carboncalcpcf.com

Product Carbon Footprint: tkjifllwti

Report for kjwexzkvts | Standard: GHG Protocol | Production Country: China

Total Cradle-to-Grave PCF: **19.81 kgCO2e**

Total Footprint

19.81 kgCO2e

Functional Unit

1.0 unit

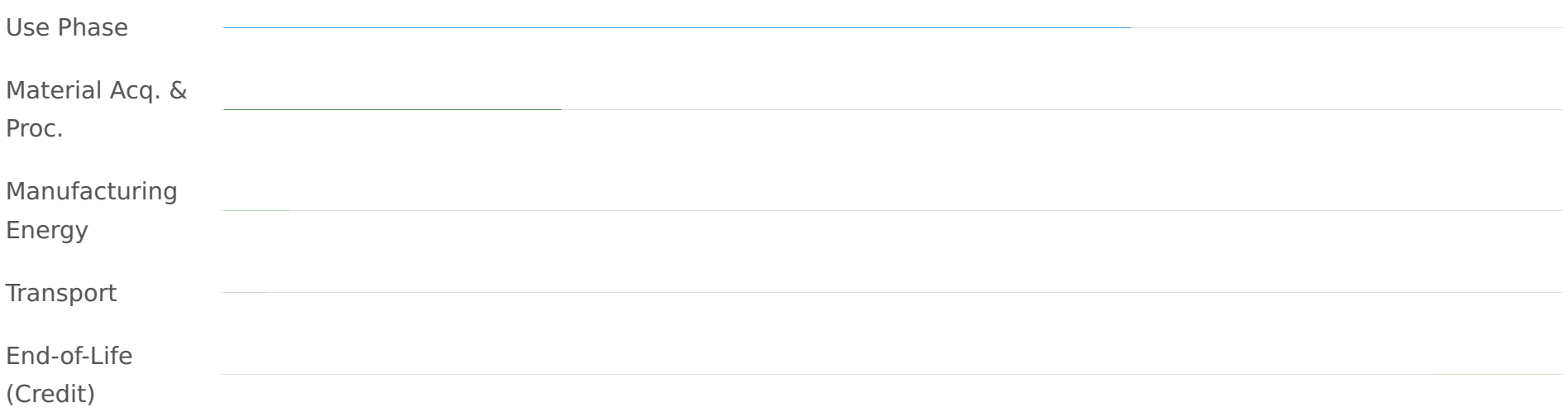
Top Material Hotspot

Aluminum Casing

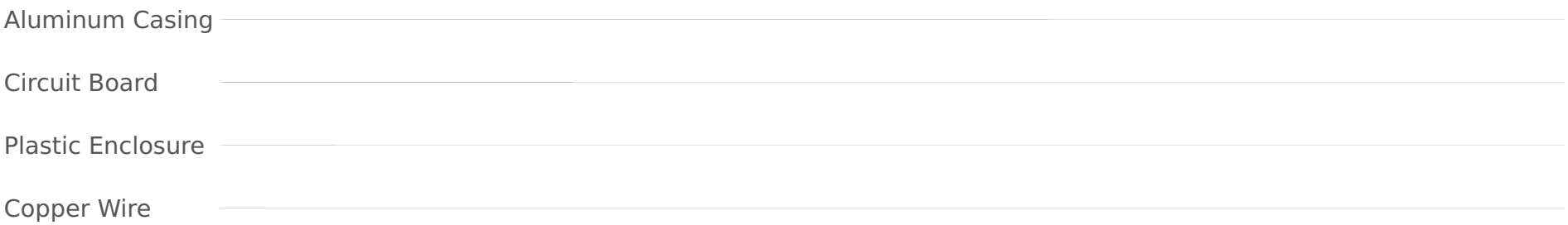
Primary Emission Scope

Scope 3

Lifecycle Stage Breakdown



Material Carbon Impact



Highlights & Key Insights

Use Phase Dominance: The product's 5-year use phase accounts for the largest share (15.00 kgCO2e) of the total footprint, emphasizing user energy consumption.

Material Hotspots: Material acquisition and processing, notably for Aluminum Casing and Circuit Board, are significant upstream contributors (5.65 kgCO2e).

Circularity Impact: Robust End-of-Life recycling initiatives provide a substantial carbon credit (-2.21 kgCO2e), showcasing the benefit of circularity.

Recommendations for Emission Reduction

Enhance Product Energy Efficiency: Redesign 'tkjifllwti' for lower energy consumption during its use phase, currently the largest hotspot.

Increase Renewable Energy Sourcing: Further invest in or procure 100% renewable energy for manufacturing operations in China to eliminate Scope 2 emissions.

Optimize Material Sourcing: Explore and prioritize suppliers offering lower-carbon materials or increased recycled content for components like aluminum and plastics.

Strengthen Circularity Initiatives: Leverage and expand circular programs, like the existing take-back system, to maximize material recovery, reuse, and recycling rates beyond 80%.

Supply Chain Engagement: Collaborate with upstream and downstream logistics partners to explore more efficient and lower-carbon transport modes where feasible.