carboncalcpcf.com

Product Carbon Footprint for xklkpiltqt

Total PCF (per 1.0 unit)

26.51 kg CO2e

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26.51 kg CO2e

Carbon Intensity

26.51 kg CO2e/unit

Top Material Hotspot

Electronic Components

Primary Emission Scope

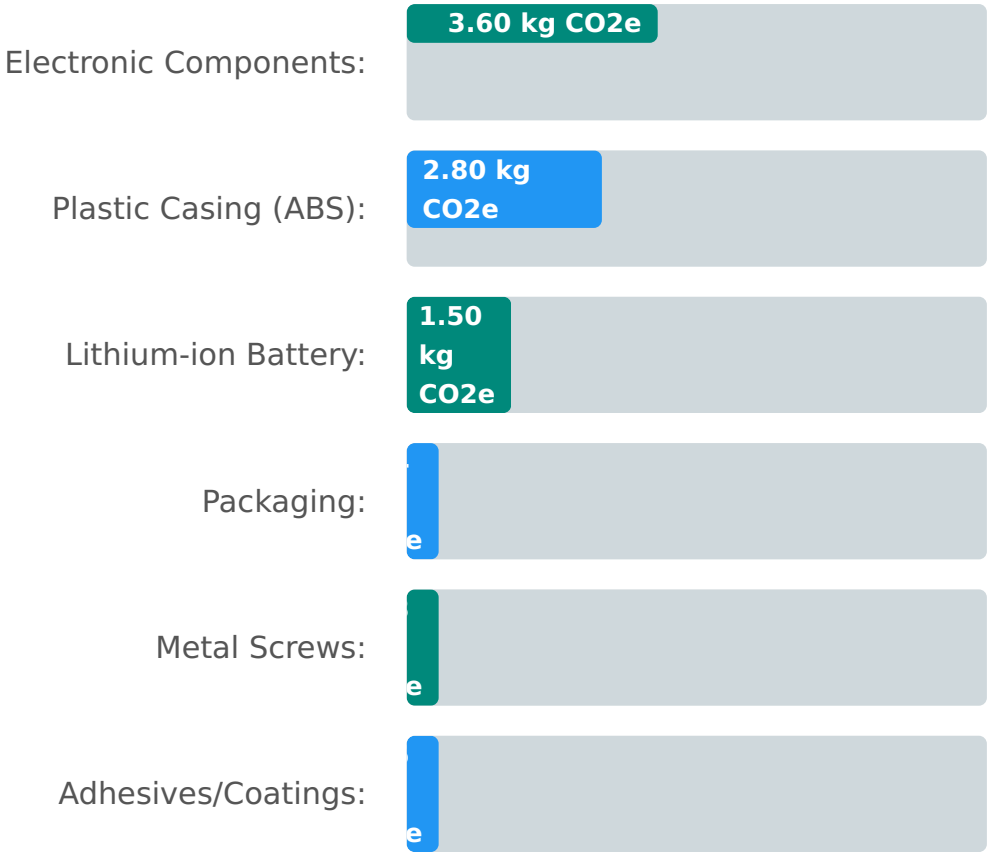
Scope 3

Emissions Breakdown

Lifecycle Stage Contribution

- Materials (Scope 3, Cat 1): 31.38% (8.32 kg CO2e)
- Production (Scope 2): 16.97% (4.50 kg CO2e)
- Logistics (Scope 3, Cat 4 & 9): 18.07% (4.79 kg CO2e)
- Use (Scope 3, Cat 11): 33.01% (8.75 kg CO2e)
- End-of-Life (Scope 3, Cat 12): 0.57% (0.15 kg CO2e)

Material Carbon Impact



Key Insights & Hotspots

- **Materials Acquisition (Scope 3, Category 1)** and **Use of Sold Products (Scope 3, Category 11)** are the primary emission hotspots, together constituting over 64% of the total PCF.
- The energy consumed during the product's 5-year lifespan significantly contributes (8.75 kg CO2e), emphasizing the importance of energy-efficient design.
- Manufacturing energy use (4.50 kg CO2e in Scope 2) offers a clear opportunity for decarbonization through increased renewable energy adoption at production facilities in China.

Recommendations for Decarbonization

- **Material Optimization:** Investigate and source lower-carbon materials for electronic components and plastic casing, working closely with suppliers for verified embedded emissions.
- **Energy Efficiency in Use:** Design xklkpiltqt for greater energy efficiency throughout its operational lifespan to reduce significant downstream emissions.
- **Renewable Energy Procurement:** Increase the percentage of renewable energy used in manufacturing operations in China, potentially through direct investments or high-quality renewable energy certificates.