

CARBONCALPCF.COM

Product Carbon Footprint Dashboard

Product: **erosjuooq** (1.0 unit)

Standard: GHG Protocol, System Boundary: Factory-gate (Cradle-to-grave)

Total PCF: 19.34 kg CO₂e

TOTAL PRODUCT FOOTPRINT

19.34 kg CO₂e

CARBON INTENSITY

19.34 kg CO₂e / unit

TOP MATERIAL HOTSPOT

Aluminium Casing

(2.00 kg CO₂e)

PRIMARY EMISSION SCOPE

Scope 3

(16.04 kg CO₂e)

Emission Highlights

- The **Use Phase** is the single largest contributor to the product's carbon footprint, accounting for 12.50 kg CO₂e, primarily due to energy consumption over its 5-year lifespan.
- **Materials Acquisition & Pre-processing** contribute significantly (3.34 kg CO₂e), with the Aluminium Casing identified as a major hotspot among components, representing 2.00 kg CO₂e.
- Despite 60% renewable energy usage, **Manufacturing Electricity (Scope 2)** remains a substantial contributor at 3.30 kg CO₂e, indicating an opportunity for further decarbonization at the production facility.

Recommendations for Reduction

- **Optimize Use Phase Efficiency:** Invest in R&D to significantly reduce the product's energy consumption during its lifespan and promote energy-efficient user behavior.
- **Material Decarbonization:** Explore alternative, lower-carbon materials for high-impact components and engage suppliers to obtain product-specific emission data.
- **Increase Renewable Energy in Manufacturing:** Further increase the share of renewable energy used in the Chinese manufacturing facilities beyond the current 60%.
- **Enhance Circularity:** Leverage the active take-back program for key components to maximize material recovery and reuse, reducing reliance on virgin materials.
- **Logistics Optimization:** Investigate more efficient transport modes (e.g., rail, sea freight for longer distances) and explore green last-mile delivery options where feasible.