Mercedes-Benz Group

360° ENVIRONMENTAL CHECK MERCEDES-BENZ GLB WITH EQ TECHNOLOGY

Life cycle COMPACT


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360° Environmental check Mercedes-Benz GLB with EQ Technology

The new GLB with EQ technology expands the entry-level segment and, as a fully electric model, plays an important role in implementing Mercedes-Benz's sustainable business strategy.

Sustainability and climate protection form a key cornerstone of the Mercedes-Benz Group's corporate strategy. This strategy is supported by targeted measures such as electrifying the vehicle fleet, charging with green electricity and improving battery technology. Mercedes-Benz also relies on the extensive use of recycled materials and renewable energies in production in order to achieve its sustainability targets and reduce its environmental impact.

For the new GLB, Mercedes-Benz Cars has also established quantitative interim targets for CO_2 emissions in the supply chains for production materials. The focus here is on materials and components that have high CO_2 emissions during production. These include steel, aluminum, certain plastics, and battery cells. Thanks to the measures agreed with the suppliers, CO_2 emissions for the production of the GLB 250+ with EQ technology (combined energy consumption: 18.3 – 15.8 kWh/100 km; combined CO_2 emissions: 0 g/km; CO_2 class: A)[1] can be reduced by around 21 % compared to production without these measures.

In the life cycle of an electric vehicle, charging with electricity from renewable sources is an essential factor in reducing CO_2 emissions. Mercedes-Benz consistently relies on the use of electricity from renewable energy sources. "Renewable Charging" is an integral part of MB.CHARGE Public[2] in Europe, Canada, the USA and China. If electricity from renewable energy sources is not yet available at the respective charging station, "Renewable Charging" uses renewable energy certificates. These ensure that an equivalent amount of electricity from renewable energies is fed into the grid for charging processes.

In this brochure we briefly summarise the results of the Mercedes-Benz GLB life cycle assessment (LCA) for you.

By the way: this brochure is available for download from http://group.mercedes-benz.com/.

[1] The specified values were determined in accordance with the WLTP (Worldwide harmonised Light vehicles Test Procedure) measurement method. The ranges given refer to ECE markets. The energy consumption and CO_2 emissions of a car depend not only on the efficient utilisation of the fuel or energy source by the car, but also on the driving style and other non-technical factors.

[2] To use the Digital Extras, you must create a Mercedes me ID and agree to the Terms of Use for Digital Extras and the Mercedes me ID Terms of Use as amended. In addition, the respective vehicle must be linked to the user account. At the end of the limited term, the Digital Extras can be renewed for a fee, provided they are still available for the respective vehicle at that time. In order to use the Digital Extra MB.CHARGE Public, a customer's own separate charging contract with a selected third-party provider is required, which is used for payment and billing of the charging processes.

Mercedes-Benz GLB with EQ Technology

Versatile everyday hero joins new, innovative family of electric vehicles

The market launch will take place with the GLB 250+ with EQ technology (combined energy consumption: 18.3 – 15.8 kWh/100 km; combined CO_2 emissions: 0 g/km; CO_2 class: A)[3] and the GLB 350 4MATIC with EQ technology (combined energy consumption: 18.6 – 15.9 kWh/100 km; combined CO_2 emissions: 0 g/km; CO_2 class: A)[3].

The new Mercedes-Benz GLB, a versatile everyday hero, offers space for up to seven people. It combines striking off-road design with true functionality and sets new standards with its high-quality interior, including the MBUX Superscreen.

The highlights of the electric GLB include the 800-volt electric architecture and the advanced drive units including a two-speed transmission on the main drive at the rear axle. The electric drive unit was developed entirely in-house and is derived directly from the VISION EQXX power unit. With a usable energy content of 85 kWh, the high-voltage battery of the GLB 250+ enables an electric range of 542 to 631 km (WLTP)[4].

The electric GLB has a new one-box braking system. The system optimizes the recovery of braking energy and thus increases the range. For reasons of efficiency, almost all braking is carried out entirely by recuperation. In principle, the models can even brake electrically until the vehicle comes to a stop and thus recover kinetic energy. If ECO Assist has detected a moving or stationary vehicle ahead, it can even brake the GLB to a standstill. This is possible, for example, at the tail end of a traffic jam or at a traffic light.

[3] The specified values were determined in accordance with the WLTP (Worldwide harmonised Light vehicles Test Procedure) measurement method. The ranges given refer to ECE markets. The energy consumption and CO_2 emissions of a car depend not only on the efficient utilisation of the fuel or energy source by the car, but also on the driving style and other non-technical factors.
[4] The actual range depends on numerous factors, in particular the individual driving style, ambient conditions, the aging process of the battery, auxiliary consumers such as air conditioning, optional extras, tires, load and the route profile and can therefore deviate from the specified WLTP figure.

Renewable charging for MB.CHARGE Public

Mercedes-Benz offers charging solutions for on the road under the Digital Extra MB.CHARGE Public[5].

Through MB.CHARGE Public, private and business customers of Mercedes-Benz electric vehicles and plug-in hybrids in over 35 countries on four continents have easy access to one of the largest charging networks in the world: over 2.7 million charging points[6] from more than 1,500 charging station operators. More than 950,000 of these charging points are located in Europe, over 160,000 of them in Germany. Mercedes-Benz is continuously expanding the charging network to which MB.CHARGE Public provides access through its own activities to build public charging infrastructures worldwide. Around 45,000 charging points in the global Mercedes-Benz Charging Network and the joint ventures IONITY, IONNA and IONCHI are to be established in Europe, North America, and China by the end of the decade.

Mercedes-Benz consistently relies on the use of electricity from renewable sources. “Renewable Charging” is an integral part of MB.CHARGE Public in Europe, Canada, the USA and China. If electricity from renewable energy sources is not yet available at the respective charging station, MB.CHARGE Public uses renewable energy certificates. These ensure that an equivalent amount of electricity from renewable energies is fed into the grid for charging processes via MB.CHARGE Public. These are exclusively renewable energy certificates[7] from wind and solar power plants that are less than six years old. “Renewable Charging” is also a crucial part of the Mercedes-Benz Charging Network. This is preferably handled via green power supply contracts, wherever possible, or through the use of renewable energy certificates.

[5] To use the Digital Extras, you must create a Mercedes me ID and agree to the Terms of Use for Digital Extras and the Mercedes me ID Terms of Use as amended. In addition, the respective vehicle must be linked to the user account. At the end of the limited term, the Digital Extras can be renewed for a fee, provided they are still available for the respective vehicle at that time. In order to use the Digital Extra MB.CHARGE Public, a customer's own separate charging contract with a selected third-party provider is required, which is used for payment and billing of the charging processes.
[6] The number of charging points can vary depending on the vehicle model. Some models, for example, require a 400V/800V inverter, the availability of which depends on the equipment and the country.
[7] With the EKOenergy ecolabel

The facts

The Mercedes-Benz GLB 250+ 360° environmental check

- combined energy consumption: 18.3 – 15.8 kWh/100 km[8]
- electric range of 542 to 631 km (WLTP)[9]
- “Renewable Charging” as part of MB.CHARGE Public
- Mercedes-Benz battery recycling factory in Kuppenheim

[8] The specified values were determined in accordance with the WLTP (Worldwide harmonised Light vehicles Test Procedure) measurement method. The ranges given refer to ECE markets. The energy consumption and CO_2 emissions of a car depend not only on the efficient utilisation of the fuel or energy source by the car, but also on the driving style and other non-technical factors.

[9] The actual range depends on numerous factors, in particular the individual driving style, ambient conditions, the aging process of the battery, auxiliary consumers such as air conditioning, optional extras, tires, load and the route profile and can therefore deviate from the specified WLTP figure.

CO_2-reduction by around 21 % in the supply chain

CO_2 reduction of the high-voltage battery cell by around 40 percent through the use of electricity from renewable energies

More than 50 % of the aluminum (163 kg) from electrolysis plants using renewable energies

20 kg of steel from electric arc furnaces, produced with electricity from renewable energies

45 kg of thermoplastic recyclate. Exemplary components and their corresponding recycled content are as follows:

- Frunk tub 50 %
- Jack receptacles 100 %
- Side member panels and bumper lower parts up to 30 %

The resources: what is needed to produce a car

Achieve more with less

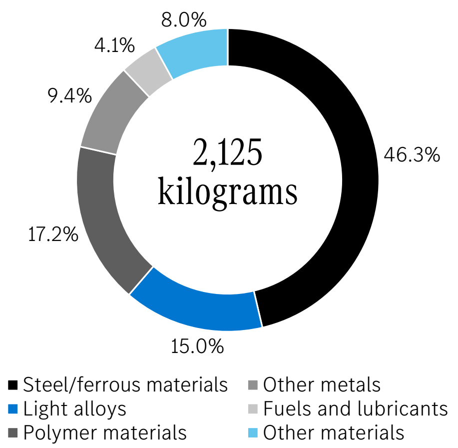
When it comes to the overall life cycle assessment[10], the GLB 250+ benefits from locally CO_2 emission-free operation and the high efficiency of the electric powertrain.

Material resources

In the case of the GLB 250+, steel and ferrous materials account for the largest share of the materials at 46.3 %. They are followed by polymer materials at 17.2 %, light alloys at 15.0 %, and other metals (non-ferrous and special metals) at 9.4 %. Fuels and lubricants account for 4.1%. The other materials (process polymers, electrics/electronics, etc.) account for 8.0 %.

The manufacture of the drive components for the GLB 250+, which account for around one-third of the total vehicle mass, requires a substantial use of material and energy resources, making the production phase of the vehicle's life cycle more significant compared with conventional internal-combustion vehicles.

Mercedes-Benz GLB 250+

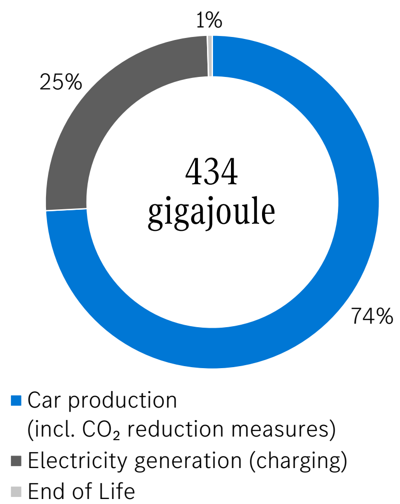


Energy resources

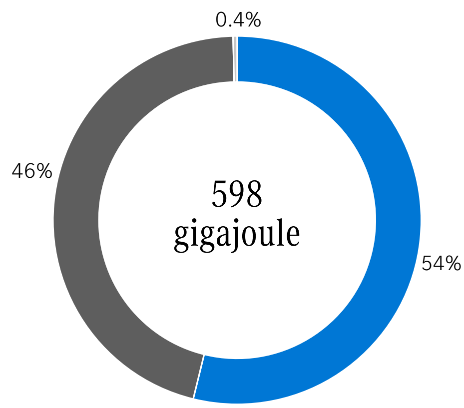
However, a comprehensive picture only emerges when the entire life cycle (material manufacturing, production, operation for 160,000 kilometres and end of life[11]) is examined. This is because during its operating phase, the GLB 250+ benefits from the high efficiency of the electric powertrain.

For the life cycle of the GLB 250+, two charging-current scenarios were examined: the EU electricity[12] mix and renewable electricity from hydropower[12].

Electricity from hydropower



EU electricity mix



values are rounded

The higher energy efficiency can be achieved by using electricity generated from renewable sources: for the entire GLB 250+ life cycle, the analysis here results in a primary energy demand of 434 GJ, of which 204 GJ come from fossil sources and 230 GJ from renewable sources. However, if the European electricity mix is used for charging, the primary energy demand is significantly higher. In total over the entire life cycle, the primary energy demand here is 598 GJ.

The materials used are not lost when this life cycle comes to an end. The valuable materials contained in high voltage batteries can also be recovered to a large extent through targeted recycling[11].

[10] The environmental assessment covers the entire life cycle. Inbound/outbound logistics and vehicle maintenance are not taken into account. The end-of-life model only includes the shredding process and the treatment of the shredder light fraction. The use phase of the base variant without optional equipment was calculated using an electricity consumption of 15.8 kWh/100 km.

[11] No consideration of recycling credits for end of life accounting

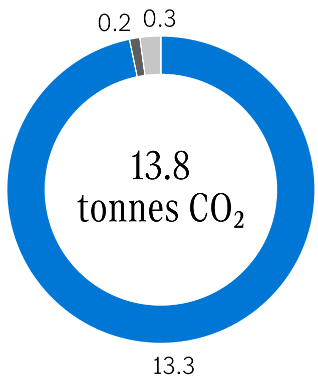
[12] The LCA software and database (version: SP2025.2) by Sphera Solutions GmbH was used to carry out the life cycle assessment.

The emissions: the carbon footprint over the life cycle

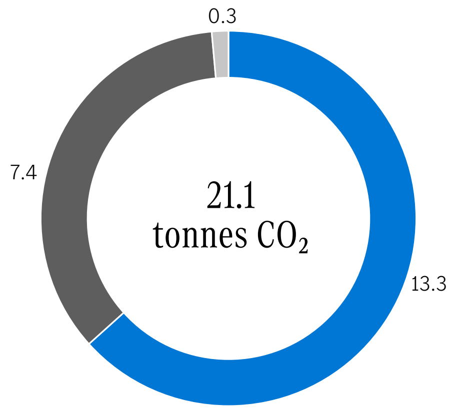
It depends on the electricity mix

It is of decisive importance for the CO_2 balance, whether the power is produced from the renewable sources wind or hydro power, or whether the EU power mix forms the basis.

Electricity from hydropower



EU electricity mix



- Car production (incl. CO_2 reduction measures)
- Electricity generation (charging)
- End of Life

values are rounded

CO_2-emissions over the life cycle

Analysis of the emissions during the individual phases of the life cycle makes it clear: As more and more vehicles are turning to electric power, two factors are becoming increasingly important, the production of the high-voltage battery and the generation of the electricity for the external charging of the battery.

In the production of the GLB 250+, around 46 % of the CO_2 emissions are caused by the high-voltage battery and battery peripheral components, and in particular the battery cells are highly relevant. In addition, steel and aluminum[13] in the bodyshell, wheels, axles, and drivetrain play a key role in CO_2 emissions. This is where the reduction measures agreed by Mercedes-Benz in the supply chain come in: By sourcing CO_2-reduced battery cells and using aluminum and steel produced with renewable energy, as well as recycled plastics, CO_2 emissions from car production can be significantly reduced.

In addition to vehicle production, the choice of charging current in the use phase is a decisive factor for the overall CO_2 footprint. With the EU electricity mix, the GLB 250+ emits a total of 21.1 tonnes of CO_2 over its life cycle (car production, driving over 160,000 km and end of life[11]). Of this, 13.3 tonnes are attributable to car production and 7.4 tonnes to the generation of the charging current (EU electricity mix[12]). By using renewable charging electricity (electricity from hydropower[12]), life-cycle CO_2 emissions can be reduced by 35 percent.

[13] Recyclable production offcuts from the manufacture of steel and aluminum components are taken into account.

Requirements for the supply chain

Sustainable supplier management

Mercedes-Benz relies on responsible procurement as the basis for decarbonizing the new vehicle fleet across all stages of the value chain and the entire life cycle.

The Mercedes-Benz Group pursues sustainable supply chain management. Suppliers must comply with the Responsible Sourcing Standards (RSS) in order to participate in new contracts awarded by the Group. The RSS is the central contractual document for sustainability requirements on the part of suppliers and defines e.g. mandatory requirements with regard to environmental protection.

The RSS is therefore an important instrument for implementing the Mercedes-Benz Group's ambitious goals in the complex supply chains. These standards therefore form the guidelines for sustainable supply chain management.

For new model series and vehicle architectures, suppliers must comply with targets set by Mercedes-Benz Cars and Mercedes-Benz Vans, particularly with regard to reducing CO_2 emissions, and implement appropriate measures. These requirements apply in particular to CO_2 and energy-intensive focus materials such as steel, aluminum, polymers and battery cells. Target values for these materials and components were integrated as criteria in the awarding processes and used as key criteria in awarding contracts for the new Mercedes-Benz Modular Architecture (MMA) vehicle platform.

Requirements for the supply chain

CO_2-reduced supply chain

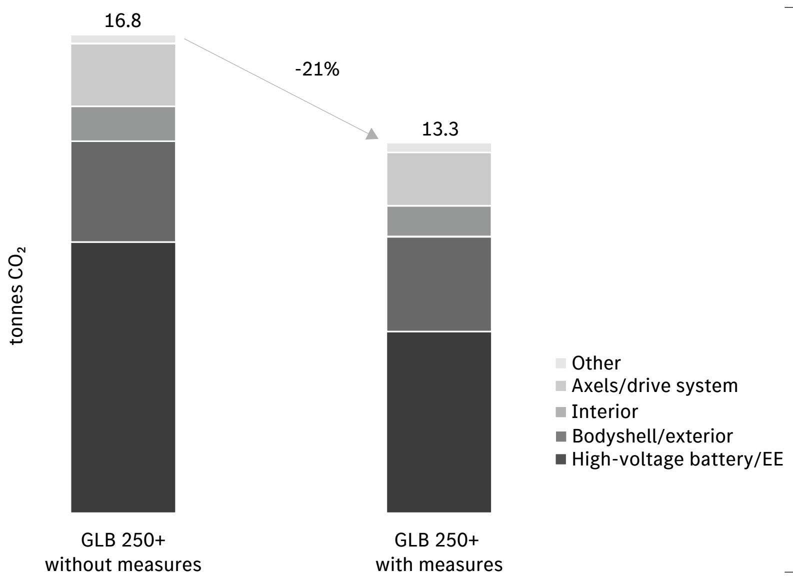
The measures agreed with suppliers can reduce CO_2 emissions for the production of the GLB 250+ by around 21 % compared to the production without these measures.

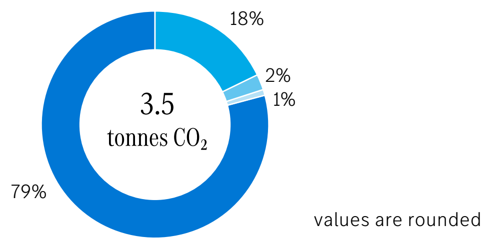
The battery is the component in the vehicle that contributes the most CO_2 during production. To reduce this value, the new GLB uses battery cells that are CO_2-reduced from the outset. Various reduction measures in the high-voltage cell reduce the CO_2 footprint by around 40% per cell compared to the production without these measures. In addition to the use of renewable electricity in cell production, electricity from renewable sources is also used in the production of cathode, anode, and cell housing materials. Looking at an entire battery, this corresponds to a reduction of around 2.8 metric tons of CO_2.

More than half of the aluminum used in the GLB is produced in electrolysis plants using renewable energies. This reduces the CO_2 footprint for these components by around 30 % compared with production without these measures and saves a total of around 0.6 metric tons of CO_2 emissions in case of the GLB 250+.

Steel and ferrous materials account for 46 % of the materials used in the manufacture of the GLB 250+. In this context, Mercedes-Benz AG is working with various steel suppliers and supporting them in their transformation in order to drive decarbonization of the supply chain. The growing availability of CO_2-reduced steel is an important lever for reducing the CO_2 footprint of Mercedes-Benz vehicles. The construction of industrial direct reduction plants and smelting units is therefore an important prerequisite for the gradual decarbonization of the steel supply chain. If the direct reduction process is combined with the electric steel process, and green hydrogen (instead of natural gas) and renewable energies are used to operate the electric arc furnace during direct reduction, nearly CO_2-free steel production could be possible in the future. For the new GLB, CO_2 reduction measures are already being taken in steel production. Around 20 kg of steel from electric arc furnaces, which are manufactured using electricity from renewable energy sources, is used for the steel scopes produced in-house in our own stamping plants.

By using recycled plastics, CO_2 emissions can be reduced by a further 71 kilograms compared to primary materials, while at the same time conserving resources.





CO_2 reduction is achieved through measures in the area of:

- Battery cells: Electricity generated from renewable resources for cell production and cell materials.
- Aluminum: Electricity generated from renewable sources for electrolysis.
- Steel: Electric arc furnaces using electricity generated from renewable resources and use of scrap stock.
- Plastics: Thermoplastic recyclate.

Holistic approach to battery value creation

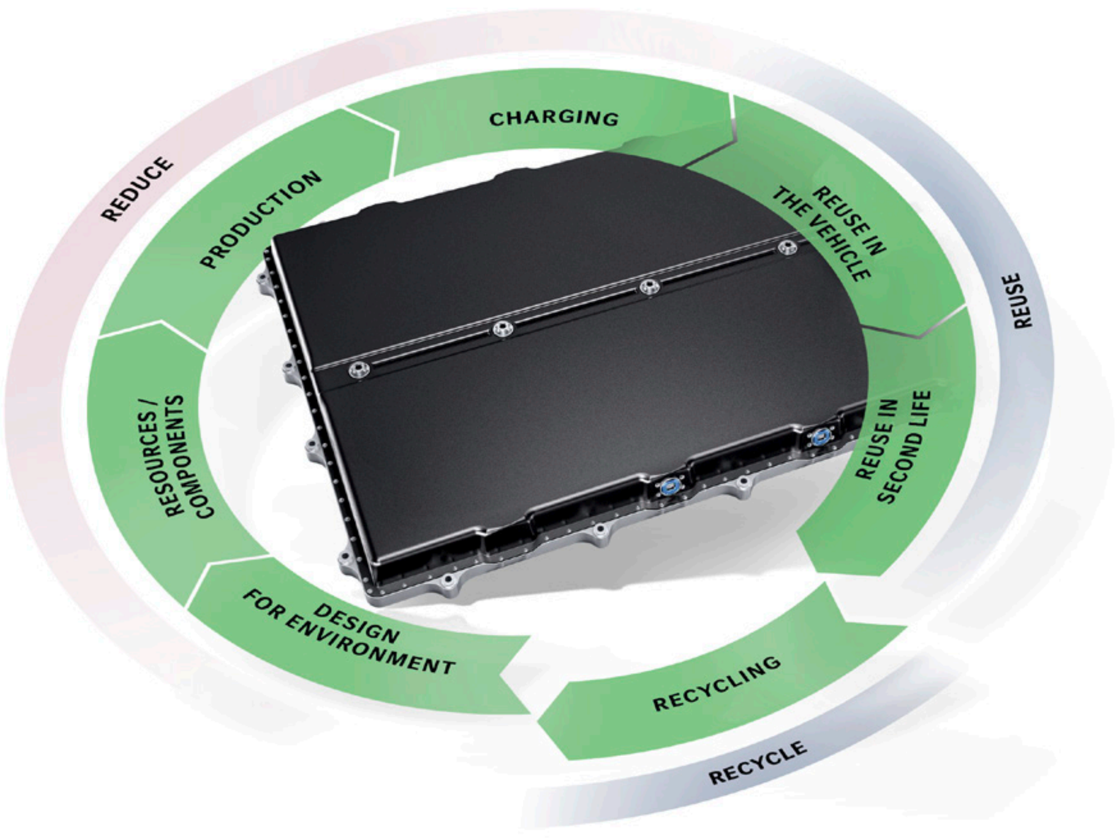
Battery recycling factory in Kuppenheim

Mercedes-Benz has designed its own battery recycling plant as a combined mechanical-hydrometallurgical facility that serves as a prototype at the Kuppenheim site in southern Germany in 2024.

Mercedes-Benz takes a holistic approach to the battery life cycle and considers three core topics: circular design, value retention and closing the material cycle. Once the traction batteries of the Mercedes fleet reach the end of their life on the road, it's far from over. The company's focus is in particular on applications from the 2nd-life and replacement parts storage unit sector to, for example, help balance fluctuations in the power grid. Only then is it time for material recycling.

With a view to the future return of lithium-ion battery systems from electric vehicles, Mercedes-Benz has designed its own battery recycling factory as a combined mechanical-hydrometallurgical plant that serves as a prototype. The aim is to build up expertise in the recycling of valuable materials and thus secure strategic raw materials in the long term.

The Mercedes-Benz battery recycling factory in Kuppenheim covers every step: From dismantling at the module level, to shredding and drying and processing of battery-grade materials. The process design of hydrometallurgy with recovery rates of more than 90 percent is intended to enable a real circular economy of battery materials. As part of the overarching scientific research project, the entire process of battery recycling is also taken into account.



Usage of materials GLB with EQ Technology

Responsible resource utilisation

Closing material cycles and using secondary raw materials are the key levers for the responsible use of resources.

Vehicle production requires a high level of material use. In order to conserve natural resources and promote the circular economy, we increasingly use secondary raw materials and resource-conserving materials.

Measures to conserve resources are carefully integrated into the development process of our vehicles. This includes the “Design for Environment” approach, which is taken into account right from the start of vehicle development. The use of secondary materials is explicitly defined in the requirements for suppliers.

In addition, supplier dialogs were held, new recycling technologies were discussed, and the necessary decisions were made to ensure that the use of secondary materials is implemented in accordance with the specifications.

In the development of the GLB, care was taken to use as many secondary materials as possible. The proportion of secondary material in the GLB 250+ with regard to thermoplastics was increased to 45 kg. Around 27 % of the secondary material for thermoplastics comes from post-consumer sources. For example, the jacking points are entirely made from recycled bumpers from end-of-life vehicles.

The frunk tub contains 50 % post-consumer recyclate. Secondary material is also used in the visible area of the body, e. g. in parts of the bumper and side member panels in series production. A total of more than 250 components and numerous small parts are produced with secondary material content.

Facts and figures

LCA results[14]

Input parameters

Material resources	**GLB 250+ EU electricity mix**	**GLB 250+ electricity from hydropower**	**Delta to GLB 250+ EU electricity mix**
Bauxite/Aluminum* [kg]	686	685	0%
Dolomite [kg]	87	84	-3%
Iron [kg]*	1,214	1,236	2%
Non-ferrous metals (Cu, Pb, Zn) [kg]*	243	242	0%
* as elementary resources			
Energy resources			
ADP fossil [GJ]**	**278**	**189**	**-32%**
Primary energy [GJ]	598	434	-27%
Proportionately			
Lignite [GJ]	29	9	-70%
Natural gas [GJ]	116	71	-39%
Crude oil [GJ]	58	53	-10%
Hard coal [GJ]	75	56	-25%
Uranium [GJ]	88	15	-82%
Other fossil resources [GJ]	0.2	0.04	-78%
Renewable energy resources [GJ]	232	230	-1%
** CML 2001, as of August 2016			
ADP = abiotic depletion potential			

Output parameters

Emissions to air	**GLB 250+ EU electricity mix**	**GLB 250+ electricity from hydropower**	**Delta to GLB 250+ EU electricity mix**
GWP [t CO_2-equiv.]**	**23.1**	**15.2**	**-34%**
AP [kg SO_2-equiv.]**	**131**	**116**	**-11%**
EP [kg phosphate-equiv.]**	**7.2**	**5.2**	**-28%**
POCP [kg ethene-equiv.]**	**8.5**	**7.3**	**-14%**
CO_2 [t]	21.1	13.8	-35%
CO [kg]	39	32	-18%
NMVOC [kg]	7.0	5.7	-19%
CH_4 [kg]	60	42	-30%
NO_X [kg]	36	27	-24%
SO_2 [kg]	88	81	-8%
Emissions to water			
BOD (biological oxygen demand) [kg]	0.18	0.16	-10%
Hydrocarbons [kg]	0.32	0.29	-7%
NO_3^- [kg]	7.2	4.1	-43%
PO_4^{3-} [kg]	0.09	0.06	-31%
SO_4^{2-} [kg]	104	90	-14%
** CML 2001, as of August 2016			
AP = acidification potential, EP = eutrophication potential, GWP = global warming potential, POCP = photochemical ozone creation potential			

[14] The environmental assessment covers the entire life cycle. Inbound/outbound logistics and vehicle maintenance are not taken into account. The end-of-life model includes only the shredding process and the treatment of the shredder light fraction. The use phase of the base variant without optional equipment was calculated using an electricity consumption of 15.8 kWh/100 km.

TÜVRheinland

Statement of Validity

TÜV Rheinland Energy & Environment GmbH confirms that a critical review of the life cycle assessment (LCA) study and product-related environmental information of **Mercedes-Benz AG, Mercedesstraße 120, 70372 Stuttgart** for th[e] following passenger car:

Mercedes-Benz GLB with EQ Technology – 2026 model year

was performed.

Proof has been provided that the requirements of the international standards

- ISO 14040:2006 + A1:2020: Environmental management – life cycle assessment – principles and framework
- ISO 14044:2006 + A1:2018 + A2:2020: Environmental management – life cycle assessment – requirements and guidelines
- ISO/TS 14071:2024: Environmental management – life cycle assessment – critical review processes and reviewer competencies: additional requirements and guidelines to ISO 14044
- ISO 14020: 2022: General principles of environmental labeling and declarations and ISO 14021: 2016: Environmental supplier declarations (Type II environmental labeling).

are considered.

Results:

- The LCA study for the variant GLB 250+ with EQ Technology (basis of the environmental brochure) was carried out according to the international standards ISO 14040:2006 + A1:2020 and ISO 14044:2006 + A1:2018 + A2:2020. The methods and the modelling of the product system are suitable to fulfill the goals stated in the study. The report and environmental brochure are comprehensive and provides a transparent description of the framework of the study.
- The assumptions used in the LCA study especially energy consumption based on the current WLTP (Worldwide harmonized Light vehicles Test Procedure) were verified and discussed.
- The assessed samples of data and environmental information included in the LCA study and environmental brochure are plausible.

Review process and level of detail:

The sample-based verification of input data and environmental information, as well as the check of the LCA process was performed in course of a critical data review. The data review considered the following aspects:

- Check of the applied methods and the product model,
- Inspection of technical documents (e.g. type approval documents, parts lists, supplier information, measurement results, etc.) and
- Sample-based check of LCA input data (e.g. weights, materials, fuel and energy consumption, etc.).

23rd March 2026

...er
...ert, Carbon Services

Erik-Peter Henrichs
Sustainability Expert, Carbon Services

...ability for the content of the LCA rests with Mercedes Benz AG. TÜV Rheinland Energy GmbH was commissioned to ...ompliance with the methodical requirements, and to verify and validate the correctness and credibility of the information

Mercedes-Benz has published product-related environmental information since 2005, reflecting the results of environmentally compatible product development and verified by independent experts.

The brochures are made available to the wider public as the "Lifecycle" series.
They can be downloaded at https://group.mercedes-benz.com/responsibility/sustainability/.

As of: March 2026

Mercedes-Benz Group Communications, 70546 Stuttgart, Germany – www.group.mercedes-benz.com
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