

The user wants a single HTML file dashboard as output. I need to make sure to only output the HTML content, including internal

# Product Carbon Footprint for dpiempwffp

Managed by xzqsvlgovd - GHG Protocol Standard

**45.29** <sup>kg</sup>  
CO<sub>2</sub>e

**carboncalcpcf.com**

Total Footprint (Net)

**45.29**

kg CO2e / unit

System Boundary

**Cradle-to-Grave**

Comprehensive lifecycle assessment

Top Material Hotspot

**Aluminum Casing**

38.10% of material emissions

Primary Emission Scope

**Scope 3**

93.4% of total PCF

## Lifecycle Stage Breakdown (Gross Emissions)

Materials Acquisition	22.85% (10.50 kg CO2e)
Manufacturing	8.70% (4.00 kg CO2e)
Transportation	3.16% (1.45 kg CO2e)
Use Phase	65.29% (30.00 kg CO2e)
End-of-Life (Credit)	-0.66 kg CO2e

## Material Carbon Impact

Aluminum Casing	38.10% (4.00 kg CO2e)
Lithium-ion Battery	28.57% (3.00 kg CO2e)
Silicon Chipset	19.05% (2.00 kg CO2e)
ABS Plastic Enclosure	10.00% (1.05 kg CO2e)
Copper Wiring	4.29% (0.45 kg CO2e)

# Key Insights & Hotspots

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The **Use Phase** is the most significant emission hotspot, accounting for approximately 66% of the product's total carbon footprint.

**Materials Acquisition & Pre-processing** represents the second largest contributor, making up around 23% of the total PCF.

**Scope 3 emissions** from the value chain dominate the footprint, comprising 93.4% of the total, highlighting the importance of supplier and consumer engagement.

# Recommended Decarbonization Actions

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1. **Product Design for Energy Efficiency:** Prioritize design improvements to drastically reduce energy consumption during the **dpiempwffp**'s operational lifespan.
2. **Sustainable Material Sourcing:** Investigate opportunities to use lower-carbon alternative materials, such as recycled content (e.g., recycled aluminum and plastics).
3. **Renewable Energy Integration:** Increase the percentage of renewable energy usage at manufacturing facilities beyond the current 50%.
4. **Enhance Circular Economy Programs:** Strengthen existing take-back programs to further increase the recyclability percentage of the product and its components.