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Product Carbon Footprint for kshpgqkrld

39.75 kg CO₂e per unit

Analyzed by yxrlzxvhli | Standard: GHG Protocol | System Boundary: factory_gate | Production Country: China

Total Product Footprint

39.75

kg CO2e

Carbon Intensity

31.8

kg CO2e / kg of product

Top Material Hotspot

Circuit Board

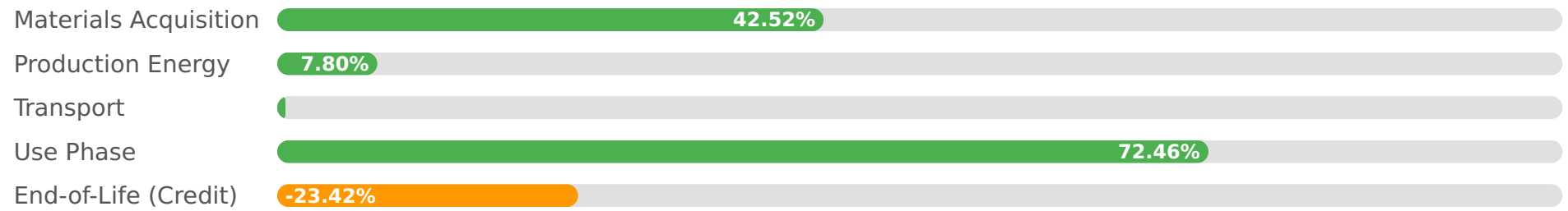
10.00 kg CO2e

Primary Emission Scope

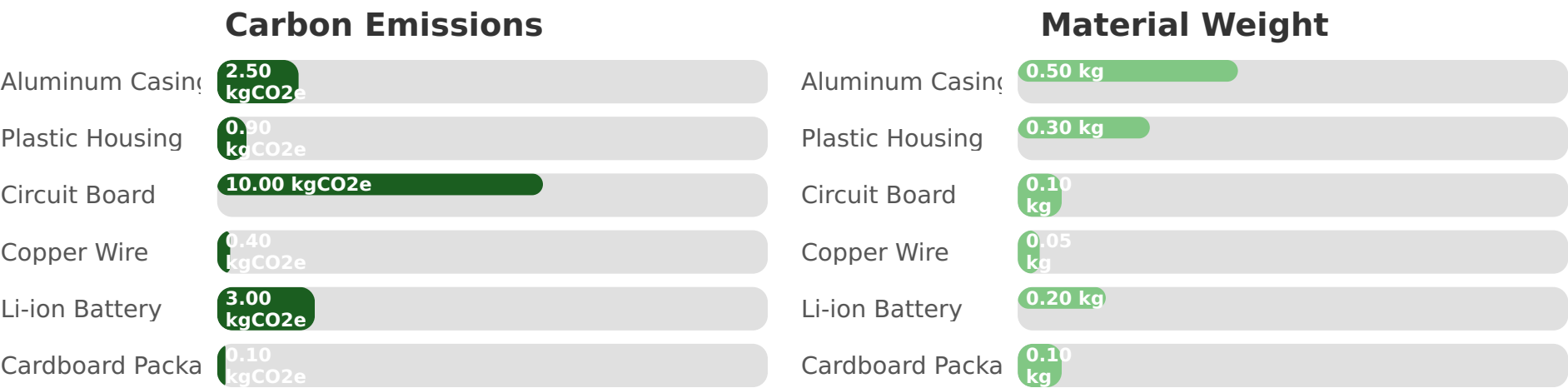
Scope 3

36.65 kg CO2e

Lifecycle Stage Breakdown



Material Impact Analysis



*Percentages calculated based on total material emissions (16.90 kgCO2e) and total product weight (1.25 kg).

Highlights & Emission Hotspots

- **□ Dominant Use Phase Emissions:** The product's operational lifespan contributes the most to its carbon footprint (72.46%), largely due to energy consumption over 5 years.
- **□ Significant Material Impact:** Raw material acquisition accounts for a substantial 42.52% of total emissions, with the Circuit Board being the single largest material hotspot.
- **□ Positive Circular Economy Impact:** A high recyclability rate (70%) and strong take-back programs result in a notable net carbon credit (-23.42%) at the End-of-Life stage, significantly offsetting other lifecycle impacts.

Recommendations for Impact Reduction

- **□ Enhance Energy Efficiency:** Prioritize design improvements and user guidance to minimize energy consumption during the product's use phase.
- **□ Optimize Material Sourcing:** Explore alternative, lower-carbon materials for components like the circuit board, and increase the percentage of recycled content.
- **□ Strengthen Supplier Engagement:** Collaborate with suppliers to collect primary data on material and transport emissions for enhanced accuracy and identify further reduction opportunities.
- **□ Expand Renewable Energy:** Further increase the adoption of renewable energy sources in manufacturing and encourage supply chain partners to do the same.
- **□ Promote Circularity:** Continue to develop and promote take-back schemes and product-as-a-service models to maximize product lifespan and material recovery.