

carboncalcpcf.com

# Product Carbon Footprint: **kuutxsznst**

A detailed analysis by usxpsrppmh

## Total Product Carbon Footprint (PCF)

**49.56 kg CO<sub>2</sub>e**

One functional unit (1.0 unit)

## Carbon Intensity

**49.56 kg CO<sub>2</sub>e/unit**

Per functional unit

## Top Material Hotspot

**PCB Assembly**

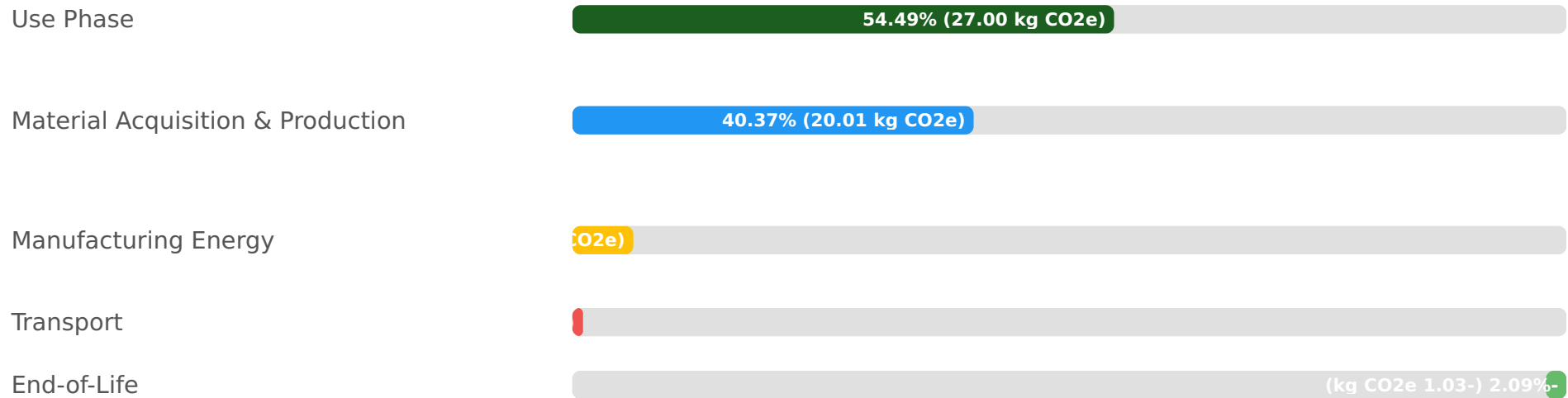
15.00 kg CO<sub>2</sub>e

## Primary Emission Scope

**Use Phase (Scope 3, Cat 11)**

54.49% of total PCF

## Lifecycle Stage Breakdown



## Top Material Carbon Impact



\*Percentages relative to total material carbon footprint (20.005 kg CO2e).

## Key Highlights & Findings

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- **Hotspots Identified:** The Use Phase (54.49%) and Material Acquisition & Production (40.37%) are the dominant emission sources. Strategic intervention should focus on these areas.
- **Energy Efficiency Critical:** The Use Phase is the largest contributor to the overall PCF, primarily due to electricity consumption over the product's lifespan, highlighting the importance of energy-efficient design.
- **Circular Economy Benefits:** End-of-Life scenarios show a net environmental benefit (-2.09%) due to usxpsrppmh's take-back and refurbishment programs and high recyclability (70%).

# Recommendations for Carbon Reduction

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- **Enhance Energy Efficiency:** Invest in R&D for more energy-efficient product designs to significantly reduce Use Phase emissions.
- **Sustainable Material Sourcing:** Explore opportunities for sourcing materials with lower embedded carbon or higher recycled content, especially for high-impact components like batteries and PCBs.
- **Expand Circularity Programs:** Strengthen and expand existing take-back and refurbishment programs to maximize material recovery, reuse, and recycling credits.
- **Monitor GHG Protocol Updates:** Continue to monitor the implementation guidance for the GHG Protocol's Land Sector and Removals (LSR) Standard for future applicability.

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Report Generated: May 22, 2026 | Standard: GHG Protocol | System Boundary: Factory-gate to Grave

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