

Product Carbon Footprint Methodology Summary

Filtrona Group Holdings Ltd | June 2026



About this document

This document summarises the methodology Filtrona applies to calculate product-level carbon footprints (PCF) for its filter products, including the conventional Cellulose Acetate (CA) range and the ECO Range of plastic-free, biodegradable alternatives. It is intended to support customers and sustainability leads in understanding the basis of Filtrona's product carbon footprint data. Product-level PCF figures are available on request.

GHG Protocol

Product Standard

Cradle-to-customer gate

System boundary

Ecoinvent v3.7.1

Secondary emission factors

36–80% lower CO₂e

ECO Range vs CA equivalents

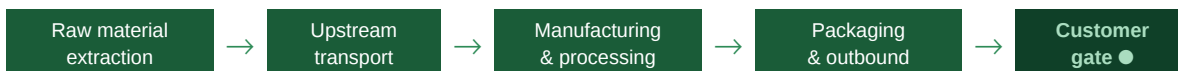
Our methodology

Reporting standard

Filtrona calculates product carbon footprints in accordance with the **GHG Protocol Corporate Value Chain (Scope 3) Product Standard** — the internationally recognised framework for quantifying greenhouse gas emissions associated with a product across its lifecycle. Calculations cover all IPCC 2013 greenhouse gases, converted to CO₂e using 2013 IPCC Global Warming Potentials.

System boundary

The system boundary applied is **cradle-to-customer gate**: from raw material extraction to the point at which finished products are delivered to the customer, including outbound transport. Use-phase and end-of-life emissions beyond the customer gate are excluded.



● System boundary ends at customer gate. Use phase and end-of-life not included.

What is included in each calculation

Input category	What it covers	Data type
Filter substrate	Primary filter material — cellulose acetate, cellulose fibre, or hybrid blend	Secondary (Ecoinvent v3.7.1 / published LCA literature)
Plug wrap	Paper wrapping for filter elements	Secondary (Ecoinvent v3.7.1)
Chemicals & additives	Triacetin, adhesives, activated carbon, flavour capsules where applicable	Secondary (Ecoinvent v3.7.1 / DEFRA)

Upstream transport	Freight from raw material supplier to Filtrona site, by mode and distance	Secondary (DEFRA 2020/2021)
Production energy	Energy consumed during manufacturing, based on actual machine and site data	Primary (site energy) + secondary (grid factors)
Packaging & outbound	Primary packaging and freight from Filtrona site to customer gate	Secondary (Ecoinvent v3.7.1 / DEFRA 2020/2021)

Product carbon footprint — illustrative comparison

The table below shows the range of carbon footprint reductions across Filtrona's ECO Range relative to conventional cellulose acetate equivalents, expressed as kg CO₂e per kg of finished filter product. Specific figures for individual product specifications are available on request.

Product type	Conventional CA (kg CO ₂ e / kg)	ECO Range (kg CO ₂ e / kg)	Reduction
Mono filter	~6.95	~1.36	~80%
Flavour capsule filter	~8.73	~3.77	~57%
Tube dual filter	~7.61	~4.86	~36%
Active dual filter	~7.81	~5.01	~36%

Figures calculated using the Filtrona PCF Calculator. All figures are representative estimates based on standard product specifications and have not been independently verified.

Data quality and verification status

What we have	Status	Next step
GHG Protocol Product Standard methodology	✓ In place	Maintain and update as standards evolve
Site-specific production data	✓ Primary data	Continue collecting per product run
Secondary emission factors (Ecoinvent, DEFRA)	✓ In use	EF refresh under review with methodology provider
Third-party verification	In progress	Independent verification of methodology planned
Supplier primary data for raw material EFs	In progress	Engaging key suppliers to replace secondary EFs

Request product carbon footprint data

Customers requiring product-level PCF data to support their Scope 3 reporting can request Filtrona's supplier data pack, which includes product-specific carbon footprint figures with full methodology disclosure. Contact your Filtrona account manager or reach the ESG team directly.

sustainability@filtrona.com →

This document is provided for informational purposes to support customer sustainability reporting. Product carbon footprint figures are calculated using the Filtrona PCF Calculator, aligned with the GHG Protocol Product Standard. All figures represent estimates based on representative product specifications and have not been independently verified. Filtrona is pursuing third-party verification of its PCF methodology. Specific figures may vary by product specification, production location and material sourcing. Full methodology documentation is available on request.