

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

19210639 (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 "1 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

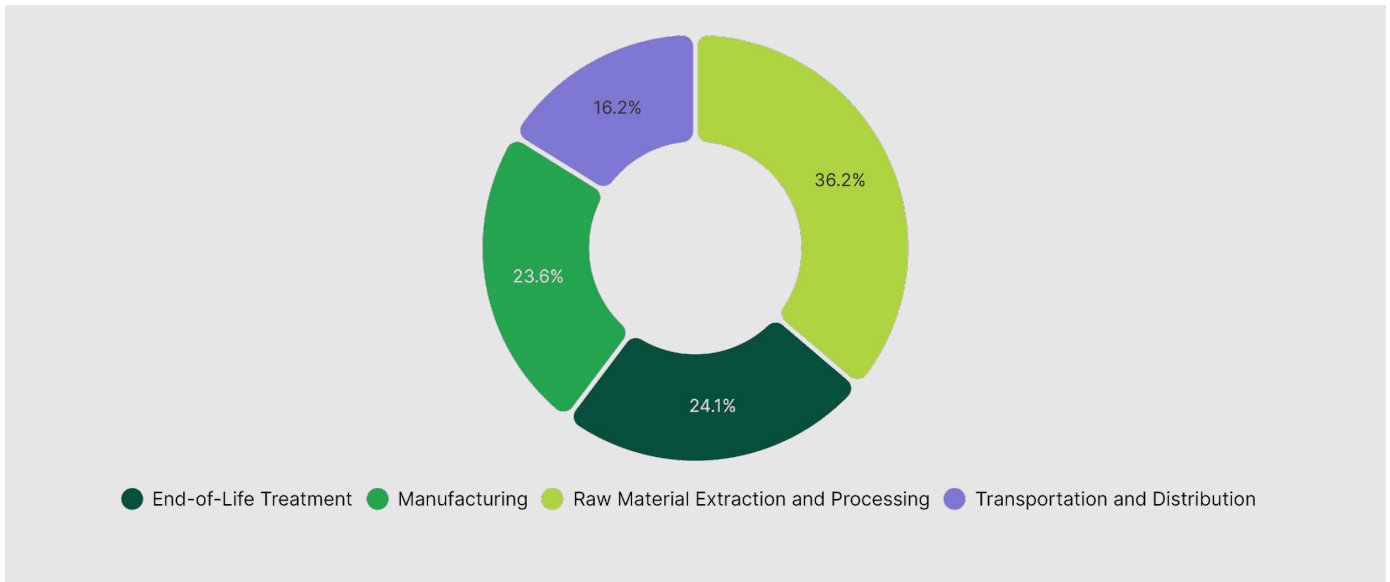
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

19210639 (sold in PL)

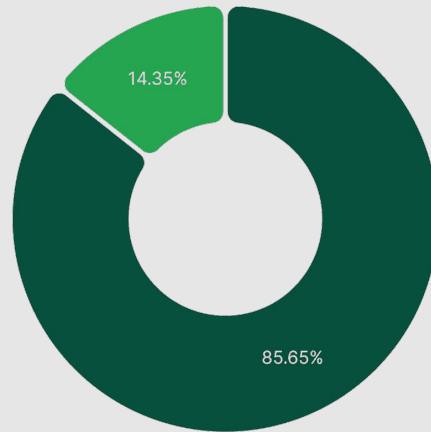
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	144.93	36.21 %
End-of-Life Treatment	96.39	24.08 %
Manufacturing	94.28	23.55 %
Transportation and Distribution	64.66	16.15 %
TOTAL	400.25	100.00 %

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Climate Change - Raw Material Extraction and Processing



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

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	0.25	124.14	85.65 %
Sourcing of raw material (steel)	2	9.62 · 10 ⁻³	20.79	14.35 %

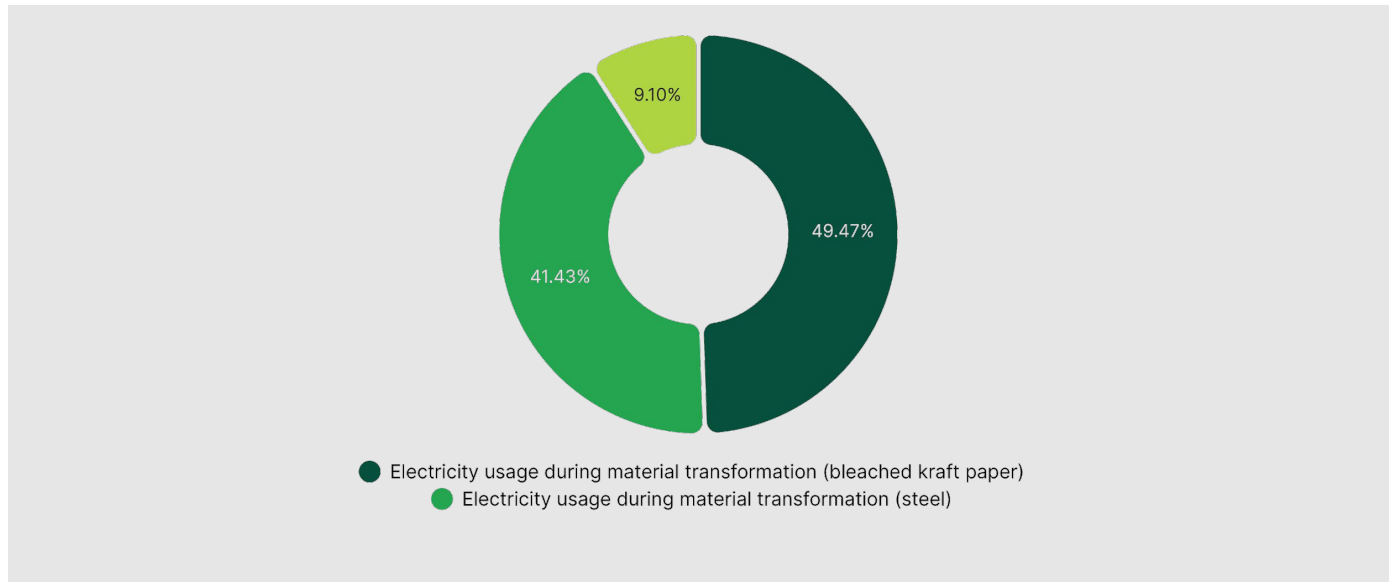
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TOTAL			144.93	100.00 %
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Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	3	0.09	46.64	49.47 %
Electricity usage during material transformation (steel)	3	0.07	39.06	41.43 %
Natural gas usage during material transformation (bleached kraft paper)	4	0.05	8.58	9.10 %
TOTAL			94.28	100.00 %

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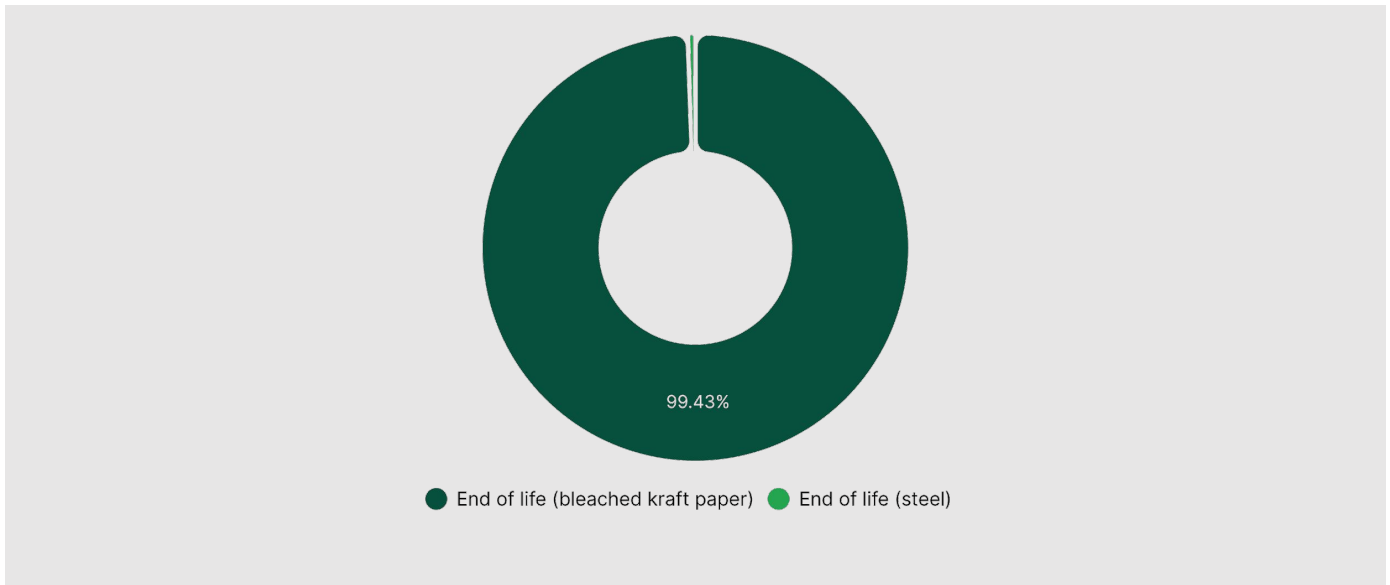
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	5	0.18	64.66	100.00 %
TOTAL			64.66	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	0.17	95.83	99.43 %
End of life (steel)	6	8.74 · 10 ⁻³	0.55	0.57 %
TOTAL			96.39	100.00 %

Contact us

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