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Product Carbon Footprint: drzylsimpt

27.245 kg CO2e (per 1.0 unit)

Key Metrics

Total Footprint

27.245

kg CO2e per unit

Carbon Intensity

27.245

kg CO2e / unit

Top Material Hotspot

Aluminium Sheet

4.00 kg CO2e from BOM

Primary Emission Scope

Downstream Scope 3


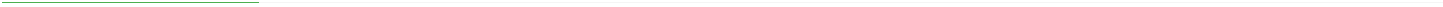

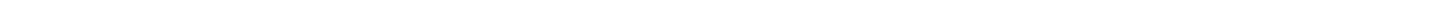
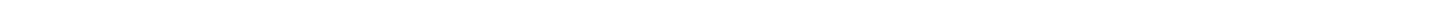
Mainly Use Phase (64.27%)

Detailed Carbon Breakdown

Lifecycle Stage Breakdown

Use Phase	64.27%
Raw Materials	21.65%
Production	12.85%
Inbound Transport	0.59%
Outbound Transport	0.40%
End-of-Life	0.26%
Last-Mile Delivery	0.01%

Material Carbon Impact (of total material footprint)

Aluminium Sheet		4.00 kg CO2e
ABS Plastic Granules		1.05 kg CO2e
Printed Circuit Board		0.50 kg CO2e
Copper Wire		0.25 kg CO2e
Corrugated Cardboard		0.10 kg CO2e

Key Insights

- The ****Use Phase**** dominates the product's carbon footprint, accounting for 64.2% of total emissions.
- ****Raw Materials Acquisition & Pre-processing**** is the second largest hotspot at 21.7%, with Aluminium Sheet being the most impactful material.
- ****Production emissions**** (12.8%) are notable despite 50% renewable energy usage, indicating room for further decarbonization.

Recommendations for Emission Reduction

- **Reduce Use Phase Emissions:** Focus on energy-efficient product design and promote renewable energy adoption by end-users.
- **Optimize Material Selection:** Research and adopt alternative, lower-carbon materials and increase recycled content.
- **Decarbonize Production:** Increase renewable energy procurement beyond 50% and implement further energy efficiency measures.
- **Enhance Circular Economy:** Strengthen existing take-back programs and explore design-for-disassembly to maximize material recovery.