

html

carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: xfrfyvwqkh

Total Carbon Footprint: 26.04 kgCO₂e per unit

Total Footprint

26.04

kgCO₂e / unit

Carbon Intensity

21.7

kgCO₂e / kg of product

Top Material Hotspot

Aluminum Casing

2.50 kgCO₂e

Material Carbon Impact

Total Material Carbon: **5.95 kgCO₂e** (from 1.2 kg total product weight)

Aluminum Casing	42.02% (2.50 kgCO ₂ e)
Battery Pack	30.25% (1.80 kgCO ₂ e)
Main PCB	13.45% (0.80 kgCO ₂ e)
Plastic Enclosure	11.76% (0.70 kgCO ₂ e)
Packaging (Cardboard)	2.52% (0.15 kgCO ₂ e)

Key Emission Hotspots

- ✓ The **Use Phase** is the most significant contributor, accounting for 14.28 kgCO₂e, primarily due to operational energy consumption.
- ✓ **Purchased Electricity for Production** is a substantial hotspot at 5.58 kgCO₂e, even with 40% renewable energy use in China.
- ✓ **Material Acquisition & Processing** contributes 5.95 kgCO₂e, with Aluminum Casing and Battery Pack identified as major material impact areas.

Recommendations for Emission Reduction

- ✓ **Optimize Use Phase Efficiency:** Focus on improving the energy efficiency of xfrfyvwqkh through hardware design and software optimization.
- ✓ **Increase Renewable Energy Sourcing:** Aggressively pursue higher percentages of renewable energy for the manufacturing facility in China.
- ✓ **Material Optimization & Circularity:** Explore lighter materials, integrate higher recycled content, and expand product take-back programs to maximize recycling.
- ✓ **Supply Chain Engagement:** Collaborate with material suppliers and logistics providers to gather more specific emissions data and encourage sustainable practices.