

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

9351593 (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

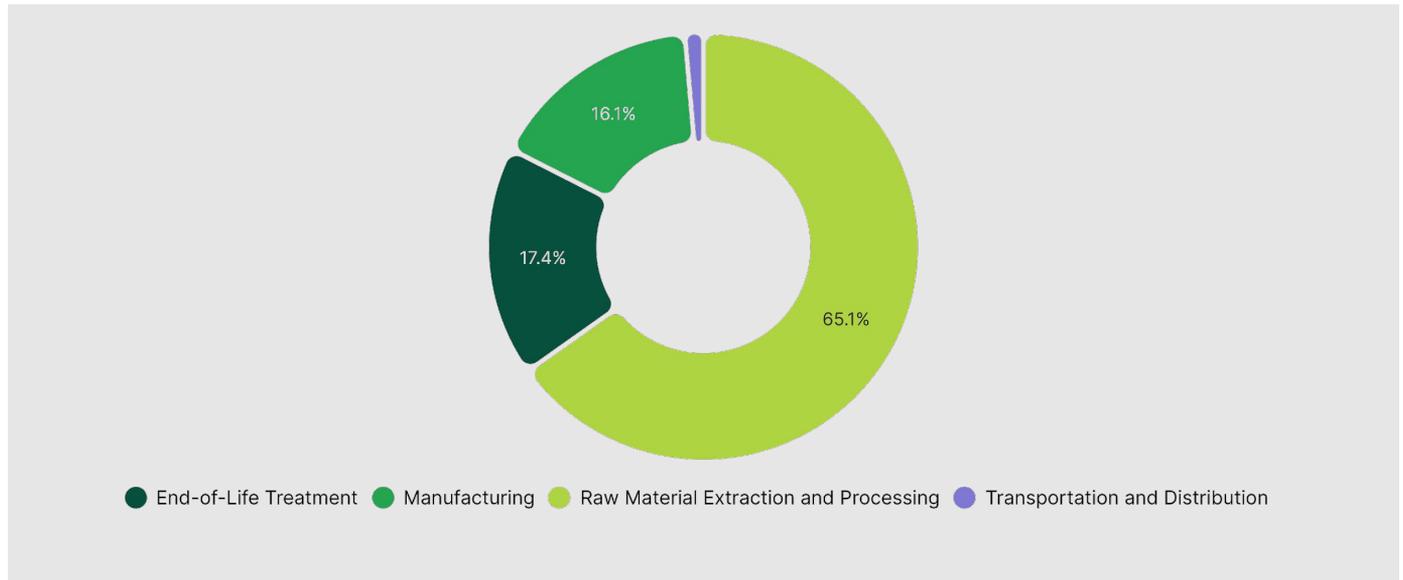
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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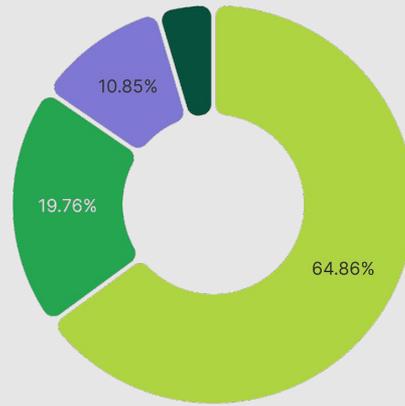
Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.8	65.14 %
End-of-Life Treatment	0.21	17.39 %
Manufacturing	0.2	16.09 %
Transportation and Distribution	0.02	1.38 %
TOTAL	1.22	100.00 %

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Climate Change - Raw Material Extraction and Processing

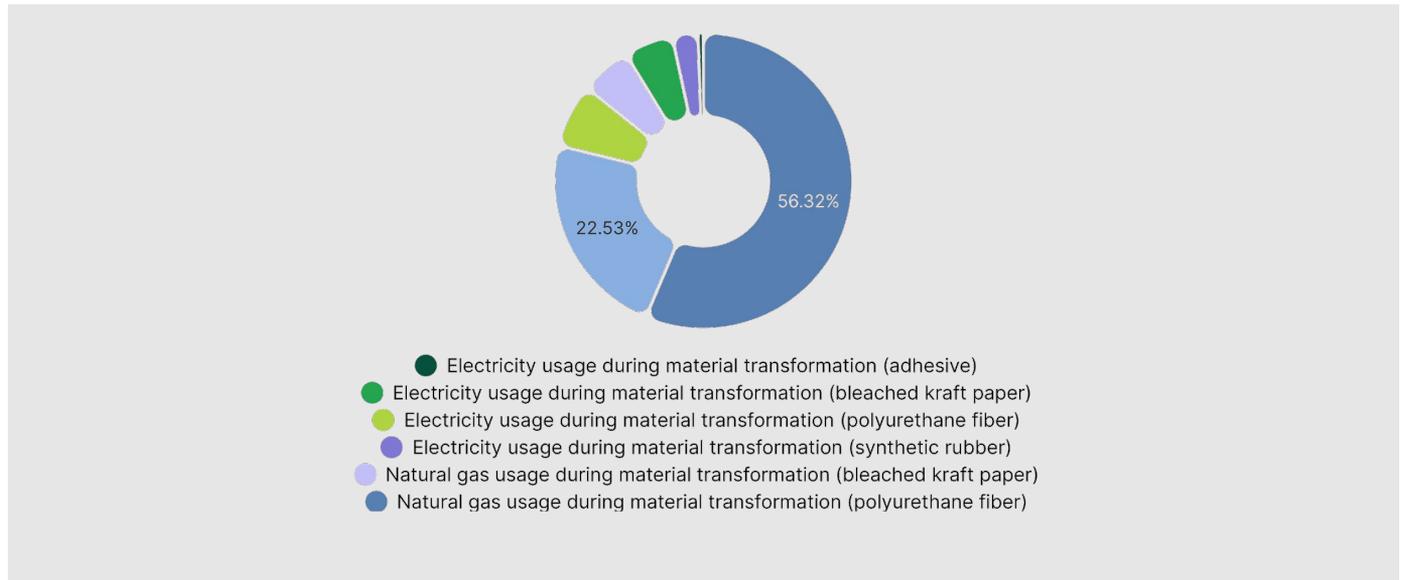


● Sourcing of raw material (adhesive)
 ● Sourcing of raw material (bleached kraft paper)
 ● Sourcing of raw material (polyurethane fiber)
 ● Sourcing of raw material (synthetic rubber)

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (polyurethane fiber)	2	0.08	517.33	64.86 %
Sourcing of raw material (bleached kraft paper)	4	0.32	157.57	19.76 %
Sourcing of raw material (synthetic rubber)	3	0.03	86.54	10.85 %
Sourcing of raw material (adhesive)	1	6.63 · 10 ⁻³	36.14	4.53 %
TOTAL			797.58	100.00 %

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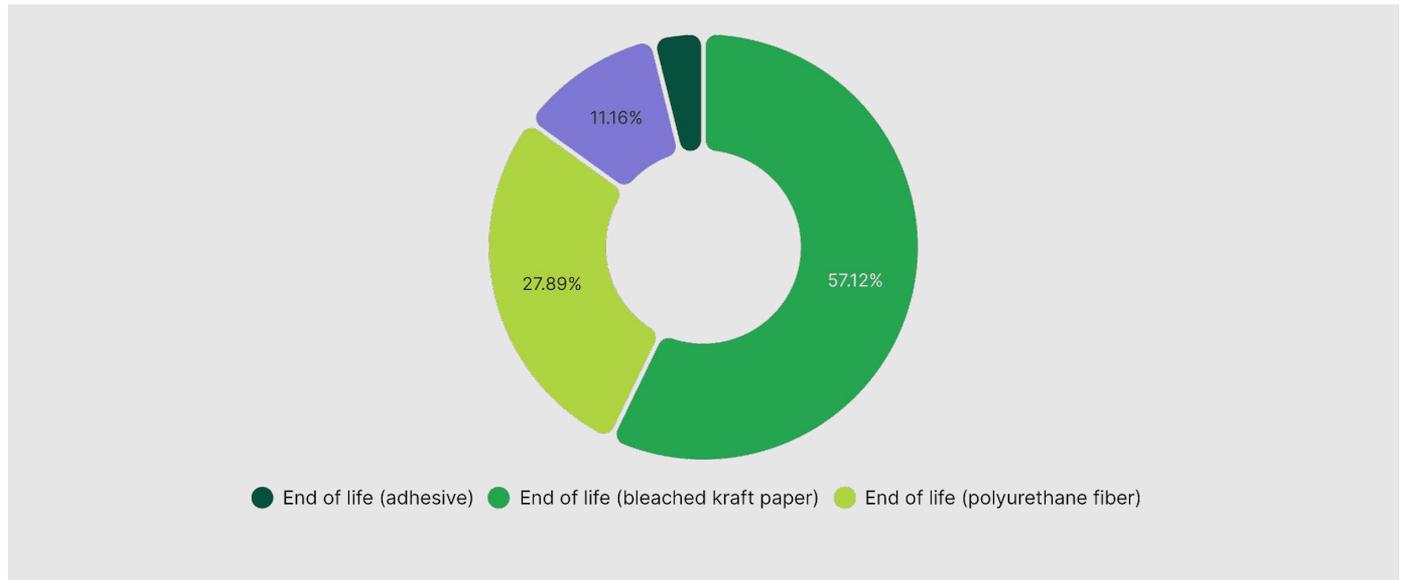
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Natural gas usage during material transformation (polyurethane fiber)	5	0.61	110.98	56.32 %
Natural gas usage during material transformation (synthetic rubber)	5	0.25	44.39	22.53 %
Electricity usage during material transformation (polyurethane fiber)	6	0.15	13.71	6.96 %
Natural gas usage during material transformation (bleached kraft paper)	5	0.06	10.89	5.52 %
Electricity usage during material transformation (bleached kraft paper)	6	0.11	10.45	5.30 %
Electricity usage during material transformation (synthetic rubber)	6	0.06	5.48	2.78 %
Electricity usage during material transformation (adhesive)	6	0.01	1.15	0.58 %
TOTAL			197.05	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)	10	0.21	121.65	57.12 %
End of life (polyurethane fiber)	9	0.06	59.4	27.89 %
End of life (synthetic rubber)	9	0.02	23.76	11.16 %
End of life (adhesive)	8	6.02 · 10 ⁻³	8.16	3.83 %
TOTAL			212.96	100.00 %

Contact us

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