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Carbon Footprint Dashboard for rnxofdzims

Total Carbon Footprint: 49.72 kg CO2e

TOTAL FOOTPRINT

49.72 kg CO2e

CARBON INTENSITY

49.72 kg CO2e / unit

TOP MATERIAL HOTSPOT

Aluminum Alloy (12.00 kg CO2e)

PRIMARY EMISSION SCOPE

Scope 3 (87.5% of total)

Emission Breakdown

Lifecycle Stage Contribution

Materials Acquisition & Pre-processing	46.9%
Use Phase	25.1%
Production (Electricity)	12.5%
End-of-Life	5.6%
Unaccounted for (estimated)	8.1%
Transport (Upstream & Downstream)	1.8%

Top Material Carbon Impact

Aluminum Alloy (Sheet)	12.00 kg CO2e
Lithium-ion Battery	4.50 kg CO2e
ABS Plastic Granules	3.60 kg CO2e
Silicon Chipset	2.00 kg CO2e

Key Insights & Hotspots

Materials Acquisition & Pre-processing (46.9%) is the most significant contributor, primarily driven by the energy-intensive production of aluminum alloy, plastics, and electronic components.

Use Phase (25.1%) energy consumption during the product's 5-year lifespan significantly contributes to its overall footprint, depending heavily on the electricity mix of the usage region (Europe in this case).

Production Phase (12.5%) in China is a notable hotspot, even with assumed renewable energy usage, due to the remaining reliance on the Chinese grid.

Recommendations for Decarbonization

Material Decarbonization: Focus on sourcing lower-carbon alternatives for aluminum, plastics, and electronics, and explore recycled content with verifiable low-carbon processing.

Energy Efficiency in Use: Invest in R&D to reduce the product's energy consumption during its use phase, considering design changes that minimize energy draw.

Production Energy Transition: Explore increasing renewable energy procurement at the China production facility, through direct purchasing, green tariffs, or on-site generation.

Circular Economy Integration: Continue to strengthen and expand existing circular/take-back programs, and improve the recyclability of components.