

carboncalcpcf.com

Product: fkmsyxtzn

Carbon Footprint Analysis Summary

Total Product Footprint

183.96 kg CO₂e

Quantity

1.0

unit

System Boundary

factory_gate

(Cradle-to-Grave Analysis)

Production Country

China

GHG Protocol Standard

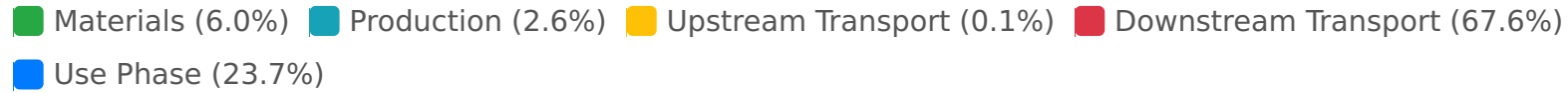
Primary Emission Scope

Scope 3

Value Chain Emissions

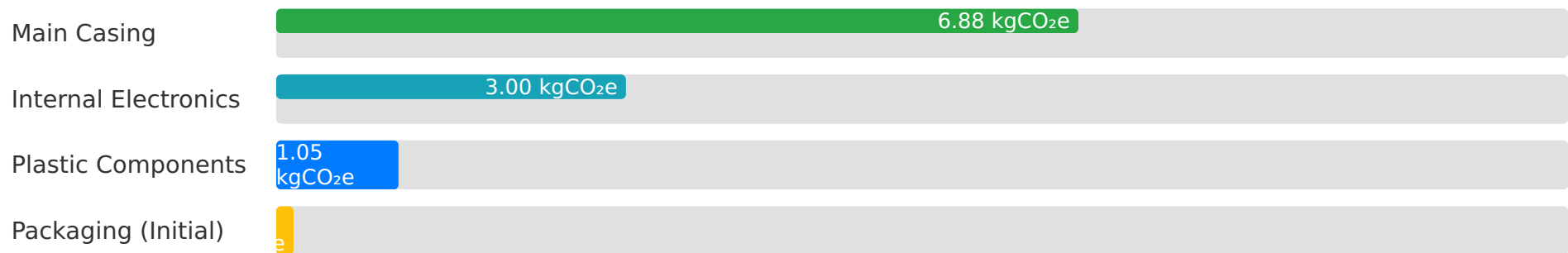
Key Findings

Lifecycle Stage Breakdown



Note: End-of-Life phase provides a net credit of -1.18 kg CO₂e due to recycling programs.

Top Material Carbon Impact (Scope 3, Category 1)



Highlights & Recommendations

Critical Emission Hotspots

Last-Mile Delivery Dominance: Downstream Transportation (Category 9) accounts for 125.00 kg CO₂e/unit, representing 67.6% of positive emissions. This highlights a significant opportunity for logistics optimization.

Use Phase Energy Consumption: The product's operational lifespan contributes 43.80 kg CO₂e/unit (23.7%), emphasizing the need for energy-efficient design.

Material Footprint: Upstream material production (Category 1) contributes 11.08 kg CO₂e/unit, driven significantly by the Main Casing.

Action Plan for Decarbonization

Optimize Last-Mile Logistics: Investigate delivery route optimization, vehicle electrification, or alternative delivery models.

Enhance Product Energy Efficiency: Design for lower energy consumption during its use phase.

Prioritize Sustainable Materials: Increase recycled content and explore materials with inherently lower carbon footprints.