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# Product Carbon Footprint Report: hojggqlmoi

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**162.99 kg CO<sub>2</sub>e**

Total Cradle-to-Grave Footprint for 1.0 unit

Total Footprint

**162.99 kg CO<sub>2</sub>e**

Carbon Intensity

**31.96 kg CO<sub>2</sub>e/kg**

Top Material Hotspot

**Steel/Li-ion Battery**

Primary Emission Scope

**Scope 3 (79.5%)**

## Emissions by Lifecycle Stage

Materials Acquisition	24.05 kg CO <sub>2</sub> e (14.4%)
Manufacturing / Production	33.36 kg CO <sub>2</sub> e (20.0%)
Transport & Distribution	12.46 kg CO <sub>2</sub> e (7.5%)
Use Phase	97.30 kg CO <sub>2</sub> e (58.2%)
<b>End-of-Life (Credit)</b>	<b>-4.19 kg CO<sub>2</sub>e (-2.6%)</b>

## Carbon Impact by Material Type

Steel Casing	7.50 kg CO <sub>2</sub> e (31.2%)
Li-ion Battery	7.50 kg CO <sub>2</sub> e (31.2%)
Circuit Board	5.00 kg CO <sub>2</sub> e (20.8%)
Plastic Enclosure	3.60 kg CO <sub>2</sub> e (15.0%)
Packaging (Cardboard)	0.45 kg CO <sub>2</sub> e (1.9%)

## Key Highlights

- The **use phase** dominates the product's carbon footprint, accounting for almost 60% of total emissions, primarily due to ongoing energy consumption over its 7-year lifespan.
- **Manufacturing** is the second largest contributor (20.5%), driven by purchased grid electricity.
- The **End-of-Life stage** shows a net positive impact (carbon credit) due to significant recycling efforts (85% recyclability), offsetting disposal emissions.

## Recommendations for Reduction

- **Optimize Use Phase Energy:** Focus on product design for higher energy efficiency or explore renewable energy options for product use.
- **Enhance Manufacturing Efficiency:** Increase renewable energy sourcing beyond 60% and improve process efficiency in production facilities.
- **Sustainable Material Sourcing:** Investigate and procure lower-carbon intensity materials, especially for key components like steel, Li-ion batteries, and circuit boards.
- **Logistics Optimization:** Further optimize upstream and downstream transport routes and modes to reduce delivery emissions.