

Product Carbon Footprint for

carboncalcpcf.com

vodixdfjl

25.87 kg CO₂e

Total PCF per 1.0 unit (Cradle-to-Grave)

Total Footprint

25.87 kg CO2e

Carbon Intensity

39.8 kg CO2e/kg

(Per kg of core product mass)

Top Material Hotspot

Aluminum & ABS Plastic

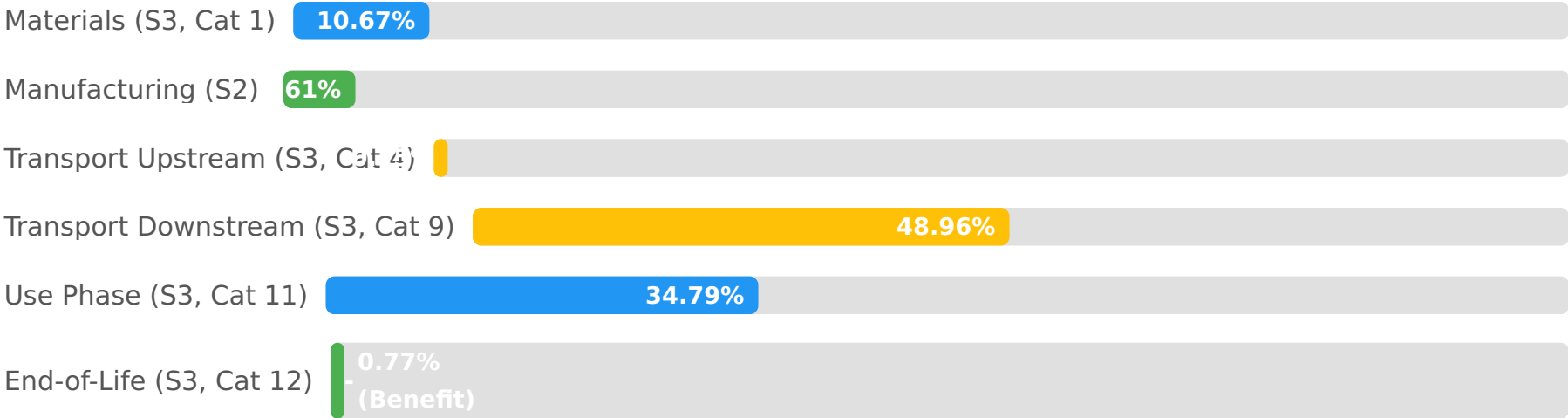
(1.05 kg CO2e each)

Primary Emission Scope

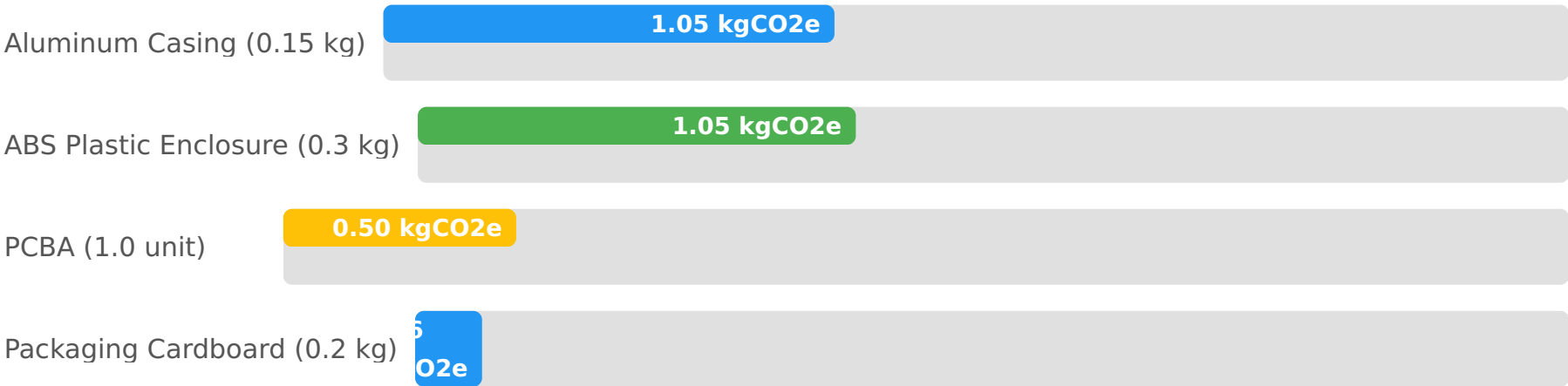
Scope 3 (94.65%)

(Value Chain Emissions)

Lifecycle Stage Breakdown



Material Carbon Impact



Highlights & Hotspots

- Downstream Transport & Distribution is the largest contributor (48.96%), primarily due to last-mile delivery, indicating a critical area for optimization.
- The Use Phase accounts for a significant portion (34.79%) of the footprint, highlighting the need for energy-efficient product design and consumer guidance.
- A strong effective recycling rate of 76% in the End-of-Life phase demonstrates a net carbon benefit (-0.20 kg CO₂e), underscoring the success of circular economy initiatives.

Recommendations for Reduction

- ****Optimize Logistics:**** Explore regional fulfillment centers, bulk shipping, and low-carbon last-mile delivery options (e.g., electric vehicles, bicycle couriers).
- ****Enhance Energy Efficiency:**** Redesign the product for lower energy consumption during the use phase and promote renewable energy sourcing for manufacturing.
- ****Material Innovation:**** Investigate lower-carbon alternatives for high-impact materials like Aluminum and ABS Plastic, or increase recycled content.
- ****Circular Economy Expansion:**** Continue to strengthen take-back programs and educate consumers on proper recycling to further maximize end-of-life benefits.