

html

carboncalcpcf.com

# Product Carbon Footprint Dashboard

**Product:** mxpfklnhed | **Total PCF:** 11.53 kgCO<sub>2</sub>e/unit

Comprehensive analysis adhering to GHG Protocol & 2026 LSR Update

Total Carbon Footprint

**11.53** kgCO<sub>2</sub>e

per 1.0 unit of mxpfklnhed

Carbon Intensity

**12.39** kgCO<sub>2</sub>e/kg

Based on 0.93 kg product weight

Top Material Hotspot

**Plastic Casing**

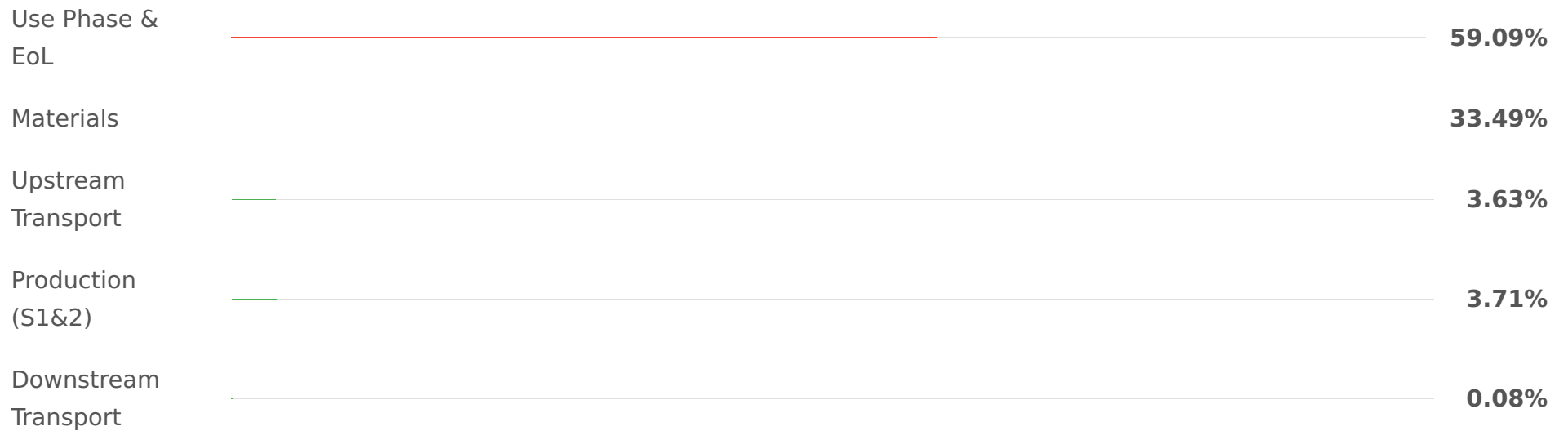
1.25 kgCO<sub>2</sub>e (32.38% of material impact)

Primary Emission Scope

## Scope 3

96.38% of total footprint (11.10 kgCO<sub>2</sub>e)

### Lifecycle Stage Breakdown



### Material Carbon Impact

## Key Insights

**Use Phase Dominance:** The product's energy consumption during its lifespan accounts for the largest share of emissions (7.5 kgCO2e, 59.09% of total), indicating a critical area for efficiency improvements.

**Material Hotspots:** Purchased materials, particularly the **Plastic Casing** and **Internal Battery**, are significant contributors (total 3.86 kgCO2e, 33.49% of total), highlighting the need for sustainable sourcing and design.

**Circular Economy Potential:** The End-of-Life phase demonstrates a net **avoided emission of -0.6975 kgCO2e** due to high recyclability (70%) and take-back programs, showcasing the benefits of circularity.

## Action Plan for Decarbonization

**Enhance Use Phase Efficiency:** Prioritize R&D for product energy reduction and user education on efficient operation to significantly cut the largest emission hotspot.

**Optimize Material Sourcing:** Shift towards recycled, lower-carbon, and sustainably certified materials. Collaborate with suppliers for transparent, primary emission data.

**Strengthen Circularity:** Expand and promote take-back schemes, design for durability, repairability, and further increase recyclability to maximize avoided emissions.

Plastic Casing	32.38%
Internal Battery	31.09%
Circuit Board	25.91%
Metal Fasteners	6.48%
Packaging Material	4.15%

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**Invest in Renewable Energy:** Increase the use of renewable energy in manufacturing facilities and encourage supply chain partners to do the same to reduce Scope 2 and upstream Scope 3 emissions.