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carboncalcpcf.com

Product Carbon Footprint for "uyenzfwyre"

A detailed analysis by etifmkxneg, following GHG Protocol standards.

19.64 kgCO2e

Total Cradle-to-Grave Footprint per unit

1.0 unit

Functional Unit

Factory Gate + Downstream

System Boundary

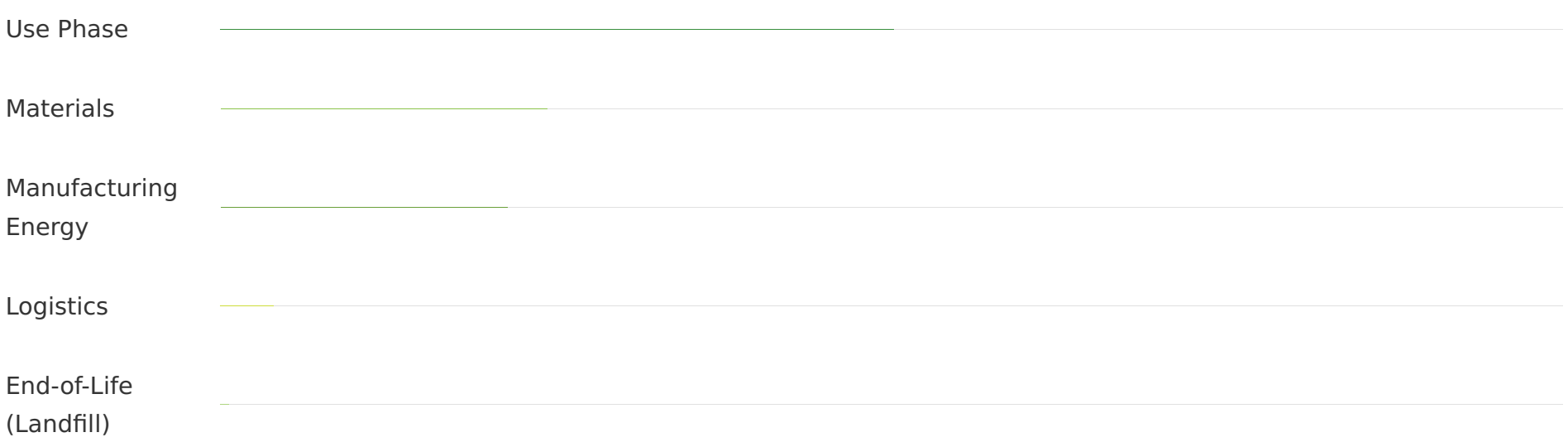
China

Production Country

GHG Protocol (2026 LSR)

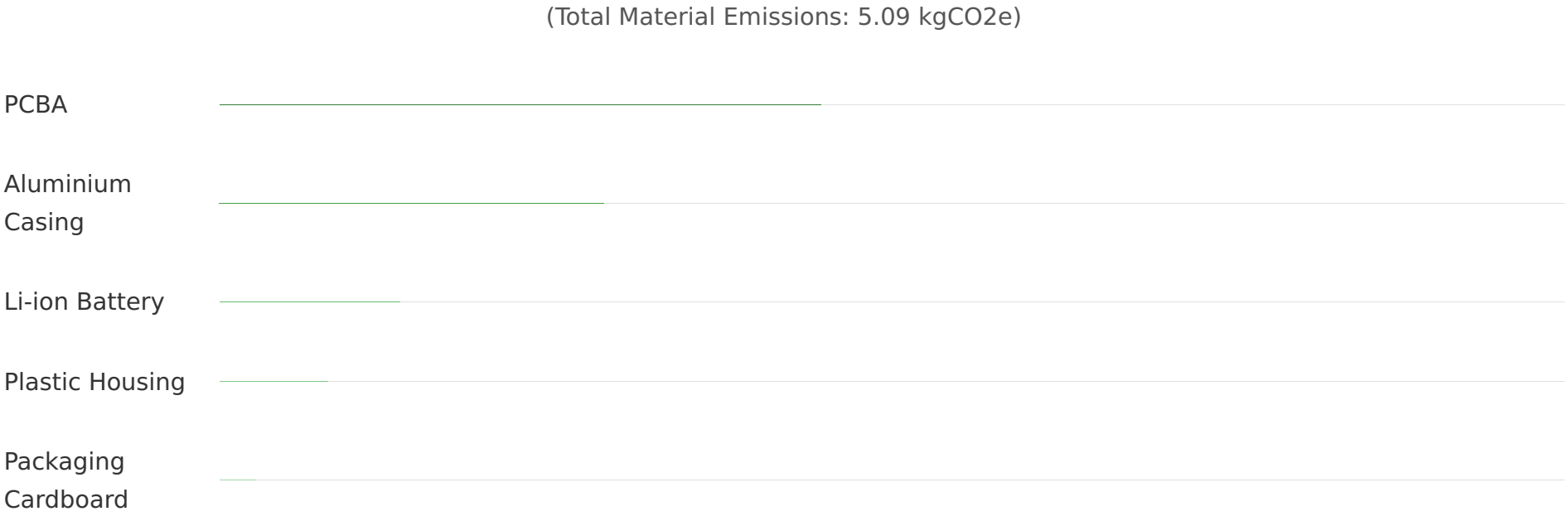
Standard Applied

Lifecycle Stage Breakdown



Note: Total PCF of 19.64 kgCO2e includes a recycling credit of -1.275 kgCO2e.

Material Carbon Impact



Key Insights & Highlights

Use Phase Dominance: The product's energy consumption over its 7-year lifespan is the largest contributor to its carbon footprint (10.50 kgCO2e).

Material Hotspots: Material acquisition, particularly PCBA (2.50 kgCO2e) and Aluminium Casing (1.60 kgCO2e), represents a significant upstream impact.

Manufacturing Efficiency: Despite 60% renewable energy use in manufacturing, grid electricity in China still contributes 4.47 kgCO2e, highlighting the impact of non-renewable energy sources.

Strong Circularity: High recyclability (85%) and an established take-back program for main components contribute to avoided emissions, reflecting a commitment to circular economy principles.

Recommendations for Emission Reduction

- ✓ **Optimize Use Phase:** Investigate and implement strategies to reduce the product's energy consumption during its active lifespan.
- ✓ **Material Decarbonization:** Engage with suppliers to source lower-carbon materials and increase recycled content in high-impact components.
- ✓ **Renewable Energy Sourcing:** Further increase renewable energy adoption at manufacturing facilities, pursuing PPAs or higher-quality certificates.
- ✓ **Logistics Efficiency:** Optimize transport routes and modes, partnering with logistics providers committed to decarbonization, especially for last-mile delivery.
- ✓ **Enhance Circularity:** Continuously develop and promote take-back and recycling programs, focusing on maximizing material recovery and reuse.

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