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Product Carbon Footprint for rghvvrmrpf

Total PCF: 21.63 kg CO2e / unit

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21.63 kg CO2e / unit

System Boundary

Cradle-to-gate-plus-use-and-end-of-life

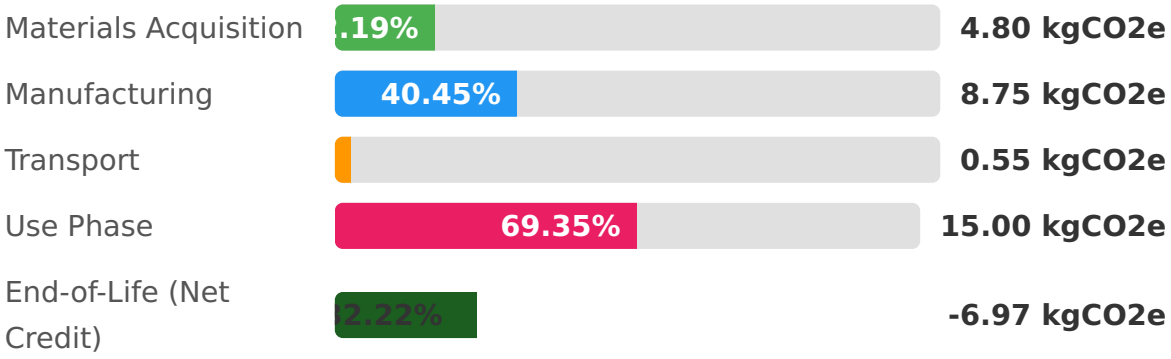
Primary Emission Scope

Scope 3 (59.55%)

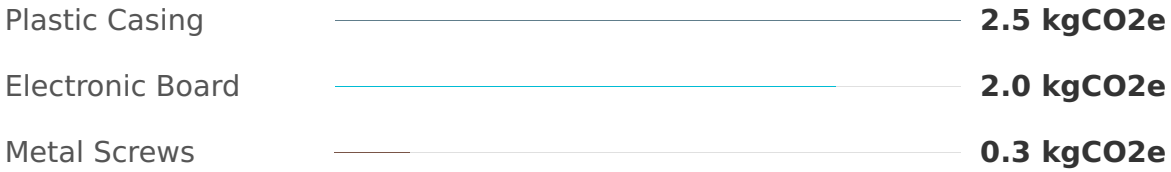
Production Country

China

Lifecycle Stage Breakdown



Material Composition vs Carbon Impact



Key Highlights

- The **Use Phase** is the largest contributor to the product's carbon footprint, accounting for 69.35% of total emissions.
- **Manufacturing** (Scope 2 emissions) represents a significant hotspot at 40.45%, though mitigated by a reported 50% renewable energy usage.
- A high **recyclability rate of 70%** and active regional take-back programs result in a substantial net credit (-6.97 kg CO2e) in the End-of-Life phase, demonstrating strong circular economy principles.

Action Plan: How to Reduce PCF

- **Enhance Use Phase Efficiency:** Focus on product designs that minimize energy consumption during operational lifespan and promote responsible user practices.
- **Increase Renewable Energy Procurement:** Further elevate the share of renewable energy sources at manufacturing facilities, especially in China, to directly reduce Scope 2 emissions.
- **Optimize Material Choices & Design:** Investigate lower-carbon alternative materials and implement design-for-disassembly to improve recyclability and material recovery beyond current rates.
- **Strengthen Supply Chain Engagement:** Collaborate with suppliers to identify and implement emission reduction opportunities in raw material acquisition and pre-processing for high-impact materials.
- **Improve Data Accuracy:** Continuously seek primary data for all lifecycle stages, particularly for the Bill of Materials and transportation, to enhance future PCF analysis precision.

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