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Product Carbon Footprint Dashboard

Product: Panadol 10 Tablets

Functional Unit: 1.0 unit

System Boundary: Factory Gate (Cradle-to-Gate)

Total Footprint: 384.43 g CO_2e

Total Carbon Footprint

384.43 g CO_2e

Per 1.0 unit of Panadol 10 tablets

Production Country

Netherlands

Final manufacturing location

Top Material Hotspot

Paracetamol API

350.00 g CO_2e (91.05% of total)

Primary Emission Scope

Scope 3

Purchased Goods & Services

Emissions Breakdown by Lifecycle Stage

Raw Materials	95.40%
Manufacturing Energy	3.88%
Logistics (Upstream)	0.70%
Waste in Operations	0.01%

Note: "Cradle-to-gate" boundary excludes use & end-of-life phases.

Material Impact Contribution (Raw Materials only)

Paracetamol API	95.42%
Packaging Materials	3.48%
Excipients	1.09%

Proportion of total raw material emissions.

Key Insights & Highlights

- The production of the Active Pharmaceutical Ingredient (Paracetamol API) is by far the most significant contributor to the carbon footprint of Panadol 10 tablets within a cradle-to-gate boundary, accounting for approximately 91.05% of the total emissions.
- Packaging materials (blister, carton, leaflet) constitute the second largest emission hotspot, followed by manufacturing energy.
- The analysis adheres to the GHG Protocol, including the 2026 Land Sector and Removals (LSR) Standard update and ensures at least 95% Scope 3 coverage.

Recommendations for GHG Reduction

1. **API Sourcing and Production Optimization (Scope 3):**
    - Collaborate with API suppliers to decarbonize their manufacturing processes.
    - Explore alternative synthesis routes for Paracetamol with lower energy demands.
2. **Packaging Material Optimization (Scope 3):**
    - Investigate lightweighting and the use of recycled content for blister and carton materials.
    - Research lower-impact or innovative packaging designs without compromising product integrity.
3. **Manufacturing Energy Decarbonization (Scope 1 & 2):**
    - Increase renewable electricity procurement for manufacturing facilities in the Netherlands.
    - Improve energy efficiency and transition to lower-carbon heat sources for process heating.
4. **Supply Chain Engagement & Waste Reduction (Scope 3):**
    - Collaborate with suppliers on decarbonization and optimize inbound logistics.
    - Implement lean manufacturing principles to minimize waste and enhance recycling.