

INDEPENDENT BATTERY CERTIFICATE



CERTIFICATE NUMBER: 9E7C427C-2E42-4467-8F3C-B83C81F2D072

VEHICLE

BRAND: BMW

MODEL: 5 Series Plug-in Hybrid - 22,1 kWh

MILEAGE: 10,886 km

VIN: WBA71FJ05RCS03987

DATE AND TIME:

05.09.2025, 10:12:49

EXECUTED BY: 135024 - Bergwerff Automotive B.V

RESULTS

STATE OF HEALTH (SOH)

97.7 %

ENERGY

19kWh | 20kWh



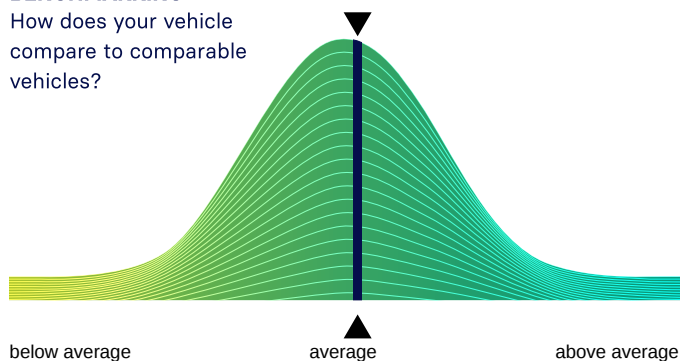
WLTP RANGE

101km | 103km

RATING

BENCHMARKING

How does your vehicle compare to comparable vehicles?



CHECKS

Battery Management System (BMS) ✓

Battery Sensor ✓

Battery Measurements ✓

Battery Cell Voltages ✓

Vehicle Communication ✓



SCAN FOR DETAILS

EVALUATION

EXCELLENT HEALTH - NO ABNORMALITIES DETECTED

Based on the detailed battery diagnostics performed with the AVILOO FLASH Test, we hereby certify that the drive battery of this vehicle is in excellent condition.

The drive battery is therefore officially AVILOO Certified.

Marcus Berger

Dr. Marcus Berger, CEO



ENERGY

	Gross	Net (Nominal)	Usable
Current:	21.8kWh	19.1kWh	19.1kWh
New:	22.3kWh	19.5kWh	19.5kWh

RANGE

	WLTP	Typical
Current:	62-101km	68km
New:	63-103km	69km

EXECUTION PROTOCOL

AVILOO Box connected. 10:12:45

FLASH Test started.	✓
Vehicle detected.	✓
Starting data acquisition.	✓
Finished data acquisition.	✓

SENSORS

Voltage Sensor	✓
Current Sensor	✓
Temperature Sensors	✓
Cell Voltage Sensors	✓

BMS

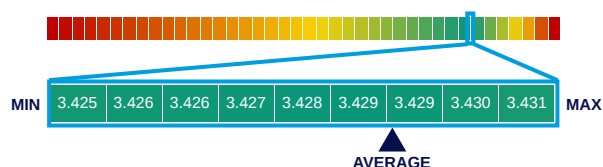
	Value	Status
BMS State of Charge (SoC)*:	1%	
SoC calculation accuracy:		✓
BMS State of Health (SoH)*:	98%	
SoH calculation accuracy:		✓

MEASUREMENTS

	Min	Max	Delta	Status
Battery Temperature	16.2°C	16.5°C	0.3°C	✓
Cell Voltage	3.425V	3.431V	6mV	✓
Pack Voltage	329.2V			
Average Current	-0.8A			

CELL VOLTAGES DIAGRAM

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 - 20	3.425	3.426	3.427	3.429	3.429	3.429	3.429	3.429	3.427	3.429	3.429	3.429	3.428	3.429	3.428	3.429	3.429	3.429	3.429	3.428
21 - 40	3.429	3.430	3.429	3.429	3.429	3.430	3.431	3.431	3.431	3.431	3.431	3.431	3.431	3.431	3.430	3.431	3.431	3.431	3.430	3.431
41 - 60	3.428	3.429	3.427	3.428	3.428	3.430	3.428	3.429	3.430	3.428	3.425	3.429	3.427	3.428	3.427	3.429	3.428	3.429	3.427	3.428
61 - 80	3.428	3.429	3.427	3.429	3.429	3.429	3.429	3.429	3.429	3.429	3.428	3.429	3.429	3.429	3.428	3.428	3.429	3.430	3.429	3.428
81 - 96	3.427	3.428	3.428	3.428	3.428	3.427	3.428	3.428	3.428	3.427	3.428	3.428	3.427	3.427	3.427	3.428	/	/	/	/



*The values shown here were not calculated by AVILOO but correspond to the values read out from the battery management system (BMS) and were calculated by the manufacturer. AVILOO therefore assumes no liability for their accuracy.

DISCLAIMER: The test result includes the currently calculated state of health (SoH) of the drive battery. The determination is based on data provided by the vehicle. These are evaluated by AVILOO's algorithms using statistical and analytical models. Manipulation of the data in the control unit leads to an incorrect result. The indicated SoH has a technically induced fluctuation range (deviation) of no more than 3% in at least 95% of reference measurements. It should be noted that this tolerance applies to the SoH determination at the cell level and not to the SoH of the entire battery. This is because the state of charge of individual cells may vary, which can negatively affect the current SoH of the battery. However, this can be compensated by the Battery Management System (BMS) or during a calibration. The result reflects the condition of the battery at the time of the test. No conclusions can be drawn about the future state of health of the battery from this. Statements about mechanical damage or external influences are not part of this diagnosis.