

Logbatt transporters in use: The safe handling of hazardous goods requires highly qualified staff.



Philipp Helmle

Flammable battery waste in luggage

The still young company Logbatt transports e-car batteries from Porsche, BMW and Mercedes - a growth market with franchise potential.

Claudia Scholz Düsseldorf

A damaged EQC electric all-terrain vehicle arrives at a Mercedes branch in western Germany. Mechanics on site remove the drive battery, which is also suspected to be damaged. Once removed, the defective battery has to be stored in a special container until it is disposed of. The car company has created a few special transport boxes for such cases and lends the branch one of the containers for emergencies. This container weighs about one and a half tonnes and is worth a small car: 25,000 euros, as a Mercedes employee reveals.

The box was manufactured by the company Logbatt. Aichwald near Stuttgart is one of the first suppliers in Germany to launch a legally approved packaging on the market - for the large electric car batteries weighing up to 700 kilograms, for example from the Porsche Taycan or Mercedes EQC.

The containers are made according to the specifications of the Federal Institute for Materials Research (BAM). This is because the transport and storage of so-called critically defective lithium batteries require official approval. The transport boxes must also be designed for the worst case scenario, a battery fire. Because when batteries react thermally, a lot of energy can be released in a short time.

Since batteries cannot be extinguished, they have to burn out slowly and in a controlled

manner, says Philipp Helmle, founder and managing director of



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Managing Director

The companies include the battery manufacturers Porsche, BMW and Streetscooter as well as the cell manufacturers CATL, Farasis, LG Europe and LG Chem. Logbatt plans the storage, transport and disposal of the discarded batteries for these companies throughout Europe. The company benefits from its proximity to the major car manufacturers. Helmle's trucks reach the Mercedes plant in Untertürkheim in 21 minutes. It takes them only ten minutes longer to reach the Porsche plant near Stuttgart.

Before founding the company in 2017, Helmle had already made contacts in the automotive industry when he was entrusted with the development of lithium-ion batteries at the Mercedes subsidiary Deutsche Accumotive. "There was no specific packaging for batteries when we started, nor were there any logistics structures," says the 39-year-old Helmle.

Business model with a future

Logbatt now employs 26 people and expects a turnover of ten million euros in 2022. This year, the logistics company will transport around 3,000 tonnes of lithium-ion batteries, 90 per cent of which are car batteries and the rest appliance batteries. According to Log BATT, this makes it the market leader in the field of car battery logistics.

Discarded batteries accumulate at car manufacturers due to the increasing number of production rejects and batteries from test vehicles. "Without the chip shortage, there would be many more cars produced, resulting in battery waste and thus a need for transport," says Helmle.

The market will continue to grow strongly. According to the Federal Environment Agency, there could already be 160,000 used batteries from e-cars by 2025. BAM says:

"A forecast of more than ten million e-cars in Germany by 2030 seems quite realistic. There will therefore be increasingly more transports of intact as well as defective batteries." The higher number of e-cars will also increase the number of e-cars in accidents.

The transport of batteries is already part of the business model of some forwarding companies, with a growing share, according to the DSLV Bundesverband Spedition und Logistik. However, the safe handling of hazardous goods requires highly qualified staff. This is where logistics specialist Helmle sees its lead. Many logistics companies shy away from the dangerous goods legislation and official approvals, he says. "Damaged, critical batteries are still a red rag for many." It has also been difficult to calculate the capacity utilisation so far.

"Our advantage is that we are not as big as Logbatt. Temperatures over 1000 degrees. That's what a transport box has to withstand." With Logbatt, a double wall ensures that no more than one hundred degrees arrive outside the box. The lid also filters the flue gas.

In Germany, there are currently 20 companies that are allowed to transport critical batteries according to BAM. These include large logistics companies such as DB Schenker, but also manufacturers of lithium batteries and power tools, waste disposal companies and automotive companies. The barriers to market entry are relatively high, because certification requires high investment costs. Real batteries and the designed transport boxes have to be burnt off during tests.

The investment depends on the size of the packaging and the battery, BAM informs.

Depending on the size, the fire test can cost over 10,000 euros - plus the battery, which costs several tens of thousands of euros. Logbatt has tested its own boxes with more than 30 different batteries from various manufacturers and invested a six-figure sum of money, the company says. But the boxes for fire-hazardous batteries, of which Logbatt produces a few hundred per year, are only a means to an end. "This is our gateway to the customers," says Helmle, who studied logistics and runs the company together with Eduard Schönmeier.

Car manufacturers would have to transport non-hazardous batteries much more

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often than dangerous ones. This is the main business of Log-batt, whose customers, besides Mercedes, include the Au-

Owners. For large corporations, waste batteries from e-cars are often not standardised enough. Log-batt relies on a network of a dozen partner companies in Germany that have fleets of ten to 50 trucks and are in flexible demand.

Missing lorry drivers

But the shortage of skilled truck drivers could still become a problem for Logbatt and its competitors. According to the DSLV, there is a shortage of up to 80,000 professional drivers in Germany. Owner Helmle also sees this threat to future growth. He is arming himself with "fair pay and professional training opportunities in a market of the future".

Legally, all countries in Europe have the same dangerous goods transport law, and countries like Turkey have also adopted these regulations. A total of 52 countries apply the law, and growth is still possible there for transport companies like Logbatt. Helmle says: "We are strongest where the regulations are strictest. If you don't have to use special freight boxes in a country, we are also less needed."

Logbatt believes he is so good at it that the company even wants to establish a franchise system in Europe. Helmles' goal is a European take-back network for lithium-ion batteries with boxes, infrastructure, collection points and warehouses. He expects additional income from training and the organisation - and more boxes sold, which should safely contain batteries.