html

carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: lkgzjqvjny (Smart Home Device)

19.57 kg CO2e

Total Illustrative Carbon Footprint per unit

Total Footprint

19.57 kg CO2e

Per 1.0 unit of lkgzjqvjny

Carbon Intensity

19.57 kg CO2e/unit

Reflects emissions per functional unit

Top Material Hotspot

Aluminum Casing

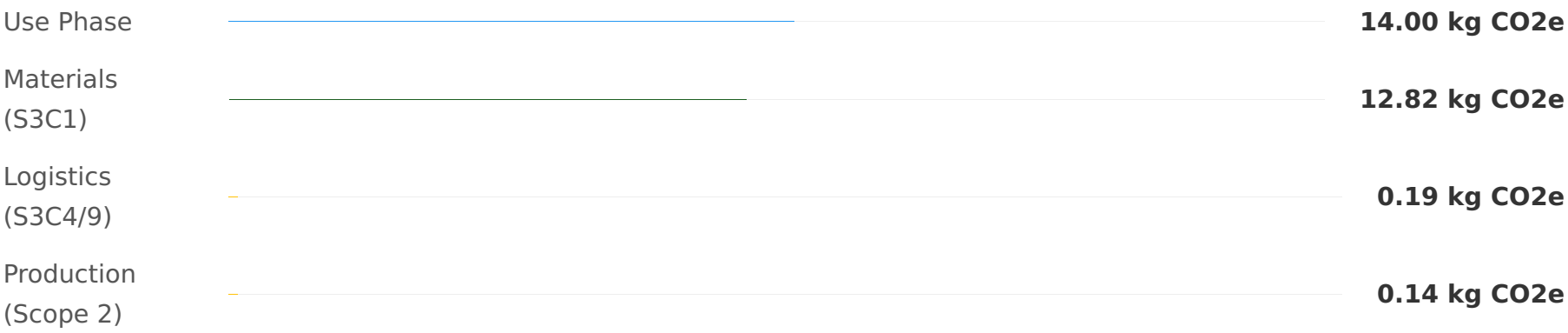
7.50 kg CO2e (58.5% of material impact)

Primary Emission Scope

Scope 3

Dominant contribution from Use Phase & Materials

Lifecycle Stage Breakdown (Positive Emissions)



Net End-of-Life Impact: A significant -7.58 kg CO2e reduction due to strong circular programs and high recyclability (85%).

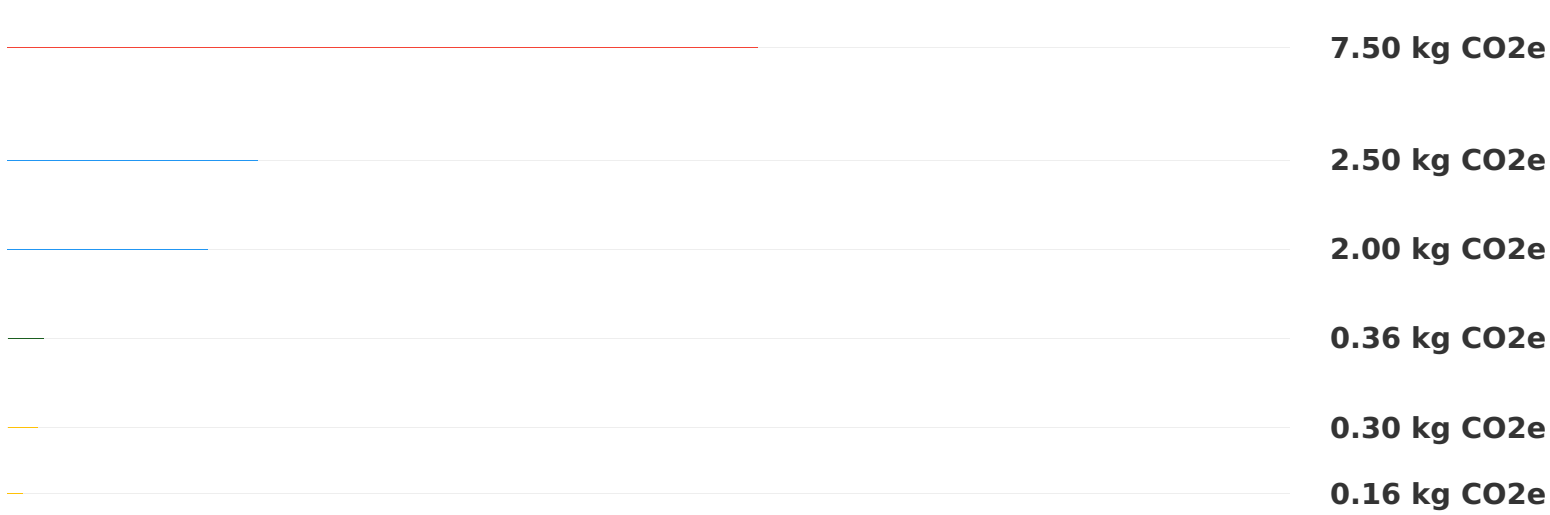
Key Insights & Hotspots

Use Phase Dominance: The product's operational lifespan contributes a substantial **14.00 kg CO2e**, highlighting energy efficiency as a key area for improvement.

Material Impact: Purchased goods and services, particularly the **Aluminum Casing (7.50 kg CO2e)** and **Circuit Board (2.50 kg CO2e)**, are significant emission drivers.

Circular Economy Success: Robust End-of-Life programs lead to a net **-7.58 kg CO2e** reduction, demonstrating effective emission avoidance.

Material Carbon Impact (Scope 3, Category 1)



Action Plan: How to Reduce Emissions

Enhance Primary Data: Systematically collect supplier-specific data for all major components to ensure accurate calculations and target interventions.

Optimize Energy Mix (Use Phase): Investigate end-user energy consumption patterns and regional grid mixes to identify opportunities for promoting renewable energy adoption.

Material Circularity: Explore opportunities to increase recycled content or substitute high-impact materials, particularly for aluminum and circuit boards.

Transport Efficiency: Implement detailed logistics tracking for specific routes and vehicle types to identify and reduce transport emissions.