

Product Carbon Footprint Dashboard

for **uevgrtwkgz**

Calculated by veuxiusxin, Senior Sustainability Consultant at swxrzhonxe

carboncalcpcf.com

TOTAL CARBON FOOTPRINT

25.79 kg CO₂e

Per 1.0 unit (Cradle-to-Gate + Downstream)

CARBON INTENSITY

25.79 kg CO₂e/unit

Product: uevgrtwkgz | Standard: GHG Protocol

TOP MATERIAL HOTSPOT

Aluminum Casing

3.50 kg CO₂e (from material production)

PRIMARY EMISSION SCOPE

Scope 3

99.53% of total PCF

Lifecycle Stage Breakdown

Use Phase		18.25 kg CO2e
Raw Materials		7.65 kg CO2e
Logistics		0.12 kg CO2e
Manufacturing Energy		0.12 kg CO2e

Note: The End-of-Life stage contributes a net negative impact of **-0.35 kg CO2e** due to high recyclability (85%) and an active buy-back program.

Top Material Carbon Impact

Aluminum Casing		3.50 kg CO2e
Circuit Board		2.00 kg CO2e
Battery		1.50 kg CO2e
Plastic Enclosure		0.60 kg CO2e
Packaging (Cardboard)		0.05 kg CO2e

Highlights & Emission Hotspots

- The **Use Phase** is the dominant contributor, accounting for approximately 70.75% (18.25 kg CO₂e) of the total carbon footprint, highlighting the impact of energy consumption over the product's lifespan.
- **Raw Material Acquisition & Pre-processing** represents the second-largest hotspot at around 29.66% (7.65 kg CO₂e), with high-impact components like aluminum and batteries being key areas for focus.
- The **End-of-Life** stage shows a net negative contribution (-0.35 kg CO₂e) due to 85% recyclability and an active buy-back program, demonstrating strong circular economy benefits.

Recommendations for Emission Reduction

- ✓ **Optimize Use Phase Efficiency:** Invest in R&D to further reduce the product's energy consumption during its operational life and educate users on energy-efficient usage patterns.
- ✓ **Material Optimization:** Continue to explore lightweighting options and alternative, lower-carbon materials for high-impact components like the aluminum casing and battery.
- ✓ **Enhance Circularity:** Leverage the Active Buy-back Program to maximize material recovery and investigate repairability/modular design to extend product lifespan beyond 5 years.
- ✓ **Supply Chain Engagement:** Collaborate with upstream suppliers to identify and mitigate emissions hotspots within the raw material and component manufacturing processes.