Carbon Footprint Dashboard for hqgrqoutjp

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Total Product Carbon Footprint

551.34 kg CO2e

Key Metrics

Total Footprint

551.34 kg CO2e

Per 1.0 unit of hqgrqoutjp

Top Material Hotspot

Steel

200.0 kg CO2e (42.1% of materials)

Primary Emission Scope

Scope 3

Dominates with 548.425 kg CO2e

Production Overview

China

Standard: GHG Protocol | Boundary: factory_gate

Detailed Breakdown

Lifecycle Stage Carbon Breakdown

Materials Acquisition & Pre-processing	475.0 kg CO2e (86.1%)
End-of-Life Disposal	34.0 kg CO2e (6.2%)
Use Phase	30.0 kg CO2e (5.4%)
Transport	9.43 kg CO2e (1.7%)
Manufacturing (Energy)	2.91 kg CO2e (0.5%)

Material Carbon Impact

Steel	200.0 kg CO2e (42.1%)
Plastic	175.0 kg CO2e (36.8%)
Aluminum	100.0 kg CO2e (21.1%)

Total Material Emissions: 475.0 kg CO2e

Highlights & Key Insights

- Material Acquisition & Pre-processing is the dominant carbon hotspot, accounting for approximately 86.1% of the total footprint.
- Significant environmental benefit observed from recycling efforts, with an estimated 204.0 kg CO2e in avoided emissions due to circularity.
- Manufacturing energy emissions are relatively low (0.5%), a positive outcome likely influenced by the 70% renewable energy usage.

Recommendations for Carbon Reduction

1. **Material Decarbonization:** Prioritize sourcing lower-carbon intensity materials, increasing recycled content, and optimizing material efficiency to reduce product mass.
2. **Supply Chain Optimization:** Investigate and implement more efficient and lower-emission transport modes for both upstream and downstream logistics, especially for the Europe-focused supply chain.
3. **Manufacturing Energy & Renewables:** Further improve energy efficiency in manufacturing and strive to increase the percentage of renewable energy beyond the current 70%.
4. **Use Phase Engagement:** Design for reduced energy consumption during the product's lifespan and provide consumers with guidance on efficient usage and renewable energy options.
5. **Enhance Circularity:** Strengthen existing circular economy initiatives, take-back programs, and maximize product recyclability to further leverage avoided emissions.