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Product Carbon Footprint Report

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48.02 kg CO_2e

TOTAL FOOTPRINT

48.02 kg CO_2e

CARBON INTENSITY

48.02 kg CO_2e / unit

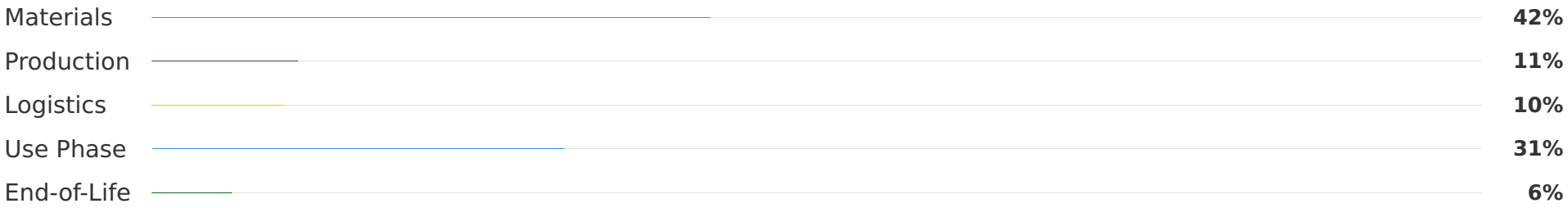
TOP MATERIAL HOTSPOT

Aluminium Alloy Sheet

PRIMARY EMISSION SCOPE

Scope 3

Lifecycle Stage Breakdown



Top Material Carbon Impact

Aluminium Alloy Sheet	**12.75 kg CO_2e**
ABS Plastic Granules	**2.56 kg CO_2e**
Silicon Chip	**2.50 kg CO_2e**
Lithium-ion Battery	**1.20 kg CO_2e**
Copper Wire	**0.82 kg CO_2e**

Highlights & Emission Hotspots

- Material production (especially Aluminium) accounts for the largest share (42%) of the PCF.
- Use phase energy consumption is a significant contributor (31%) over the product's 5-year lifespan.
- Upstream supply chain (materials and transport) combined represents over 50% of the total footprint.

Action Plan: How to Reduce Footprint

- Explore lower-carbon alternative materials and increase recycled content for BOM components.
- Enhance manufacturing energy efficiency and boost renewable energy sourcing beyond 40%.
- Optimize logistics from Europe to China, prioritizing more carbon-efficient transport modes.
- Design for greater energy efficiency in the use phase and extend product lifespan further.
- Strengthen circular economy initiatives like product take-back programs to maximize material recovery.