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carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: **vjnhtofyil** | Quantity: **1.0 unit** | Standard: **GHG Protocol** | Production Country: **China** | System Boundary: **Cradle-to-Grave**

Total PCF: 59.15 kgCO2e

per unit (cradle-to-grave)

Total Footprint

59.15 kgCO2e

Carbon Intensity

90.9 kgCO2e/kg

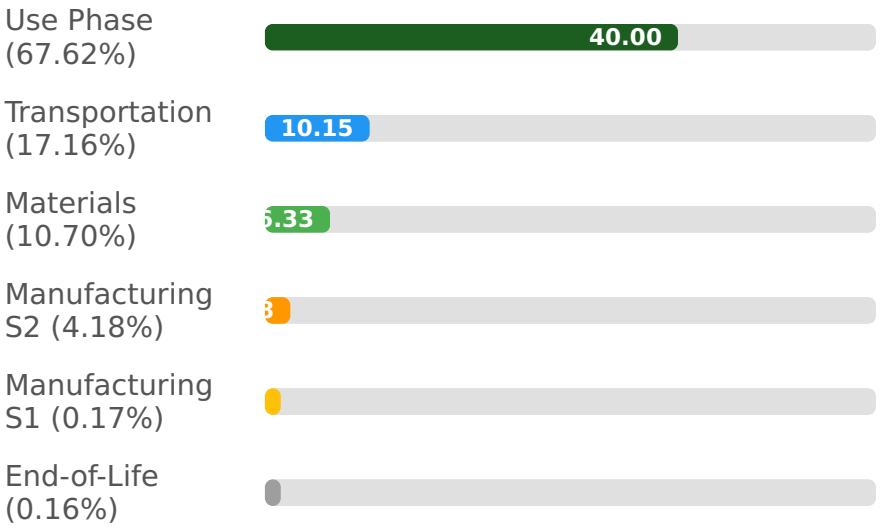
Top Material Hotspot

Aluminum Casing (3.75 kgCO2e)

Primary Emission Scope

Scope 3 (Downstream Use Phase)

Lifecycle Stage Breakdown



Highlights

The **Product Use Phase** is the largest emission hotspot, contributing ~67.6% of the total PCF, driven primarily by energy consumption during the product's lifespan.

Transportation and Distribution accounts for a significant ~17.1% of emissions, with last-mile delivery and raw material logistics being key contributors.

Material Acquisition is responsible for ~10.7% of the footprint, with components like Aluminum Casing and Lithium-ion Batteries having higher embodied carbon.

How to Reduce Emissions

1. **Use Phase Optimization:** Prioritize designs for greater energy efficiency and extend product lifespan through enhanced durability and repairability.
2. **Logistics & Transportation:** Optimize transport modes (e.g., more rail/sea, less air), consolidate shipments, and explore local sourcing to reduce travel distances.
3. **Material Innovations:** Integrate materials with lower embodied carbon and maximize recycled content, especially for components like aluminum.
4. **Manufacturing Improvements:** Increase renewable energy usage in production facilities beyond current levels and continuously optimize processes for efficiency.
5. **End-of-Life Enhancement:** Design products for easier disassembly and material separation to boost actual recyclability and strengthen take-back programs.