

carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: tjewrdmzyq | **Quantity:** 1.0 unit | **Standard:** GHG Protocol

Production Country: China | **System Boundary:** Cradle-to-Grave (PCF)

Total Carbon Footprint

22.31

kgCO₂e per unit

Primary Emission Hotspot

Product Use Phase

14.00 kgCO₂e

Top Material Hotspot

Aluminum Casing

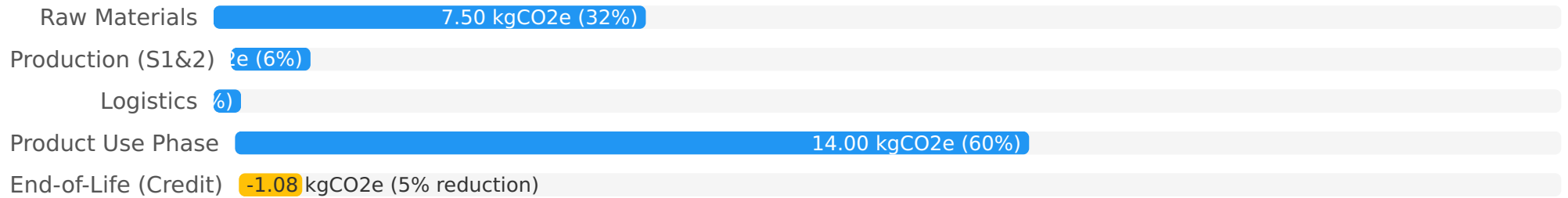
3.50 kgCO₂e

End-of-Life Credit

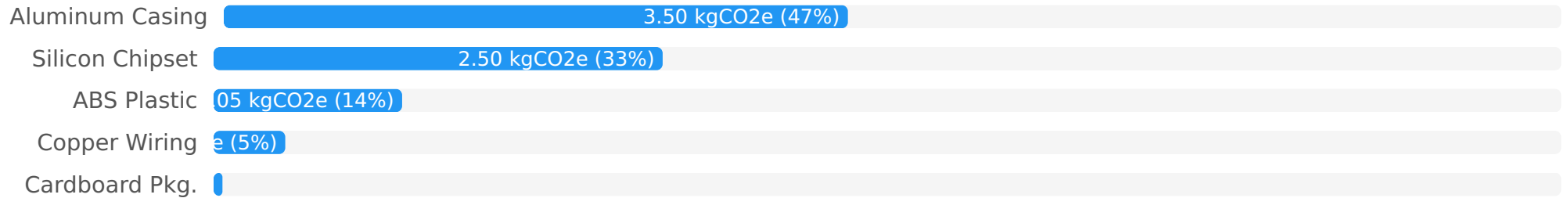
-1.08

kgCO₂e

Emissions by Lifecycle Stage



Material Carbon Impact (Raw Materials)



Highlights & Key Insights

The **Product Use Phase** is the single largest contributor to the carbon footprint, accounting for 14.00 kgCO₂e, which is approximately 60% of the positive emissions. This highlights the importance of energy efficiency during its 5-year operational lifespan.

Raw Material Acquisition & Pre-processing represents the second major hotspot at 7.50 kgCO₂e. Within this stage, Aluminum Casing (3.50 kgCO₂e) and Silicon Chipset (2.50 kgCO₂e) are the most impactful materials.

A significant **End-of-Life recycling credit** of -1.08 kgCO₂e is achieved, primarily due to the 75% recyclability of materials and yjmzogilrl's voluntary take-back program. This actively mitigates the product's overall environmental impact.

How to Reduce Carbon Footprint

- **Enhance Product Energy Efficiency:** Prioritize design improvements that reduce energy consumption during the product's 5-year use phase, directly addressing the largest emission hotspot.
- **Source Sustainable Materials:** Investigate and integrate lower-carbon alternatives for high-impact materials like Aluminum Casing and Silicon Chipset, or collaborate with suppliers to reduce their production emissions.
- **Increase Renewable Energy Adoption:** Further increase the percentage of renewable energy sourced for manufacturing facilities beyond the current 60% to minimize Scope 2 emissions.
- **Optimize Logistics & Transportation:** Explore more efficient transport modes and routes, especially for intercontinental shipments of raw materials and finished products.
- **Expand Circularity Initiatives:** Continue to strengthen and broaden the voluntary take-back and recycling programs to maximize material recovery and further enhance end-of-life credits.