

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

15642748 (sold in PL)

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 "18 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

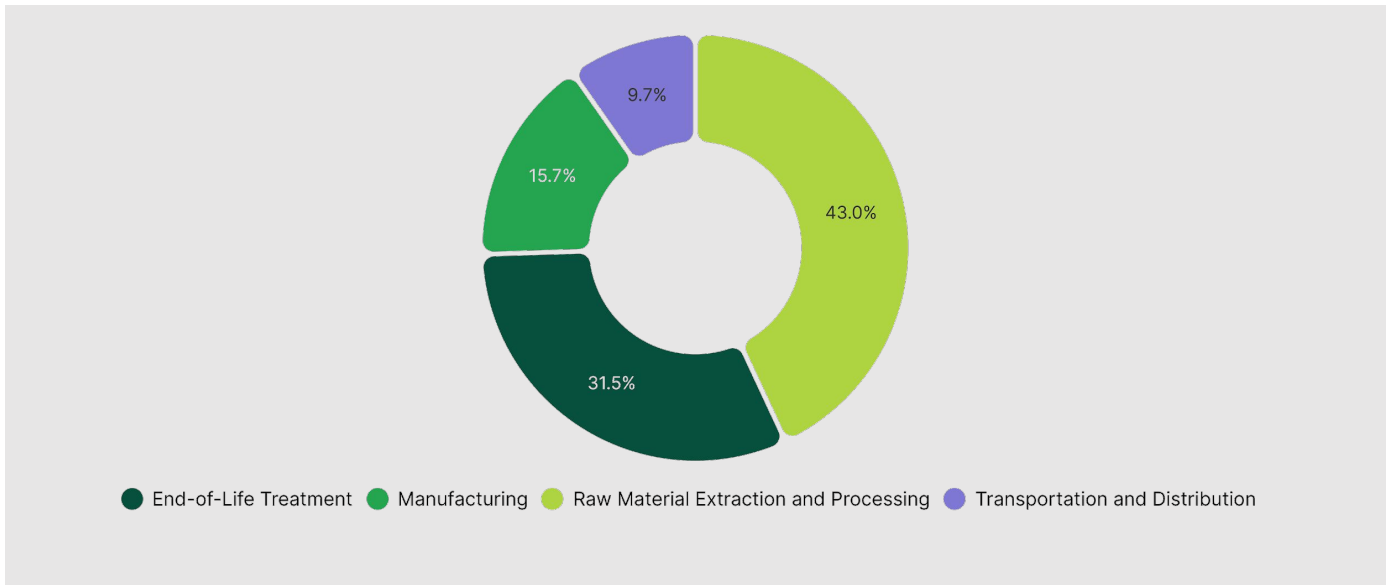
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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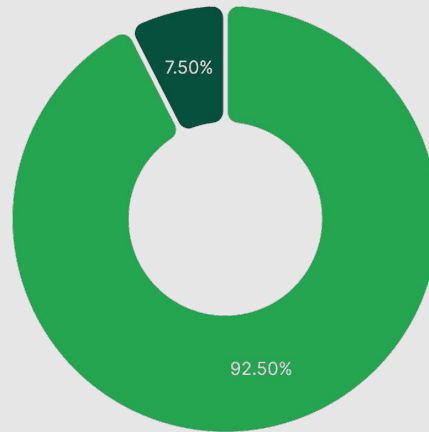
Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.53	43.05 %
End-of-Life Treatment	0.39	31.47 %
Manufacturing	0.19	15.74 %
Transportation and Distribution	0.12	9.74 %
TOTAL	1.23	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	0.98	488.62	92.50 %
Sourcing of raw material (adhesive)	2	7.27 · 10 ⁻³	39.62	7.50 %
TOTAL			528.24	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	0.35	153.44	79.44 %
Natural gas usage during material transformation (bleached kraft paper)	4	0.19	33.76	17.48 %
Electricity usage during material transformation (adhesive)	3	0.01	5.96	3.09 %
TOTAL			193.16	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)	7	0.65	377.22	97.68 %
End of life (adhesive)	6	6.6 · 10 ⁻³	8.94	2.32 %
TOTAL			386.16	100.00 %

Contact us

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