

# Product Carbon Footprint Dashboard for "tvhzsufuot"

**15.5 kg CO2e**

Estimated Total Footprint

## Key Metric

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**15.5 kg CO<sub>2</sub>e**

Total Product Carbon Footprint

## Carbon Intensity

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**15.5 kg CO<sub>2</sub>e/unit**

Per Functional Unit (1.0 unit)

## Top Material Hotspot

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**Housing Plastic (ABS)**

Highest impact material from BOM

## Primary Emission Scope

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**Scope 3**

Dominant GHG Protocol Scope

## Lifecycle Stage Breakdown

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Raw Material Acquisition	23.5% (3.64 kg CO <sub>2</sub> e)
Manufacturing	20% (Illustrative)
Transport	20% (Illustrative)
Use Phase	30% (Illustrative)
End-of-Life	6.5% (Illustrative)

Note: Percentages for Manufacturing, Transport, Use Phase, and End-of-Life are illustrative due to placeholder data in the full report. Raw Material Acquisition uses data from the BOM example.

## Material Composition vs. Carbon Impact (from BOM example)

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Housing Plastic (ABS)	2.63 kg CO <sub>2</sub> e
Printed Circuit Board (PCB)	0.80 kg CO <sub>2</sub> e
Copper Wire	0.21 kg CO <sub>2</sub> e

Note: Based on the illustrative Bill of Materials (BOM) data provided in the report.

## Highlights & Key Insights

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- **Scope 3 Dominance:** The analysis emphasizes a comprehensive cradle-to-grave perspective, with Scope 3 emissions (raw materials, transport, use, EoL) forming the majority of the footprint.
- **Material Hotspot Identified:** Based on the illustrative BOM, Housing Plastic (ABS) presents the highest material-related carbon impact.
- **Production Location:** Production in China with a "Europe Focused" supply chain highlights the importance of optimizing upstream logistics and assessing regional energy mixes.

## Recommendations: How to Reduce Impact

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- **Material Innovation:** Explore alternative low-carbon materials for components like the housing plastic, and increase the use of recycled content where feasible.
- **Supply Chain Optimization:** Focus on optimizing logistics routes for both upstream and downstream transport, considering a shift to lower-emission modes (e.g., rail over road) and consolidating shipments.
- **Energy Efficiency & Renewables:** For the manufacturing phase, increase the procurement of renewable energy and invest in energy efficiency measures within production facilities.
- **Product Design for Longevity & Circularity:** Design for extended product lifespan and ease of recycling or refurbishment, supported by robust circular/take-back programs.