

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

12953242 (sold in WI)

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 "6 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

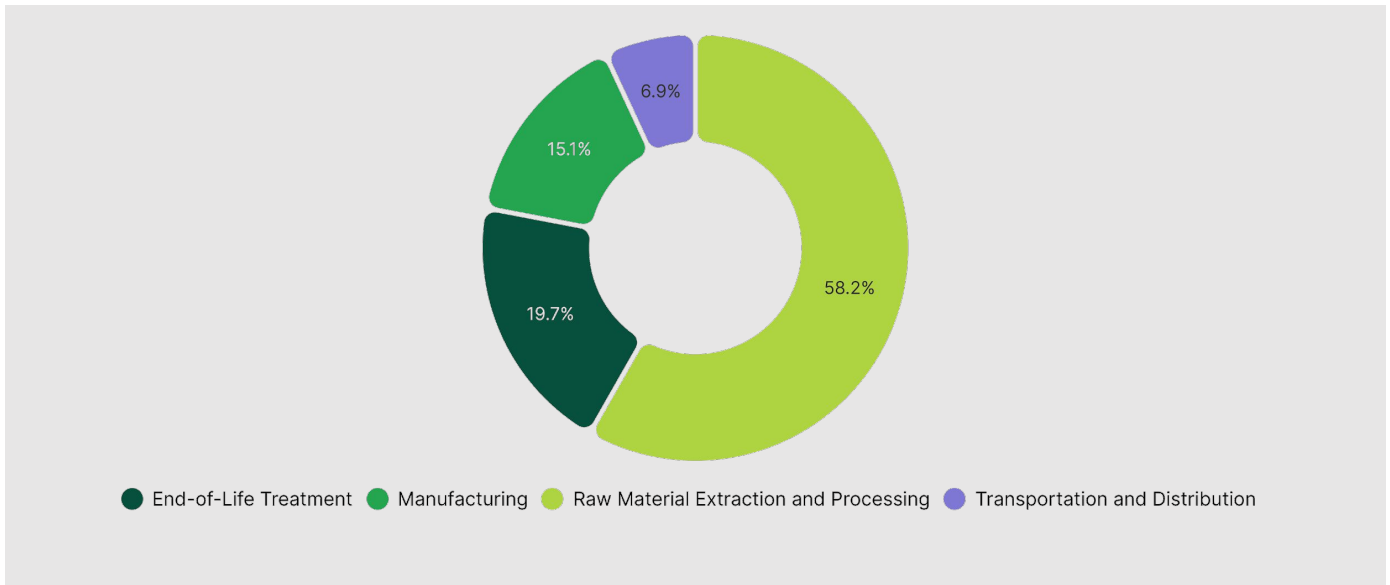
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

12953242 (sold in WI)

Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.71	58.25 %
End-of-Life Treatment	0.24	19.75 %
Manufacturing	0.18	15.07 %
Transportation and Distribution	0.08	6.94 %
TOTAL	1.21	100.00 %

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Climate Change - Raw Material Extraction and Processing



● Sourcing of raw material (adhesive) ● Sourcing of raw material (coloured kraft paper)

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (coloured kraft paper)	2	0.61	681.91	96.52 %
Sourcing of raw material (adhesive)	1	4.5 · 10 ⁻³	24.57	3.48 %

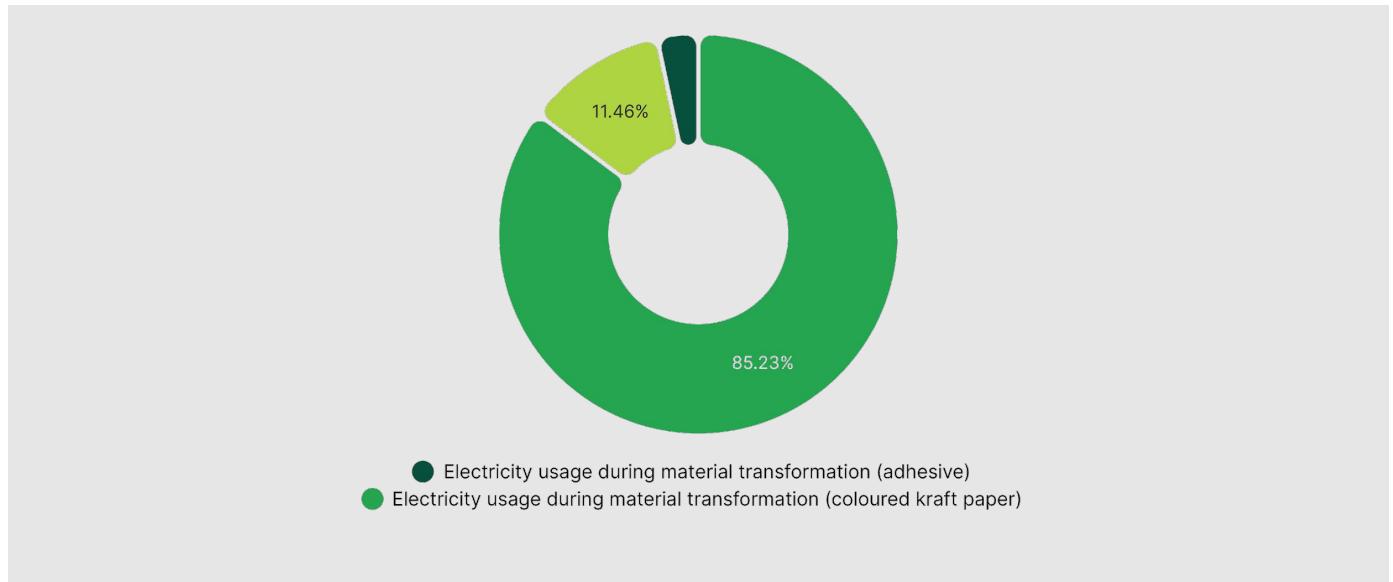
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TOTAL			706.48	100.00 %
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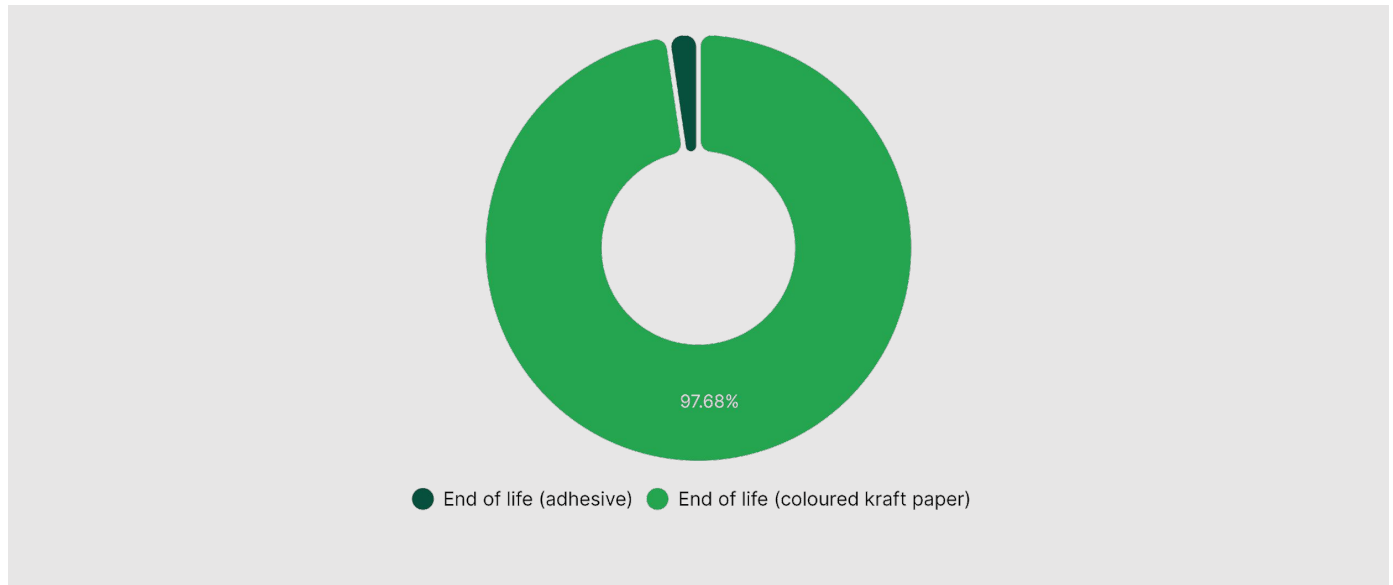
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (coloured kraft paper)	4	0.22	155.74	85.23 %
Natural gas usage during material transformation (coloured kraft paper)	3	0.12	20.94	11.46 %
Electricity usage during material transformation (adhesive)	4	8.37 · 10 ⁻³	6.05	3.31 %
TOTAL			182.73	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 (coloured kraft paper)	7	0.41	233.98	97.68 %
End of life (adhesive)	6	4.09 · 10 ⁻³	5.55	2.32 %
TOTAL			239.52	100.00 %

Contact us

Alexis Normand CEO

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