

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

19210572 (sold in WI)

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	

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

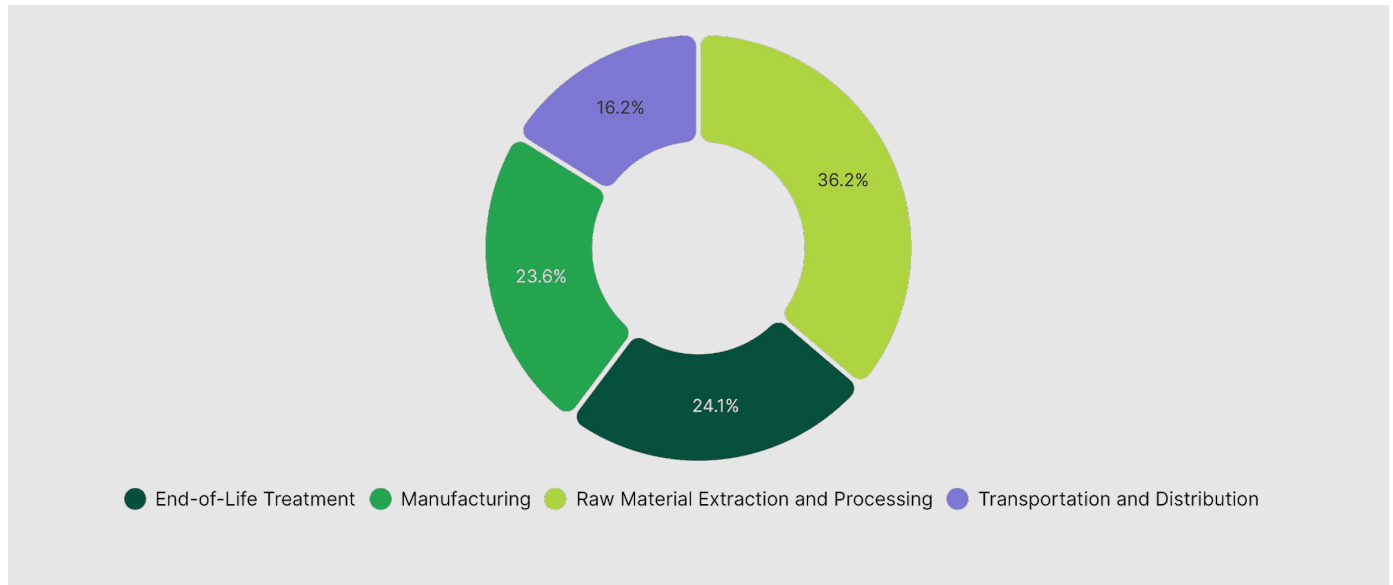
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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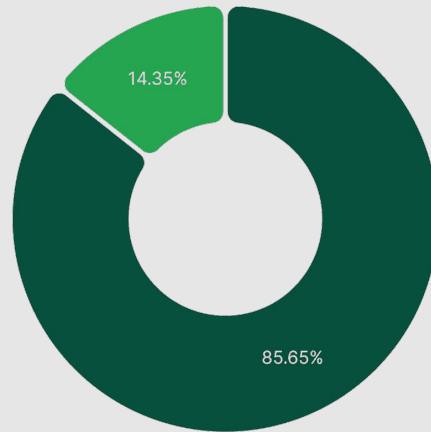
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	279.09	36.21 %
End-of-Life Treatment	185.61	24.08 %
Manufacturing	181.55	23.55 %
Transportation and Distribution	124.51	16.15 %
TOTAL	770.77	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	0.48	239.05	85.65 %
Sourcing of raw material (steel)	2	0.02	40.04	14.35 %

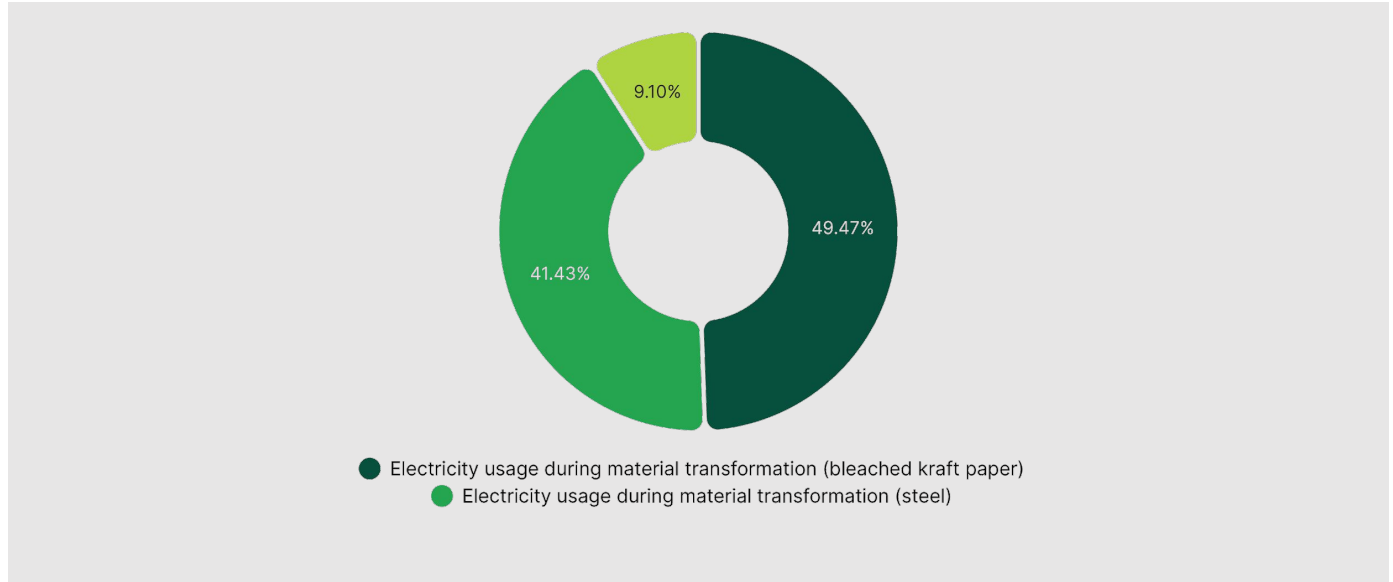
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TOTAL			279.09	100.00 %
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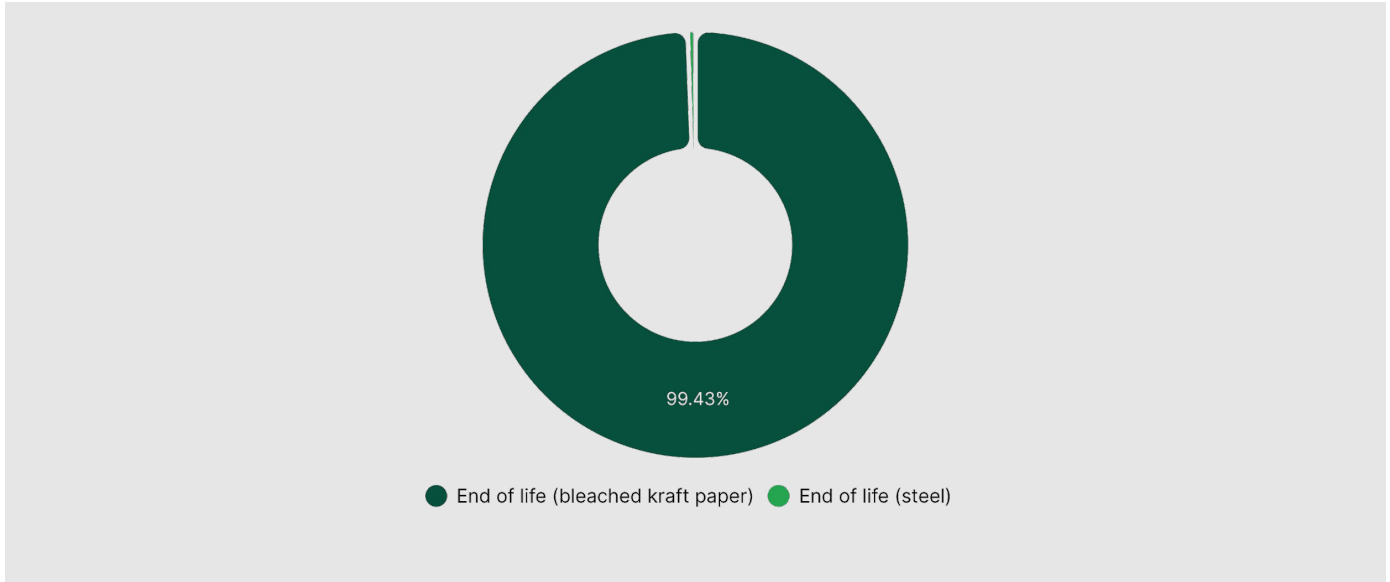
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	3	0.17	89.81	49.47 %
Electricity usage during material transformation (steel)	3	0.14	75.22	41.43 %
Natural gas usage during material transformation (bleached kraft paper)	4	0.09	16.51	9.10 %
TOTAL			181.55	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	0.32	184.55	99.43 %
End of life (steel)	6	0.02	1.06	0.57 %
TOTAL			185.61	100.00 %

Contact us

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