

Carbon Footprint Dashboard

Product: Smart Widget Pro (xkiqvrllfy)

Company: rjghwvezyo

Standard: GHG Protocol

16.425 kgCO₂e

Total Product Carbon Footprint (per unit)
carboncalcpcf.com

Key Metrics

Top Material Carbon Impact (from 8.25 kgCO₂e total material footprint)

Aluminium Casing	3.75 kgCO ₂ e (45.45%)
Lithium-ion Battery	2.00 kgCO ₂ e (24.24%)
Circuit Board	1.50 kgCO ₂ e (18.18%)
Plastic Enclosure	0.90 kgCO ₂ e (10.91%)
Packaging Cardboard	0.10 kgCO ₂ e (1.21%)

Highlights & Key Hotspots

Material Acquisition Dominates: Raw material extraction and pre-processing account for a significant portion (~50.23%) of the product's total carbon footprint. The Aluminium Casing and Lithium-ion Battery are primary drivers.

Use Phase is Critical: The energy consumed during the product's 3-year lifespan contributes substantially (~45.66%), highlighting the importance of energy-efficient design and user behavior.

Strong Scope 3 Coverage: The analysis successfully achieved a high Scope 3 coverage of ~97.26%, demonstrating comprehensive accounting across the value chain.

Recommendations for Emission Reduction

Material Optimization: Explore lower-carbon alternatives and increase recycled content for high-impact components like Aluminium Casing and Lithium-ion Batteries.

Enhance Energy Efficiency: Redesign 'xkiqvrllfy' to minimize energy consumption during its operational life and guide users towards renewable energy sources.

Increase Renewable Energy in Manufacturing: Strive for 100% renewable electricity at production facilities to further reduce Scope 2 emissions beyond the current 70%.

Strengthen Circular Economy Programs: Leverage the existing take-back program to promote product refurbishment, remanufacturing, and high-quality recycling.

Engage Supply Chain: Collaborate with upstream suppliers to identify and implement emission reduction strategies for raw material production and transportation.