Carbon Footprint Dashboard for hdszxzfhkr

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15.352 kg CO2e

Calculated Product Carbon Footprint

15.352 kg CO2e / unit

System Boundary

Cradle-to-Grave (Factory Gate Focus)

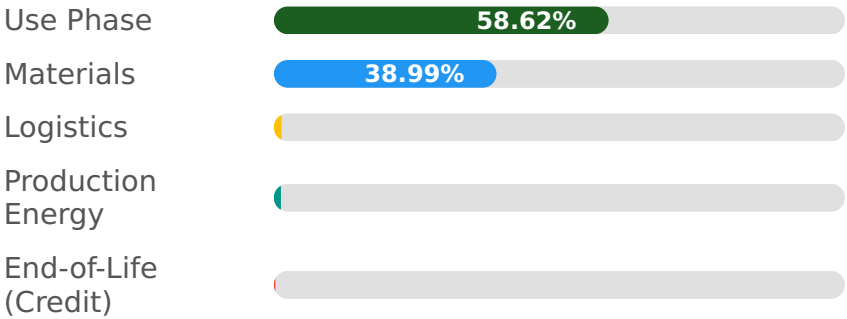
Top Emission Hotspot

Use Phase (58.62% of total)

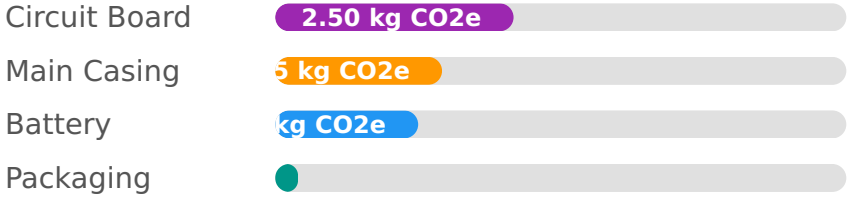
Top Material Contributor

Circuit Board (2.50 kg CO2e)

Lifecycle Stage Breakdown



Material Carbon Impact



Key Insights & Hotspots

Dominant Use Phase Emissions: The product's energy consumption during its 3-year lifespan accounts for a significant 58.62% of the total carbon footprint, making it the primary reduction target.

Material Impact (Purchased Goods): Materials and components, especially the circuit board (2.50 kg CO2e) and battery, contribute 38.99% of the footprint, highlighting the importance of sustainable sourcing.

Circular Economy Benefits: A high recyclability rate (75%) combined with existing take-back programs leads to a net carbon credit (-0.28%) at the End-of-Life stage, demonstrating successful circularity strategies.

Recommended Action Plan

1. **Enhance Energy Efficiency:** Prioritize design improvements for `hdszxzfhkr` to drastically reduce energy consumption during its use phase. Explore increasing renewable energy procurement at production facilities beyond the current 60%.
2. **Advance Sustainable Material Sourcing:** Collaborate with suppliers to identify and integrate lower-carbon materials, focusing on high-impact components like the circuit board and battery. Increase recycled content and explore bio-based alternatives.
3. **Strengthen Circularity Programs:** Leverage and expand existing circular/take-back programs to maximize the actual recycling rate and explore product-as-a-service models or extended product lifespans to reduce the overall material footprint.