carboncalcpcf.com

Product Carbon Footprint Dashboard

Detailed Analysis for **kihhjvlrkd**

95.06 kgCO2e per unit

Based on GHG Protocol & 2026 Updates

Total Footprint

95.06 kgCO2e

Per functional unit

Carbon Intensity

45.27 kgCO2e/kg

For 2.1 kg product weight

Top Material Hotspot

Aluminum Casing

6.00 kgCO2e (50.21% of material impact)

Primary Emission Scope

Use Phase

Scope 3 (Downstream)

Lifecycle Stage Breakdown

Emissions by Lifecycle Stage

Materials Acquisition & Pre-processing — 11.95 kgCO2e (12.49%)

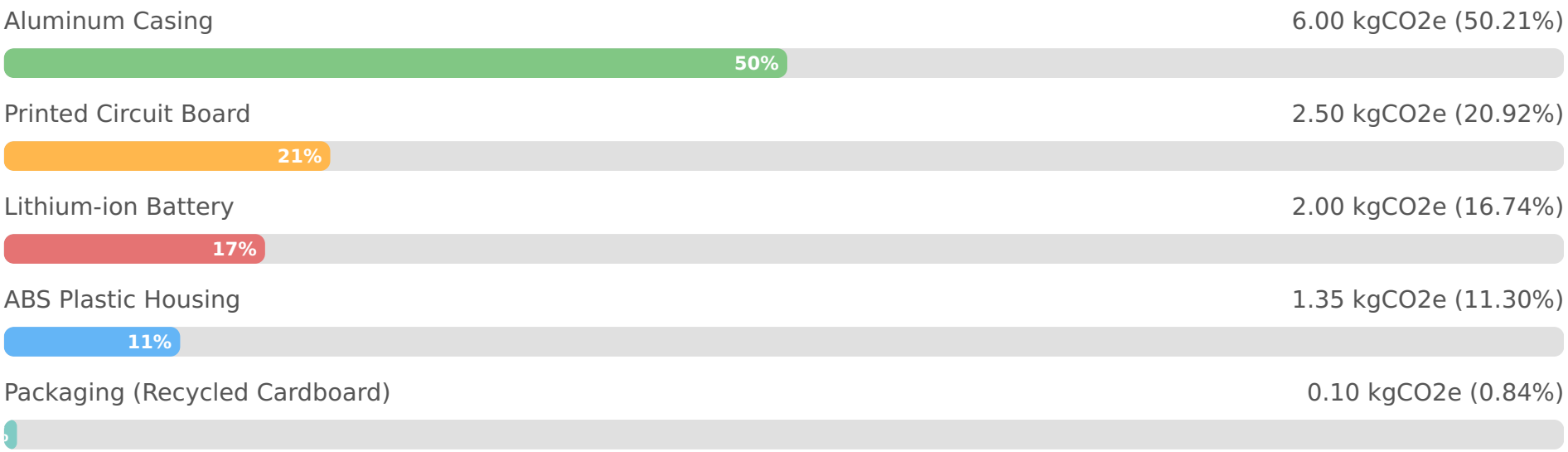
Production (Energy) — 5.88 kgCO2e (6.14%)

Transport (Inbound & Outbound) — 0.31 kgCO2e (0.32%)

Use Phase — 77.56 kgCO2e (81.04%)

End-of-Life (Avoided Emissions) — -0.65 kgCO2e

Material Carbon Impact



Key Highlights

- The **Use Phase** is the most significant emissions hotspot, contributing approximately 81.6% of the total PCF due to product energy consumption over its lifespan. [cite: `4.1. Hotspots Analysis`]
- **Materials Acquisition & Pre-processing** is the second largest contributor (~12.6%), with Aluminum Casing identified as the top material hotspot. [cite: `4.1. Hotspots Analysis`]
- The **End-of-Life** stage demonstrates net avoided emissions (-0.65 kgCO2e), showcasing the positive impact of robust company-managed recycling programs. [cite: `3.5. End-of-Life (EoL) (Scope 3 - Downstream)`]

Recommendations for Reduction

1. **Use Phase Decarbonization:** Prioritize developing more energy-efficient designs and optimizing software for lower power modes during the product's use. [cite: `4.3. Recommendations for Improvement`]
2. **Increased Renewable Energy Sourcing:** Further increase the percentage of renewable energy utilized in the production phase beyond the current 40%. [cite: `4.3. Recommendations for Improvement`]
3. **Supply Chain Engagement:** Collaborate actively with material and component suppliers to reduce their embedded emissions and enhance data traceability. [cite: `4.3. Recommendations for Improvement`]
4. **Enhanced Circularity:** Expand and leverage the existing "Company-managed return & recycling program" to maximize material recovery and avoided emissions. [cite: `4.3. Recommendations for Improvement`]