

Product Carbon Footprint for xhzqowosfl

Total PCF: 37.69 kgCO₂e

Key Metrics

Total Footprint

37.69 kgCO₂e

Per 1.0 functional unit.

Carbon Intensity

37.69 kgCO₂e/unit

Emissions per product unit.

Top Material Hotspot

Aluminum Casing

7.50 kgCO₂e (69% of material impact)

Primary Emission Scope

Scope 3

36.24 kgCO₂e (96% of total)

Emissions Breakdown

Lifecycle Stage Contributions



Material Carbon Impact



Highlights & Insights

- ✓ The **Use Phase** is the single largest contributor to the product's carbon footprint, responsible for approximately 77% of total emissions. This highlights product energy efficiency as a critical improvement area.
- ✓ **Material Acquisition** is the second most significant hotspot, contributing roughly 29% of the overall emissions. Focus on sustainable material sourcing and recycled content can yield substantial reductions.
- ✓ The **End-of-Life** stage provides a net negative emission credit, driven by the high recyclability (70%) and established circular programs. This demonstrates the positive impact of designing for circularity.

Action Plan: How to Reduce Impact

- **Enhance Use Phase Efficiency:** Invest in R&D to significantly reduce the product's energy consumption during its lifespan and provide clear guidance to consumers on energy-efficient usage.
- **Optimize Material Sourcing:** Collaborate with suppliers for primary emission data. Explore lower-carbon materials, higher recycled content, and greener production methods.
- **Refine Logistics:** Investigate opportunities for optimizing transport modes, routes, and load factors, potentially considering more localized sourcing.

