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Product Carbon Footprint Dashboard

Eco-Smart Gadget X (jodwdivznt) - Summary by GreenTech Solutions Inc.

Total PCF: **23.335 kgCO₂e** per unit

Key Metrics

Total Footprint

23.335

kgCO₂e / unit

Carbon Intensity

23.335

kgCO₂e / unit

Top Material Hotspot

Aluminium

42.45% of material impact

Primary Emission Scope

Use Phase

67.95% of positive emissions

Emission Breakdown

Lifecycle Stage Carbon Impact



- Use Phase (17.430 kgCO₂e)
- Purchased Goods & Services (Materials) (6.959 kgCO₂e)
- Production Energy (Scope 2) (1.162 kgCO₂e)
- Logistics (Upstream & Downstream) (0.100 kgCO₂e)

♻️ End-of-Life provides a significant **-2.316 kgCO₂e credit** due to 80% recyclability and circular programs.

Material Carbon Impact

Aluminium Casing
(42.45%)

Lithium-Ion Battery
(28.74%)

Circuit Board
(21.55%)

ABS Plastic
(5.40%)

Copper Wire
(1.15%)

Packaging
(0.72%)

Total Material Emissions: 6.959 kgCO₂e

Highlights

- The **Use Phase** (17.430 kgCO₂e) is the largest contributor to the product's carbon footprint, accounting for nearly 68% of positive emissions, emphasizing energy efficiency.
- **Purchased Goods and Services** (6.959 kgCO₂e) are the second largest hotspot, with Aluminium Casing and Lithium-Ion Battery being key material impacts.
- The product benefits significantly from **circular economy initiatives**, resulting in a net avoided emissions credit of -2.316 kgCO₂e at End-of-Life due to 80% recyclability.

How to Reduce PCF

- 1 **Enhance Use Phase Efficiency:** Invest in R&D to significantly reduce the Eco-Smart Gadget X's energy consumption during its lifespan.
- 2 **Sustainable Material Sourcing:** Prioritize lower-carbon alternatives for high-impact materials like aluminium and batteries.
- 3 **Increased Renewable Energy Integration:** Further increase the share of renewable energy used in the production process (Scope 2) in China.
- 4 **Strengthen Circularity:** Continue to develop and promote take-back and recycling programs for more components to maximize avoided emissions.