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# Product Carbon Footprint: Spoon

Total PCF

**0.3187**  
kg CO2e / unit

**0.3187**

Total Footprint (kg CO2e)

**5.31**

Carbon Intensity (kg CO2e / kg Product)

**56.48%**

Top Material Hotspot (Stainless Steel)

**Scope 3**

Primary Emission Scope (60.84% of total)

## Emissions by Scope

<b>Scope 1</b> (Direct)	3.83%
<b>Scope 2</b> (Purchased Energy)	32.82%
<b>Scope 3</b> (Value Chain)	60.84%

## Top Emission Hotspots (by Activity)

Stainless Steel Production	56.48%
Purchased Electricity (NL Grid)	32.82%
Direct Natural Gas Combustion	3.83%
Packaging Production	3.17%
Upstream Transport	0.88%

## Key Insights

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The production of the stainless steel itself (Scope 3, Category 1) is the single largest contributor to the spoon's carbon footprint, accounting for approximately 56% of total emissions.

Purchased electricity for manufacturing (Scope 2) is the second most significant hotspot, contributing about 33% due to the energy-intensive processes and the Netherlands' grid mix.

The report adheres to the GHG Protocol's 2026 updates, aiming for at least 95% Scope 3 coverage within the factory-gate boundary, ensuring a comprehensive upstream analysis.

## Recommendations for Reduction

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**Material Optimization:** Increase recycled content in stainless steel and implement lean manufacturing to minimize material waste during production.

**Energy Decarbonization:** Transition to 100% renewable electricity for manufacturing operations and explore alternatives to natural gas for heating.

**Supply Chain Engagement:** Collaborate with stainless steel suppliers to encourage their decarbonization efforts and optimize raw material transport routes and modes.

**Packaging Reduction:** Design minimalist packaging, maximize recycled content, and ensure packaging is easily recyclable.