

html

Product Carbon Footprint for xdkvnrsmhl

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Total Carbon Footprint: **25.5 kg CO₂e**

Functional Unit: **1.0 unit**

Standard: **GHG Protocol**

Boundary: **factory_gate**

Key Carbon Metrics

Total Footprint

25.5

kg CO₂e / unit

Carbon Intensity

25.5

kg CO₂e / unit

Top Hotspot

Raw Material A

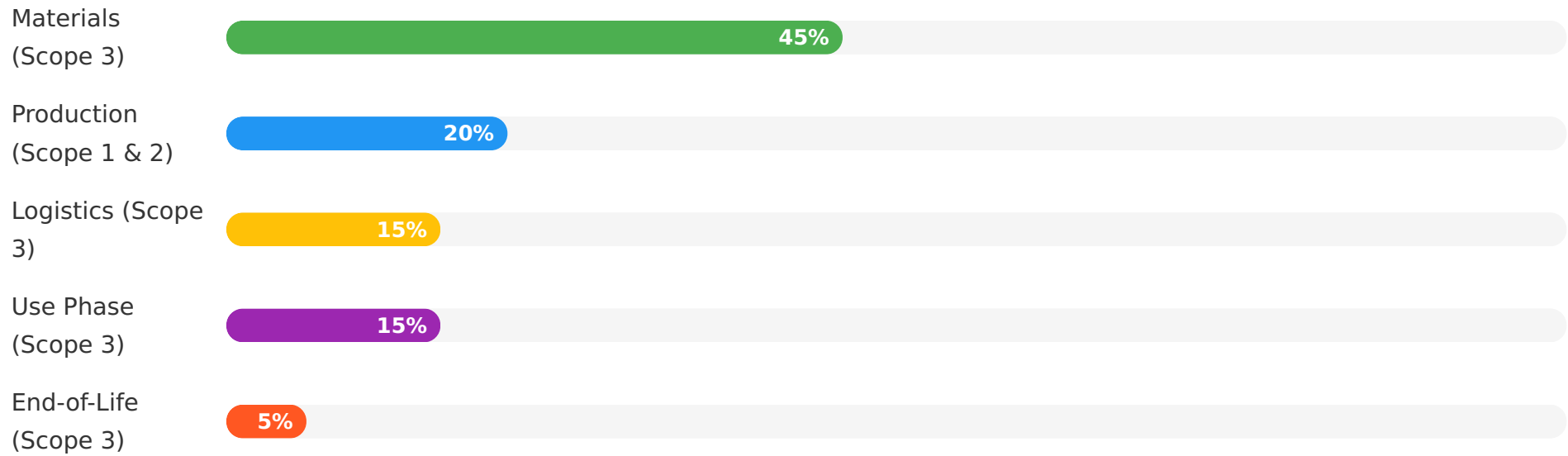
Metals

Primary Scope

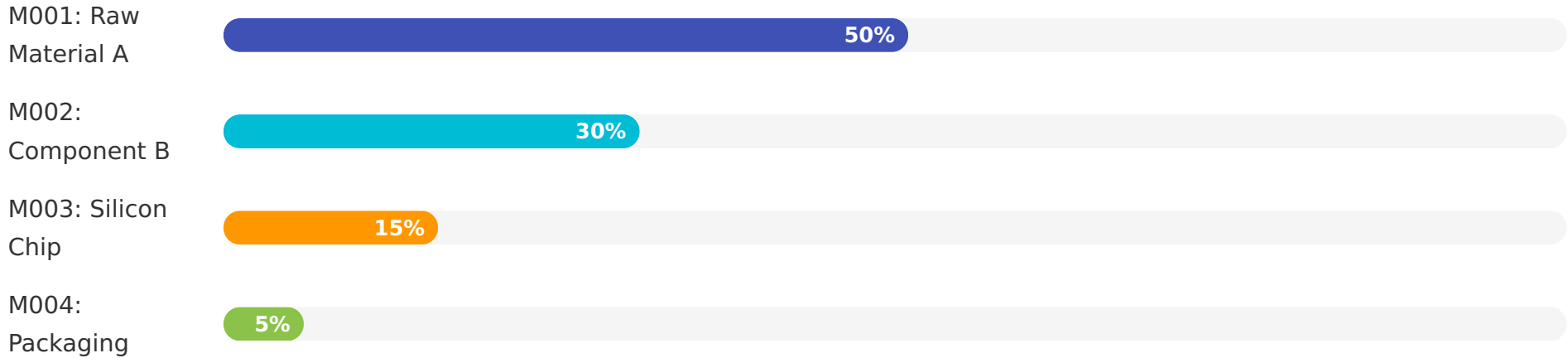
Scope 3

Purchased Goods & Services

Lifecycle Stage Breakdown



Material Carbon Impact



Highlights & Key Insights

Raw Material A (Metals) and Component B (Plastics) are the primary drivers of upstream emissions based on the detailed BOM.

The manufacturing phase shows significant impact, directly influenced by 120 kWh/unit energy intensity and a 15% renewable energy usage.

The European supply chain and 1500 km transport distance highlight logistics as a notable Scope 3 contributor.

Decarbonization Action Plan

Engage with Material Suppliers: Explore lower-carbon alternatives for materials like Raw Material A and Component B (e.g., recycled content).

Optimize Production Energy: Increase renewable energy sourcing beyond 15% and implement energy efficiency measures to reduce 120 kWh/unit.

Streamline Logistics: Investigate alternative transport modes for the 500 km distance or optimize route planning and vehicle load factors.

Enhance Circularity: Leverage the 85% recyclability and 10% programs to maximize material recovery and minimize end-of-life impacts.

Redesign for Efficiency: Improve product energy efficiency during the 10-year use phase to reduce 20% consumption.