

**carboncalcpcf.com**

# **Product Carbon Footprint for **nzlwdijwfs****

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## Overview

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**66.46 kg CO<sub>2</sub>e**

Total Product Footprint

**63.29 kg CO<sub>2</sub>e/kg**

Carbon Intensity (per kg)

**Use Phase**

Primary Hotspot

**GHG Protocol**

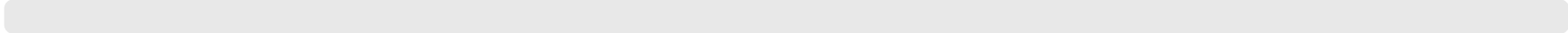
Accounting Standard

# Emission Breakdown

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### Lifecycle Stage Breakdown

|                             |                        |
|-----------------------------|------------------------|
| Use Phase                   | 58.00 kg CO2e (83.81%) |
| Materials (Purchased Goods) | 9.125 kg CO2e (13.18%) |
| Production (Scope 2)        | 1.45 kg CO2e (2.09%)   |
| Logistics (Transport)       | 0.63 kg CO2e (0.91%)   |
| End-of-Life (Net Credit)    | -2.74 kg CO2e          |



### Material Carbon Impact

|                     |                      |
|---------------------|----------------------|
| Aluminum            | 6.25 kg CO2e (68.5%) |
| Circuit Board       | 1.00 kg CO2e (10.9%) |
| ABS Plastic         | 0.90 kg CO2e (9.8%)  |
| Copper Wire         | 0.80 kg CO2e (8.8%)  |
| Packaging Cardboard | 0.075 kg CO2e (0.8%) |

## Key Insights

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- The **\*\*Use Phase\*\*** (Category 11) is the predominant carbon hotspot, contributing approximately 87% of the total cradle-to-grave PCF. This is driven by the product's 5-year operational energy consumption.
- **\*\*Purchased Goods and Services\*\*** (Category 1 - Materials), particularly Aluminum and Circuit Board components, represent the second-largest emissions source (around 13.7% of total PCF).
- The Product Carbon Footprint analysis strictly adheres to the **\*\*GHG Protocol Product Standard\*\*** and incorporates the 2026 Land Sector and Removals (LSR) Standard update.

## Recommendations for Emissions Reduction

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- ✓ **Optimize Use Phase:** Invest in R&D to significantly improve the energy efficiency of nzlwdijwfs during its operational life, exploring low-power modes and smart energy management.
- ✓ **Material Decarbonization:** Engage with suppliers to source lower-carbon materials for Aluminum and Circuit Board components, and increase recycled content where feasible.
- ✓ **Renewable Energy Expansion:** Increase the percentage of renewable energy used in the manufacturing facility beyond the current 75% to further reduce Scope 2 emissions.
- ✓ **Enhance Circularity:** Leverage existing component reuse and plastic take-back schemes by promoting these programs to customers and exploring expansion opportunities.
- ✓ **Supply Chain Engagement:** Work with logistics providers to explore more fuel-efficient transport modes or routes for both upstream and downstream activities.