

carboncalcpcf.com

ddpxqmylop Carbon Footprint Dashboard

Product PCF Analysis for umiylpkvIm

Standard: GHG Protocol | Boundary: Cradle-to-Gate + Use & EoL

Total Product Carbon Footprint

25.51 kg CO₂e

Total Footprint

25.51 kg CO₂e

Carbon Intensity

25.51 kg CO₂e / unit

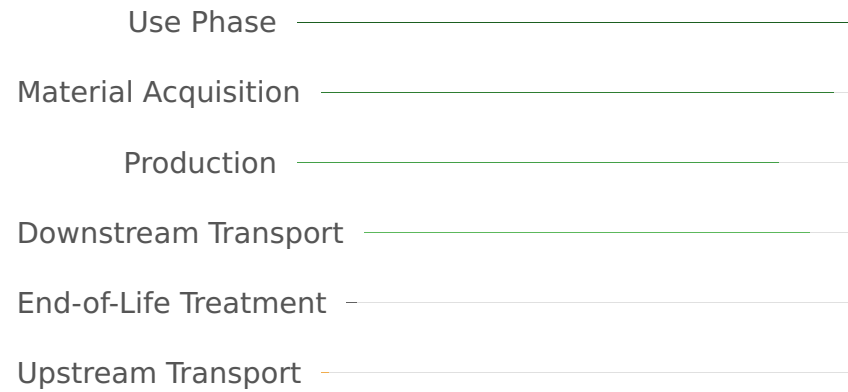
Primary Scope

Scope 3 (98.93%)

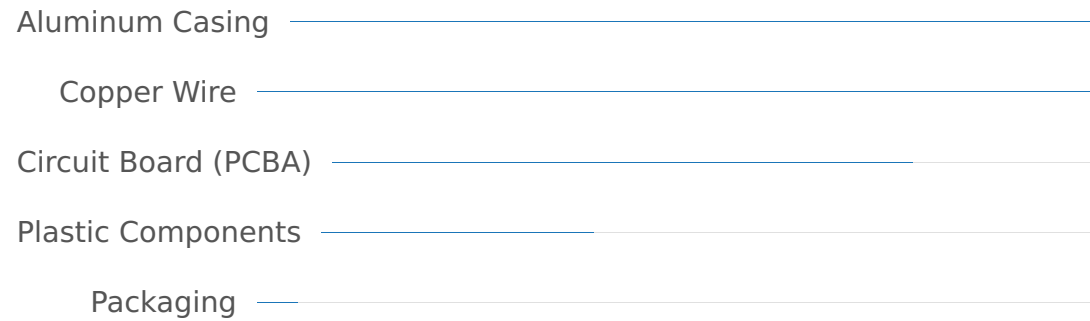
Top Material Hotspot

Alum. Casing (4.0 kg CO₂e)

Lifecycle Stage Contribution to Total Footprint



Material Carbon Impact (kg CO2e)



Key Insights & Hotspots

- ✓ **Use Phase Dominance:** The product's operational lifespan contributes the most significant portion (35.47%) of the total carbon footprint, primarily due to electricity consumption.
- ✓ **Material Embodied Emissions:** Material acquisition, especially for components like Aluminum Casing and Copper Wire, accounts for a substantial 32.88% of emissions.
- ✓ **Production & Logistics Impact:** Manufacturing (30.42%) and Downstream Transportation (29.40%) are also major contributors, highlighting areas for energy efficiency and logistics optimization.
- ✓ **Strong Scope 3 Coverage:** Overall, Scope 3 emissions represent nearly 99% of the total footprint, demonstrating a comprehensive value chain analysis.

Action Plan: Reducing the Footprint

- ⚡ **Eco-Design for Materials:** Investigate lower-carbon alternatives, higher recycled content, and engage suppliers for primary emission data.
- ⚡ **Renewable Energy in Production:** Increase the percentage of renewable energy sourced for manufacturing and optimize production processes.
- ⚡ **Enhance Use Phase Efficiency:** Design the product for greater energy efficiency during its operational life and explore features to extend lifespan.
- ⚡ **Optimize Logistics:** Implement efficient routing, high load factors, and explore cleaner fuel alternatives or electric vehicles for transportation.
- ⚡ **Circular Economy Integration:** Leverage take-back programs to maximize recycling, material recovery, and reuse beyond basic end-of-life treatment.