

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

13008391 (sold in DE)

Summary



01 | Methodology



02 | Results

01

Methodology

Environmental Impact Assessment

<p>Functional unit</p>	<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). The functional unit of this analysis is "24 set(s) of bound pages of paper for the purpose of writing".</p>
<p>Impact Indicator</p>	<p>The impact is measured through the "IPCC 2013 GWP 100a" method.</p>
<p>Electricity impact calculation method</p>	<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>
<p>Hypothesis</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

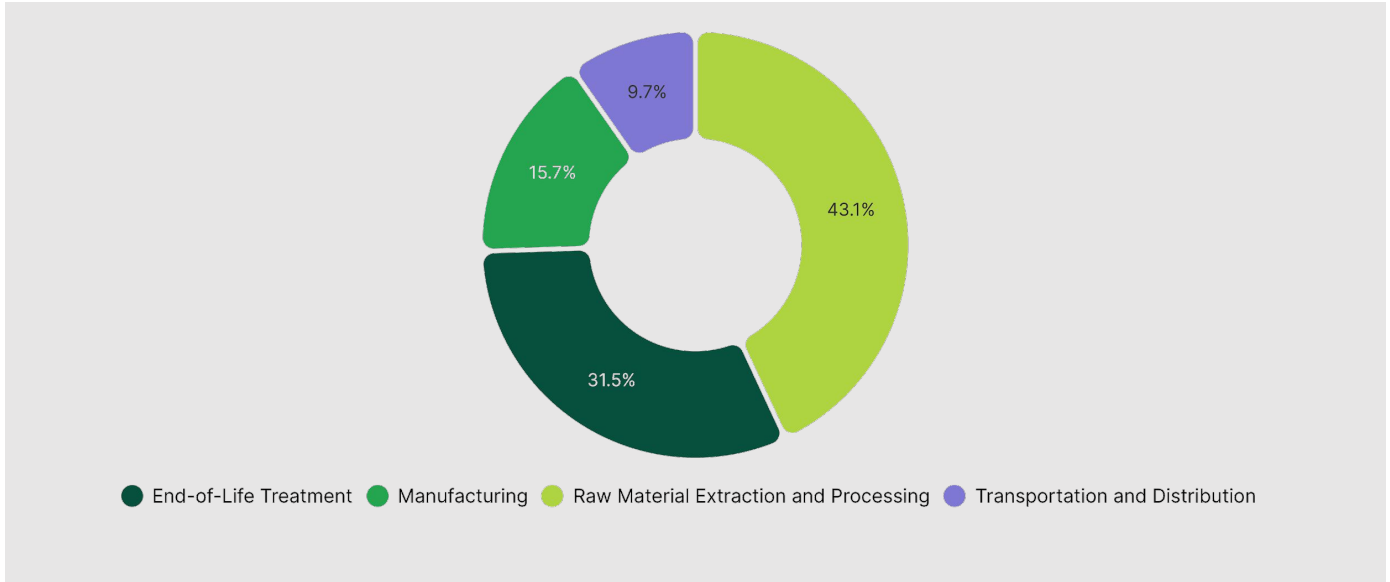
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.87	43.05 %
End-of-Life Treatment	0.64	31.47 %
Manufacturing	0.32	15.74 %
Transportation and Distribution	0.2	9.73 %
TOTAL	2.02	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)

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	1.62	805.62	92.50 %
Sourcing of raw material (adhesive)	2	0.01	65.32	7.50 %

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TOTAL			870.95	100.00 %
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Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	3	0.57	252.99	79.44 %
Natural gas usage during material transformation (bleached kraft paper)	4	0.31	55.66	17.48 %
Electricity usage during material transformation (adhesive)	3	0.02	9.83	3.09 %
TOTAL			318.48	100.00 %

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Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	5	1.09	196.88	100.00 %
TOTAL			196.88	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)	6	1.08	621.95	97.68 %
End of life (adhesive)	7	0.01	14.74	2.32 %
TOTAL			636.69	100.00 %

Contact us

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