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zpuyozduok Carbon Footprint Dashboard

Comprehensive Product Carbon Footprint (PCF) Analysis

Total PCF: 31.38 kg CO2e/unit

Total Footprint

31.38

kg CO2e / unit

Carbon Intensity

31.38

kg CO2e / unit

Top Material Hotspot

Aluminum Alloy

3.50 kg CO2e

Primary Emission Scope

Scope 3

~95.5% of total

Lifecycle Stage Breakdown

**Lifecycle
Impact**

- Materials Acquisition (29.7%)
- Production (4.5%)
- Transportation (42.1%)
- Use Phase (23.9%)
- End-of-Life (-0.2% Net Credit)

Top Material Carbon Impact

Aluminum Alloy Casing	3.50 kg CO2e
Lithium-ion Battery	3.00 kg CO2e
Polycarbonate Housing	1.35 kg CO2e
Silicon Chipset	1.00 kg CO2e

Key Insights & Hotspots

- Downstream Transportation accounts for a significant 41.7% of total emissions, primarily due to air freight.
- Purchased Goods and Services, especially raw materials like aluminum and batteries, contribute 30.1% to the overall footprint.
- The Use Phase of the product is responsible for 24.2% of emissions, highlighting the importance of energy efficiency during operation.

Recommended Actions for Reduction

- **Optimize Logistics:** Explore lower-carbon transport modes (e.g., sea freight) and consider localizing production or distribution to reduce downstream transport emissions.
- **Sustainable Sourcing:** Prioritize lower-carbon materials, increase recycled content, and collaborate with suppliers on their decarbonization initiatives.
- **Enhance Energy Efficiency:** Improve the product's energy efficiency during its use phase and educate end-users on utilizing renewable energy sources or efficient usage patterns.