

greenly

2025-09-16

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

454703 (sold in FR)

Summary



01 | Methodology



02 | Results

01

Methodology

Environmental Impact Assessment

Functional unit	<p>The functional unit is a quantified performance of a product system for use as a reference unit. One of the primary purposes of a functional unit is to provide a reference to which the input and output data are normalized (in a mathematical sense).</p> <p>The functional unit of this analysis is "1 set(s) of bound pages of paper for the purpose of writing".</p>
Impact Indicator	<p>The impact is measured through the "IPCC 2013 GWP 100a" method.</p>
Electricity impact calculation method	<p>Following guidelines from the GHG Protocol, the impact of electricity is calculated using the location-based approach. This means that the emission factors used represent the average annual carbon intensity of the power grid in the country the processes take place in.</p>
Hypothesis	<p>The Product's material composition is supplemented, if necessary, by secondary information as shown in the list below.</p> <ul style="list-style-type: none"> - pages: Paper 84% - cover: Cardboard 12% - binding: Metal 4% <p>Manufacturing Processes and associated loss percentages are assumed based on materials in the product.</p> <p>The electricity is based on the average in the country of manufacturing.</p> <p>Transportation is based on the common routes between the country of manufacturing and the country of sale.</p> <p>No replacements during the lifetime, therefore there are no emissions corresponding to the usage phase of the clipboard.</p> <p>The End of Life is based on the average waste management process of the materials in the product.</p>

Environmental Impact Assessment

System Boundaries

The scope of this research includes the complete lifecycle of a notebook from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

Exclusions

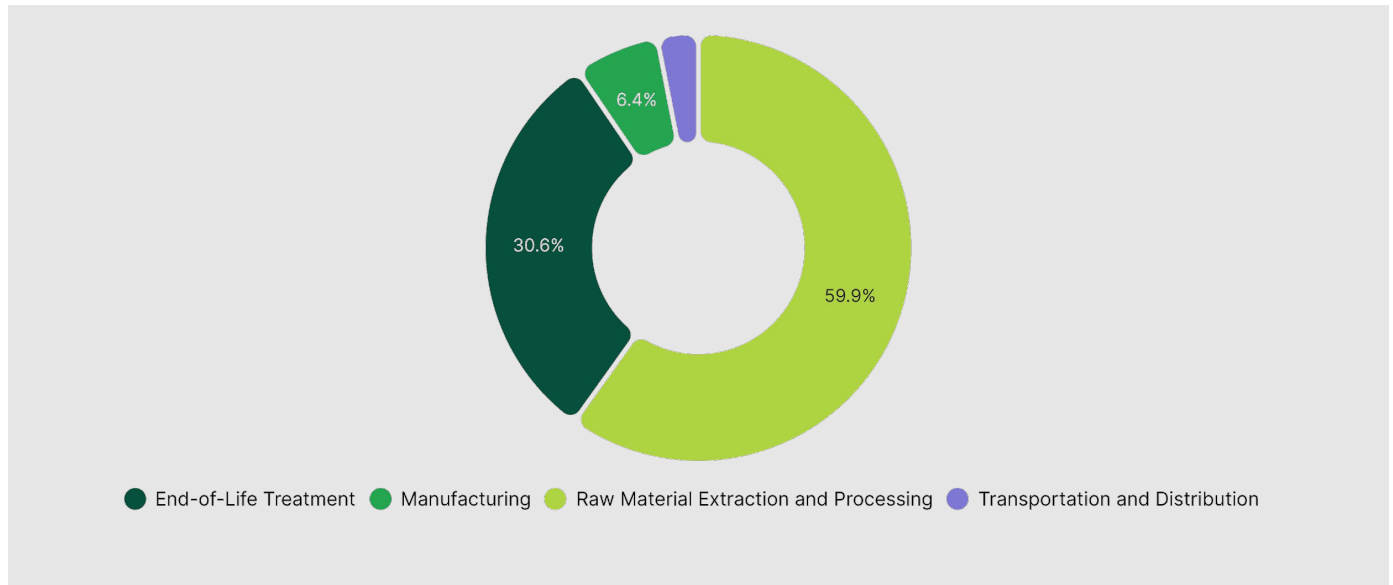
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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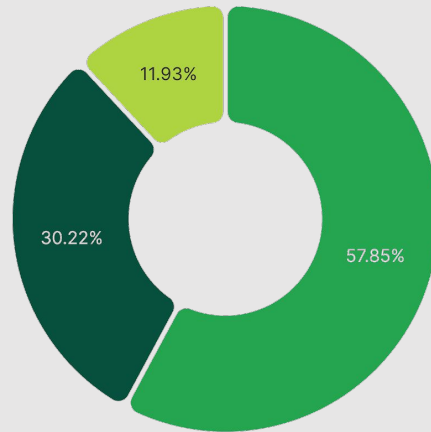
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	145.29	59.88 %
End-of-Life Treatment	74.24	30.60 %
Manufacturing	15.6	6.43 %
Transportation and Distribution	7.49	3.09 %
TOTAL	242.63	100.00 %

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Climate Change - Raw Material Extraction and Processing

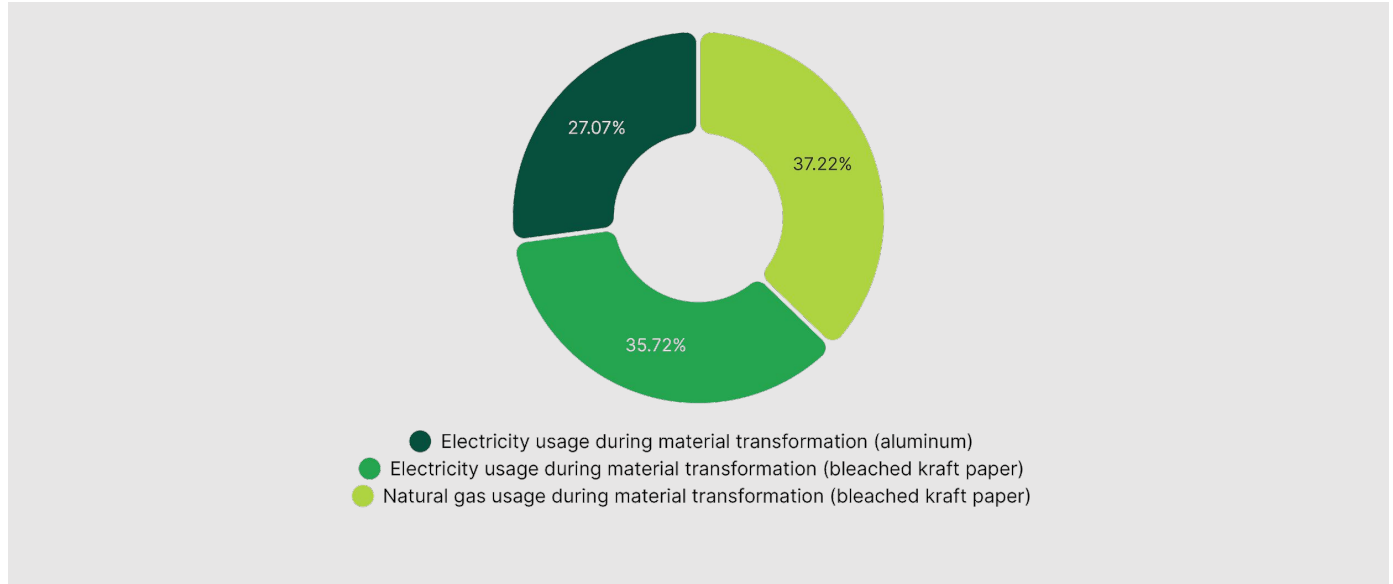


● Sourcing of raw material (aluminum) ● Sourcing of raw material (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	3	0.17	84.05	57.85 %
Sourcing of raw material (aluminum)	1	5.89 · 10 ⁻³	43.91	30.22 %
Sourcing of raw material (cardboard)	2	0.02	17.34	11.93 %
TOTAL			145.29	100.00 %

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Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Natural gas usage during material transformation (bleached kraft paper)	5	0.03	5.81	37.22 %
Electricity usage during material transformation (bleached kraft paper)	4	0.06	5.57	35.72 %
Electricity usage during material transformation (aluminum)	4	0.05	4.22	27.07 %
TOTAL			15.6	100.00 %

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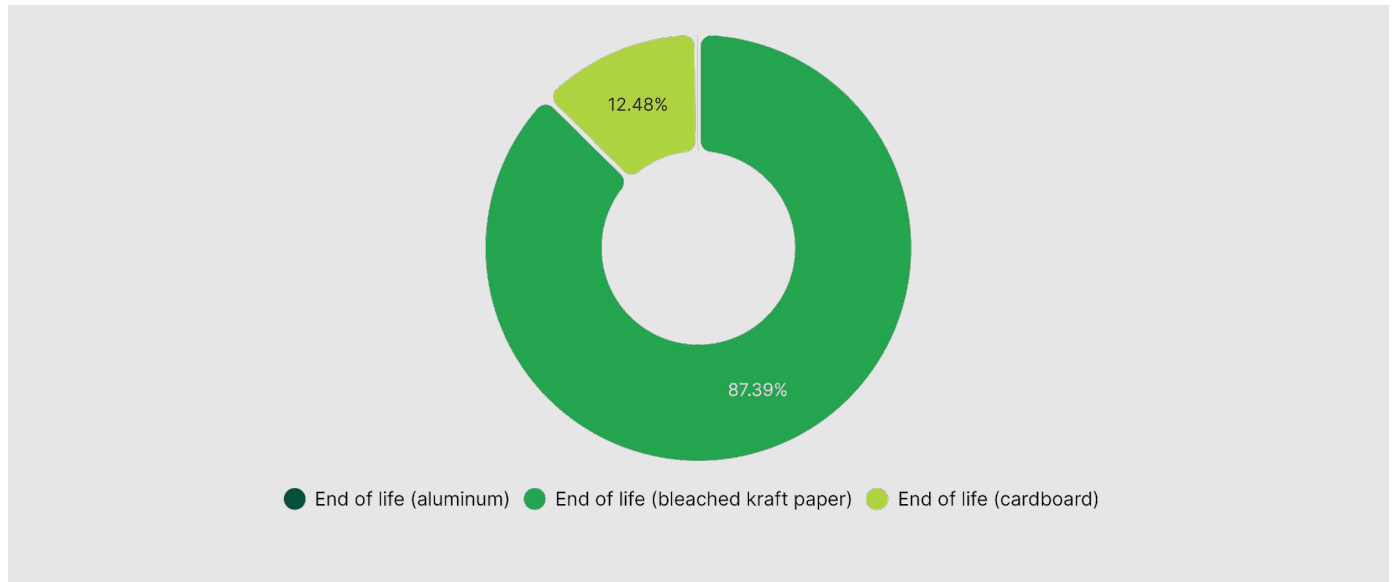
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	6	0.13	7.49	100.00 %
TOTAL			7.49	100.00 %

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Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper)	8	0.11	64.88	87.39 %
End of life (cardboard)	8	0.02	9.27	12.48 %
End of life (aluminum)	7	5.36 · 10 ⁻³	0.09	0.12 %
TOTAL			74.24	100.00 %

Contact us

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