. Given its luxurious specification and relatively high unladen weight of 1,800 kg, the vehicle achieves an adequate score of 46% and collects 2½ Green stars. The most challenging area of assessment are the greenhouses gases, where the car scores poorly due to the combustion of relatively high amounts of fossil fuel.

- > The exhaust emissions control system keeps pollutants very low, providing minimal air quality impact. The tyre abrasion score is good, but brake abrasion reduction potential is limited. The production and fuel supply emissions slightly worsen the score.
- > Fuel use is moderate but limits the sustainability scoring. Lab test measurement resulted in 5.6-7.8 I/100 km, while the mixed trip On-road test needed 5.7 I/100 km.
- > Fossil fuel combustion drives high GHG emissions: the average direct propulsion GHG emissions are measured with 149 g CO<sub>2</sub>/km. The additional emissions from the other LCA phases further reduce the score.

Disclaimer













6.5/10

#### Comments

The BMW's exhaust aftertreatment is efficient and robust under a variety of conditions. The typical pollutants are kept low even under harsh acceleration conditions in the Highway Test. Particle number is far below the legal limit. The On-road tests confirm these findings. Thanks to its exhaust performance, the 520i proves to have a minimal impact on local air quality. It scores well for tyre abrasion but collects only about one fourth of the points for brake abrasion mitigation due to the limited energy recuperation capacity of the mild hybrid system. The pollutants associated with vehicle production and supply of the fuel deteriorate the final Clean Air Index score slightly.

#### **Exhaust emissions**

Exhaust pollutant emissions are produced from combustion engines. Although current emission legislation is very strict, this type of emission directly affects air quality, and not all vehicles perform equally well. Read more

GOOD 🔵

8.1/10

In laboratory					G 0 0	D 🛑	7.4 /10
Green NCAP performs a wide range of tests or controlled conditions and guarantee that all or comparable. Read more							
	NMHC	NO <sub>x</sub>	NH <sub>3</sub>	СО	PN	PM	Score
Legal test (WLTP)	•	•		•		•	<b>5.8</b> /8
Warm weather	•	•	•			•	8.3/10
Highway	•	•				•	6.8/10
Winter cold start	•	•	•			•	7.3/10
Winter warm start							8.3/10







#### 6.5 /10

### Non-exhaust emissions

Driving a vehicle also produces emissions different from those of the exhaust pipe. Green NCAP evaluates vehicle properties that contribute to tyre and brake abrasion.

MARGINAL -

ADEQUATE -

2025

5.1/10

Tyre abrasion releases small particles during driving, and some vehicle properties have major impact on it. Heavier vehicles, wheel alignment causing increased slip angle, and aggressive acceleration responses all increase tyre wear and particle emissions. Read more

Influence of mass

Score 1.5/3

Wheel alignment

WEAK

Result

1.0/1

4.5/6

Accelerator response

2.0/2

1.6/6

#### **Brake wear**

Brake dust, produced by friction brakes, can be mitigated through filters, enclosed brake systems (like drums), or by reducing friction brake use with regenerative braking in electrified vehicles. Containment keeps dust inside the system, while recuperation lowers brake wear. However, heavier vehicles still generate more brake abrasion due to their greater stopping demands. Read more

**Brake dust mitigation** 

Score 0.0/4

**Brake dust containment** 

Result

0.0/6

Recuperative braking - warm test

1.6/6





























6.5 /10

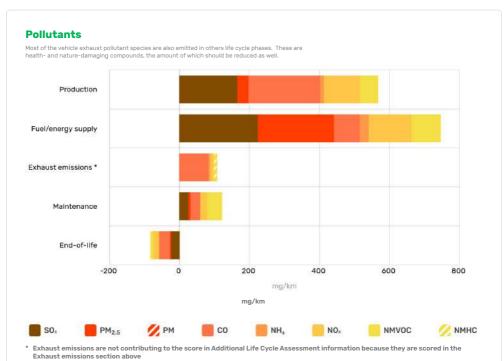
## **Additional Life Cycle Assessment information**

Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, pollutants are estimated in the various stages of a vehicle's life other than use. The chart also displays the measured emissions related to usage, which are taken as an average from the tests and are scored separately in the 'Exhaust emissions' part above. The end-of-life approach uses results in negative values because the benefit of materials recovery and recycling exceeds the effort of obtaining and processing virgin raw materials.

MARGINAL |

2025

3.3/10

































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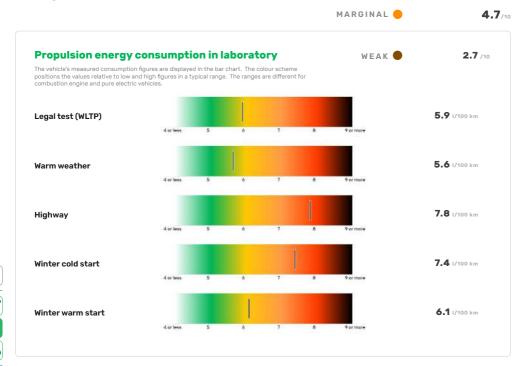
## **Energy Efficiency**

4.7 /10

#### Comments

The car's petrol consumption figures are adequate for a vehicle of this type but the large BMW does not impress in the area of energy efficiency. Consumption figures of 7.4 I/100 km in the -7°C Cold Winter test or 7.8 I/100 km in the Highway Test limit the car's sustainability performance. In a real-world mixed On-road trip, Green NCAP measured 5.7 I/100 km while the short urban trip needed 6.8 I/100 km. In terms of life cycle assessment, the total primary energy demand benefits from the absence of a heavy battery, the production of which would further increase the need for energy. Nevertheless, the amounts of fuel needed by the conventional combustion engine to propel the large 5 series limit the achievable score also in this section.

### **Energy demand**





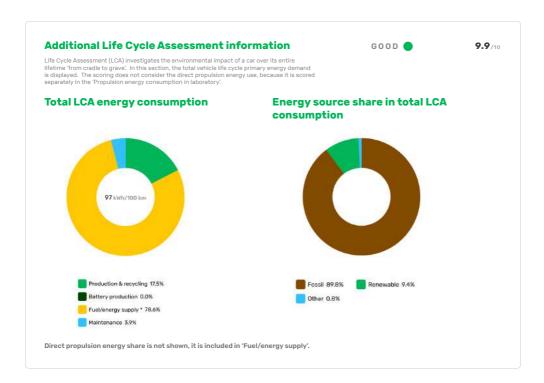






## **Energy Efficiency**

4.7 /10



## **Rolling resistance**

Rated here is the vehicle's resistance to movement at low speeds. Different factors have an impact on it, but the most significant one is mass.

MARGINAL -

5.7/10



































### 🔼 Greenhouse Gases

2.7 /10

#### Comments

While the production of a conventional vehicle emits less greenhouse gases compared to an electric car, the subsequent combustion of fossil fuels disproportionally increases the emissions, leaving the BMW with a low score in this part of the assessment. The average direct GHG emissions in Green NCAP's lab tests are 149 g CO,-eq./km. A further 100 g CO, -eq./km are added, which are related to production, maintenance and end-of-life treatment, as well as the emissions originating from the petrol fuel supply processes.

#### **Exhaust GHG emissions**

Combustion of conventional fuels releases greenhouse gases at the vehicle's tailpipe. The most significant of these gases are the emissions of  $CO_2$ . Green NCAP's assessment considers methane  $(CH_a)$  and laughing gas  $(N_aO)$  as well. Together, these are counted with their global warming potential to a sum known as CO2 equivalent.

1.2/10 WEAK

































## Greenhouse Gases

2.7 /10

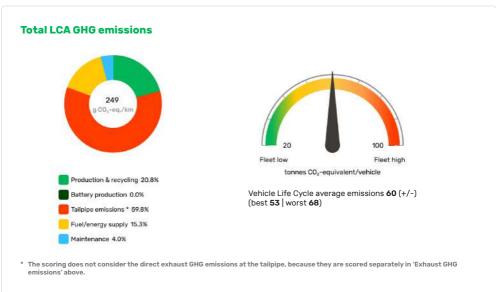
## **Additional Life Cycle Assessment information**

Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, the total vehicle life cycle greenhouse gas emissions are displayed.

ADEQUATE -

2025

7.7/10





































## **Driving Experience**



# Consumption & Range

ADEQUATE



## Cold Winter Performance

NOT APPLICABLE



## Charging Capability

NOT APPLICABLE

#### **Green NCAP Comment**

The Driving Experience evaluation of conventional vehicles focuses only on the performance in the section 'Consumption and Range'. The BMW 520i's estimated real-world consumption figures are seen as adequate in all conditions – warm weather and cold winter, urban, rural, highway and mixed driving scenarios. The consumption readings on the board computer display are very accurate.







## Consumption & Range

ADEQUATE -

## **Estimated actual consumption**

ADEQUATE -

What consumption can be expected in real world conditions?

In-laboratory measured consumption values are only partially representative of real-world use. Green NCAP's estimates aim at providing more realistic figures, which are based on measured results, modified by correction factors

Conditions	Urban	Rural	Highway	Mixed
Warm weather	7.8	5.3	6.2	6.8 I/100 k
Cold Winter	10.0	5.8	7.3	8.1 I/100 k

## **Accuracy of display**

GOOD



Is the consumption figure on the display correct?















not applicable



NOT APPLICABLE













## **Charging Capabilities**

NOT APPLICABLE











## **Specifications**

Vehicle class **Large Family Car** 

System power/torque

153 kW/330 Nm

**Engine size** 

1,998 ...

**Declared consumption** 

5.9 I/100 km

2025

**Declared driving range** 

Overall n.a. City n.a.

Declared CO<sub>2</sub>

133 g/km

**Declared battery capacity** 

Usable (net) n.a. Installed (gross) n.a.

Mass

1,805 kg

**Heating concept** 

**Waste heat** 

**Tyres** 

245/40 275/35 R20

**Emissions class** 

Euro 6 EA

**Tested car** 

WBA11FJ010CV1xxxx

**Publication date** 

11 2025











