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# Product Carbon Footprint Analysis

Product: **lqljpxhpu**

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## 20.95 kg CO<sub>2</sub>e

Total PCF

### 20.95

TOTAL PCF (KG CO<sub>2</sub>E)

### 20.95

CARBON INTENSITY (KG CO<sub>2</sub>E/UNIT)






## Steel Casing

TOP MATERIAL HOTSPOT

# Scope 3

PRIMARY EMISSION SCOPE

## Emissions by Lifecycle Stage

Materials		7.05 kg
Production		3.60 kg
Transport		0.28 kg
Use Phase		10.00 kg
End-of-Life (Credit)		-0.98 kg

- **Use Phase Dominance:** The product's energy consumption over its 5-year lifespan is the largest contributor (10.00 kg CO<sub>2e</sub>), underscoring the need for enhanced energy efficiency in design and user behavior.
- **Significant Material Impact:** Raw material acquisition and production, particularly for electronic components and steel casing, contribute substantially (7.05 kg CO<sub>2e</sub>), highlighting the importance of sustainable material sourcing.
- **Circular Economy Benefits:** Robust recyclability (75%) and take-back programs result in a net negative End-of-Life emission (-0.98 kg CO<sub>2e</sub>), offering a valuable carbon credit through avoided virgin material production.

## Key Recommendations for Reduction

- **Enhance Use Phase Efficiency:** Invest in R&D for product designs that minimize energy consumption during use and promote energy-efficient customer usage.
- **Sustainable Material Sourcing:** Prioritize suppliers offering materials with lower embedded carbon, increased recycled content, or certified sustainable origins.
- **Optimize Production Energy Mix:** Increase the percentage of renewable energy used in manufacturing facilities beyond the current 70% in China.

