

carboncalcpcf.com

# Product Carbon Footprint Dashboard

for lydegfjtns by ugeledqeid

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

Functional Unit: 1.0 unit | Standard: GHG Protocol | Boundary: Cradle-to-Grave

**31.185**

Total Footprint (kg CO<sub>2</sub>e)

**31.185**

Carbon Intensity (kg CO<sub>2</sub>e / unit)

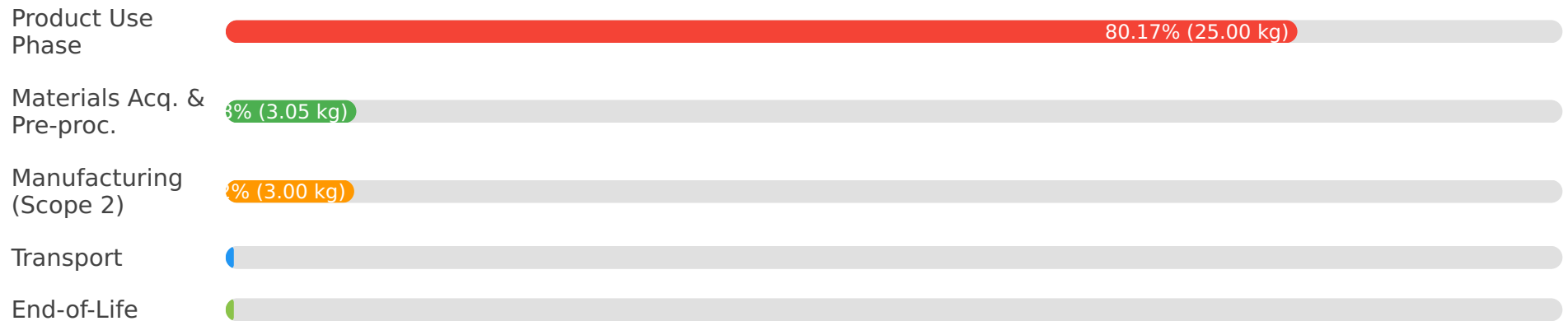
**Steel Casing**

Top Material Hotspot (1.25 kg CO<sub>2</sub>e)

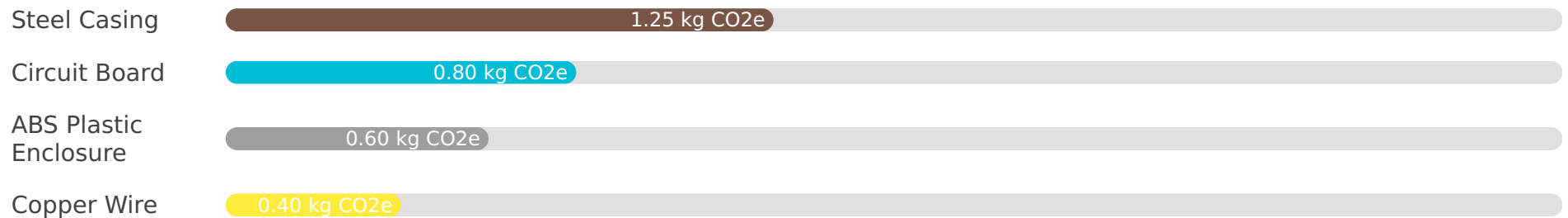
**Scope 3**

Primary Emission Scope (90.38%)

## Lifecycle Stage Breakdown



## Material Carbon Impact



## Key Emission Highlights

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- The **Product Use Phase** is the overwhelming largest contributor, accounting for over 80% of the total carbon footprint, highlighting critical energy consumption during operation.
- **Scope 3 emissions** dominate the product's footprint at over 90%, emphasizing the need for value chain collaboration, particularly in upstream materials and downstream product use.
- **Materials Acquisition & Pre-processing** and **Manufacturing** are significant secondary hotspots, collectively contributing nearly 20% to the PCF.

## Recommendations for Emission Reduction

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- **Optimize Use Phase Efficiency:** Design for ultra-low energy consumption and integrate smart energy management features.
- **Enhance Renewable Energy in Manufacturing:** Increase green energy adoption at the China production facility beyond current levels.
- **Sustainable Material Sourcing & Design:** Explore lower embodied carbon alternatives and increase recycled content for key components.
- **Strengthen Circular Economy Initiatives:** Expand take-back programs and design for disassembly, repair, and upgradability.
- **Supply Chain Engagement & Logistics Optimization:** Collaborate with suppliers and optimize transport modes and distances.