

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

19210594 (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

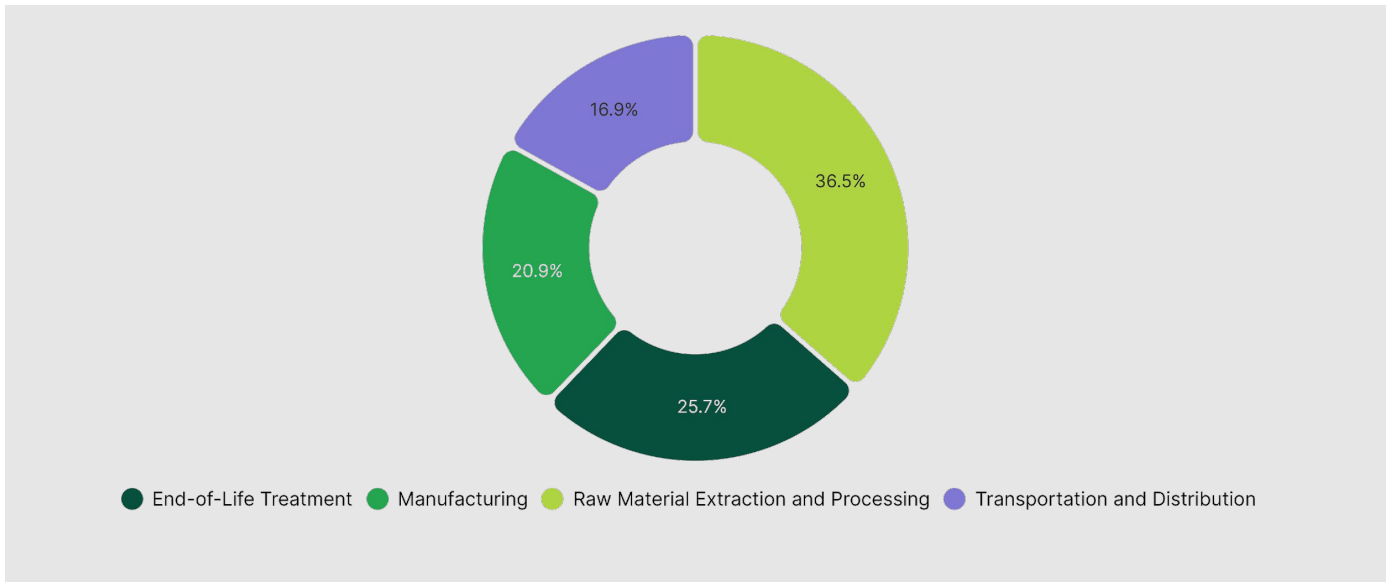
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

19210594 (sold in PL)

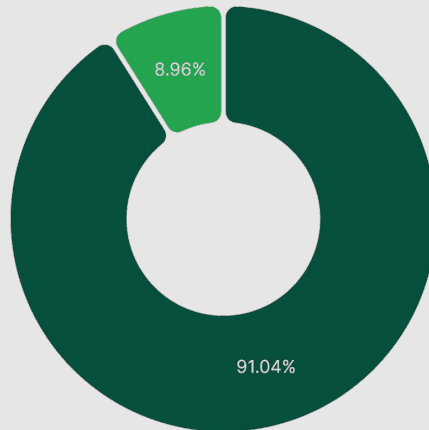
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	166.27	36.46 %
End-of-Life Treatment	117.26	25.71 %
Manufacturing	95.32	20.90 %
Transportation and Distribution	77.22	16.93 %
TOTAL	456.07	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	0.3	151.37	91.04 %
Sourcing of raw material (steel)	2	$6.89 \cdot 10^{-3}$	14.9	8.96 %

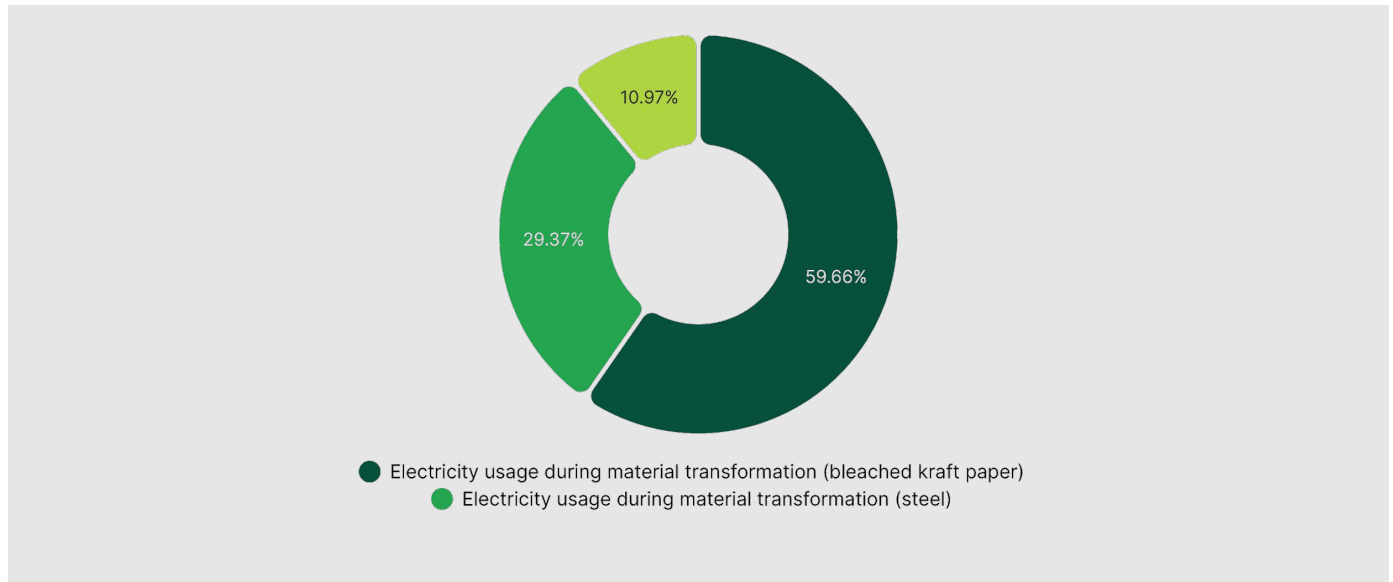
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TOTAL			166.27	100.00 %
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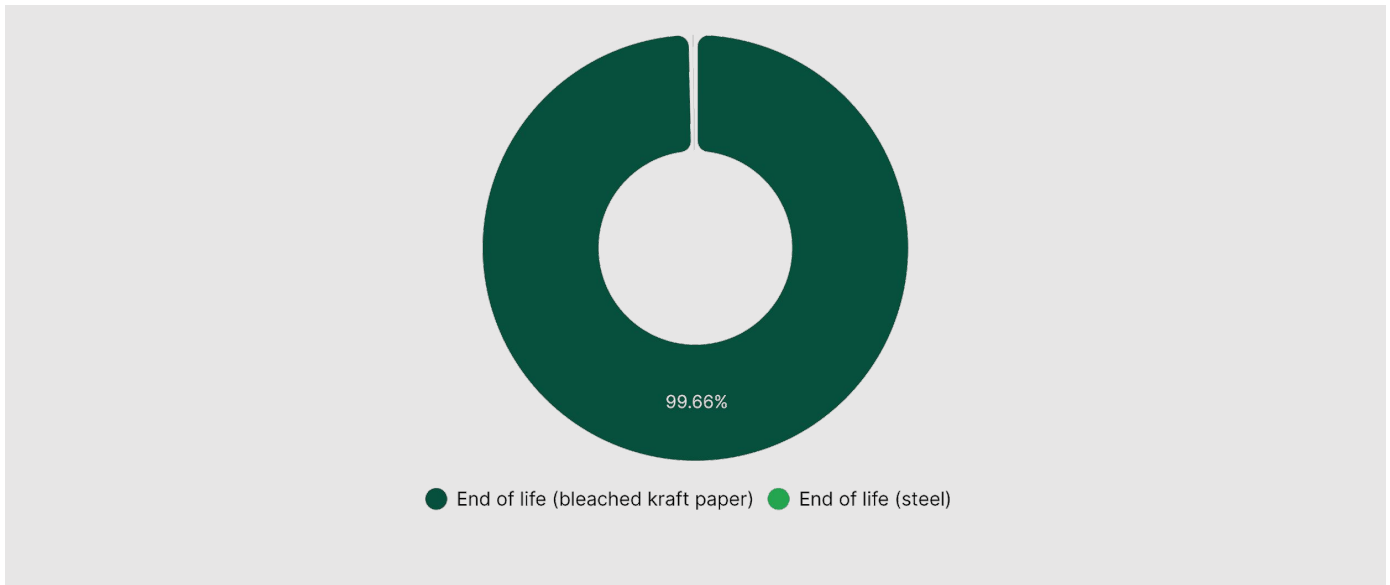
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	3	0.11	56.87	59.66 %
Electricity usage during material transformation (steel)	3	0.05	27.99	29.37 %
Natural gas usage during material transformation (bleached kraft paper)	4	0.06	10.46	10.97 %
TOTAL			95.32	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	0.2	116.86	99.66 %
End of life (steel)	6	6.27 · 10 ⁻³	0.4	0.34 %
TOTAL			117.26	100.00 %

Contact us

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