

Product Carbon Footprint Analysis

for **xgdlsgggvg** by pqokugxrdv

26.45 kg CO2e / unit

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Key Metrics

Total Footprint

26.45 kg CO2e

per 1.0 unit

Carbon Intensity

26.45 kg CO2e

per functional unit

Top Material Hotspot

Aluminum Casing

3.33 kg CO2e (42.7% of materials)

Primary Emission Scope

Scope 3 Downstream

14.16 kg CO2e (53.5% of total)

Detailed Breakdown

Emission Scopes Breakdown

Scope 1 (Direct)	0.10 kg CO2e (0.36%)
Scope 2 (Energy Indirect)	4.28 kg CO2e (16.17%)
Scope 3 (Upstream)	7.94 kg CO2e (29.99%)
Scope 3 (Downstream)	14.16 kg CO2e (53.54%)

Lifecycle Stage Breakdown

Materials	7.79 kg CO2e (29.47%)
Manufacturing	4.37 kg CO2e (16.53%)
Upstream Transport	0.14 kg CO2e (0.54%)
Downstream Transport	0.48 kg CO2e (1.80%)
Use Phase	14.26 kg CO2e (53.91%)
End-of-Life (Credit)	-0.57 kg CO2e (-2.15%)

Material Carbon Impact

Aluminum Casing	3.33 kg CO2e (42.69%)
Circuit Board	2.38 kg CO2e (30.48%)
Lithium Battery	1.43 kg CO2e (18.29%)
ABS Plastic Shell	0.57 kg CO2e (7.31%)
Packaging Film	0.10 kg CO2e (1.22%)

Highlights

The **Use Phase** represents the largest carbon hotspot, contributing over 50% of the total footprint due to product energy consumption over its lifespan.

Material production, particularly for the Aluminum Casing and Circuit Board, forms a significant portion of upstream emissions, highlighting material sourcing as a key lever.

Manufacturing energy (Scope 2) is a notable contributor, indicating further opportunities for increasing renewable energy integration at production facilities.

