carboncalcpcf.com

Product: yrgtyeuwwx

Total Carbon Footprint

25.10 kg CO2e

Total Footprint

25.10 kg CO2e

per 1.0 unit

Carbon Intensity

25.10 kg CO2e

per unit of yrgtyeuwwx

Top Lifecycle Hotspot

Use Phase

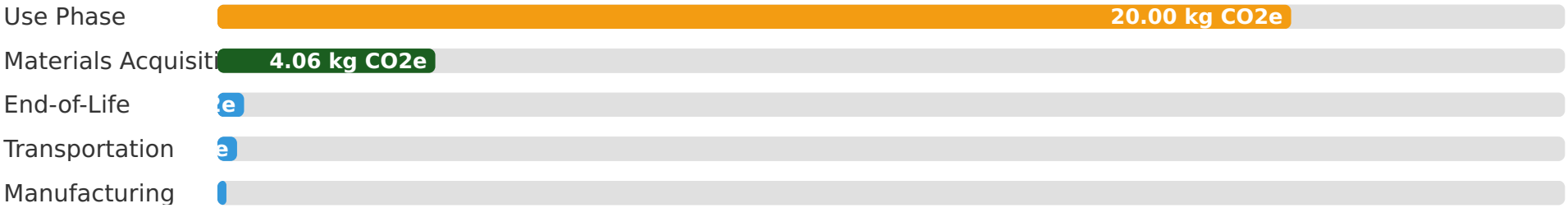
79.7% of total PCF

Primary Emission Scope

Scope 3

99.32% of total PCF

Carbon Footprint by Lifecycle Stage



Material Impact (Illustrative)

Key Highlights

- The **Use Phase** is the primary emission hotspot, accounting for nearly 80% of the total product carbon footprint, mainly due to energy consumption over its 5-year lifespan.
- **Scope 3 emissions** dominate the footprint (99.32%), underscoring the critical need for value chain engagement in decarbonization efforts.
- **Material acquisition**, particularly from components like Lithium-ion batteries and ABS plastics, represents the second-largest lifecycle contributor (16.2%).

Recommendations for Carbon Reduction

- **Use Phase Optimization:** Focus on designing for energy efficiency, incorporating low-power modes, and extending product durability to minimize energy consumption during its functional life.
- **Material Decarbonization:** Actively investigate and integrate lower-carbon alternative materials, especially for high-impact components. Engage proactively with suppliers to promote renewable energy use in their manufacturing processes.
- **Circular Economy Integration:** Enhance the "Material Take-back Program" to maximize actual recycling and reuse rates, moving beyond theoretical recyclability. Explore design strategies for disassembly and modularity to facilitate repair and component recovery.
- **Logistics Optimization:** Refine transport routes and prioritize lower-emission transport modes (e.g., rail over road for longer distances) for both upstream material delivery and downstream product distribution.