

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

19210572 (sold in FR)

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>	<p>The Product's material composition is supplemented, if necessary, by secondary information as shown in the list below.</p> <ul style="list-style-type: none"> - pages: Paper 84% - cover: Cardboard 12% - binding: Metal 4% <p>Manufacturing Processes and associated loss percentages are assumed based on materials in the product.</p> <p>The electricity is based on the average in the country of manufacturing.</p> <p>Transportation is based on the common routes between the country of manufacturing and the country of sale.</p> <p>No replacements during the lifetime, therefore there are no emissions corresponding to the usage phase of the clipboard.</p> <p>The End of Life is based on the average waste management process of the materials in the product.</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

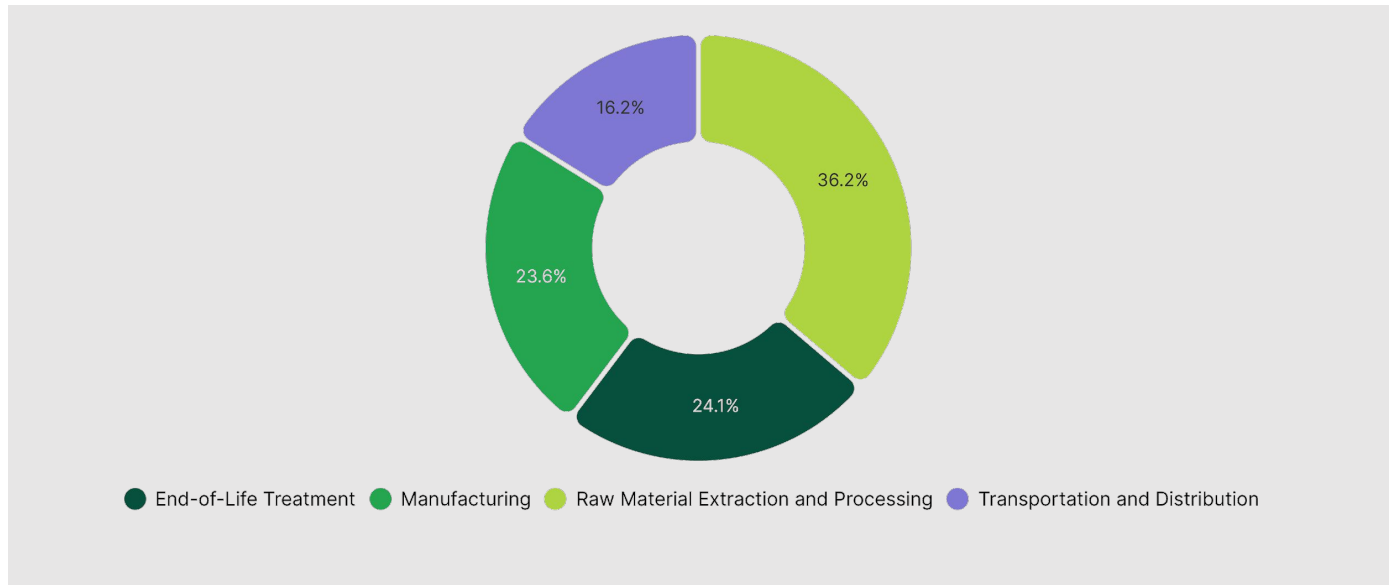
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

19210572 (sold in FR)

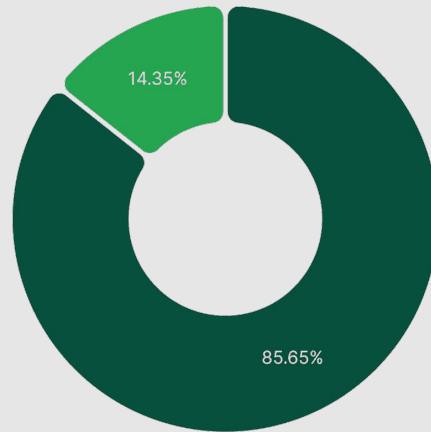
Climate Change



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	124.52	16.16 %
TOTAL	770.77	100.00 %

19210572 (sold in FR)

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)	2	0.48	239.05	85.65 %
Sourcing of raw material (steel)	1	0.02	40.04	14.35 %

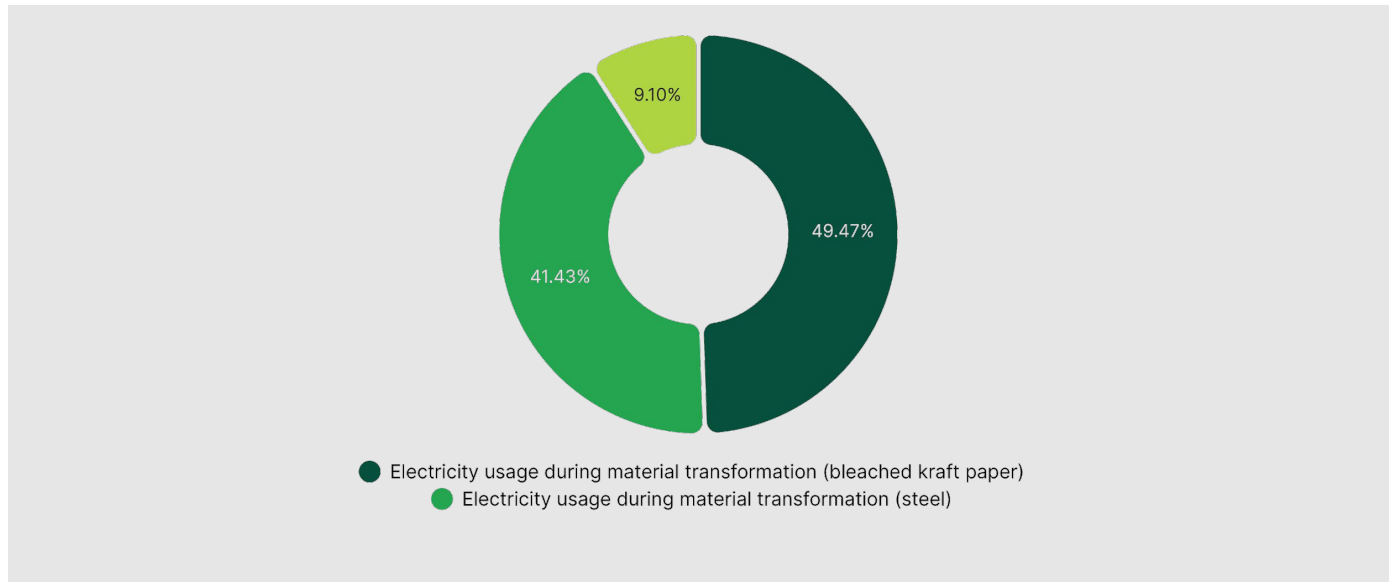
--	--	--	--	--

--	--	--	--	--

TOTAL			279.09	100.00 %
-------	--	--	--------	----------

19210572 (sold in FR)

Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	4	0.17	89.81	49.47 %
Electricity usage during material transformation (steel)	4	0.14	75.22	41.43 %
Natural gas usage during material transformation (bleached kraft paper)	3	0.09	16.51	9.10 %
TOTAL			181.55	100.00 %

19210572 (sold in FR)

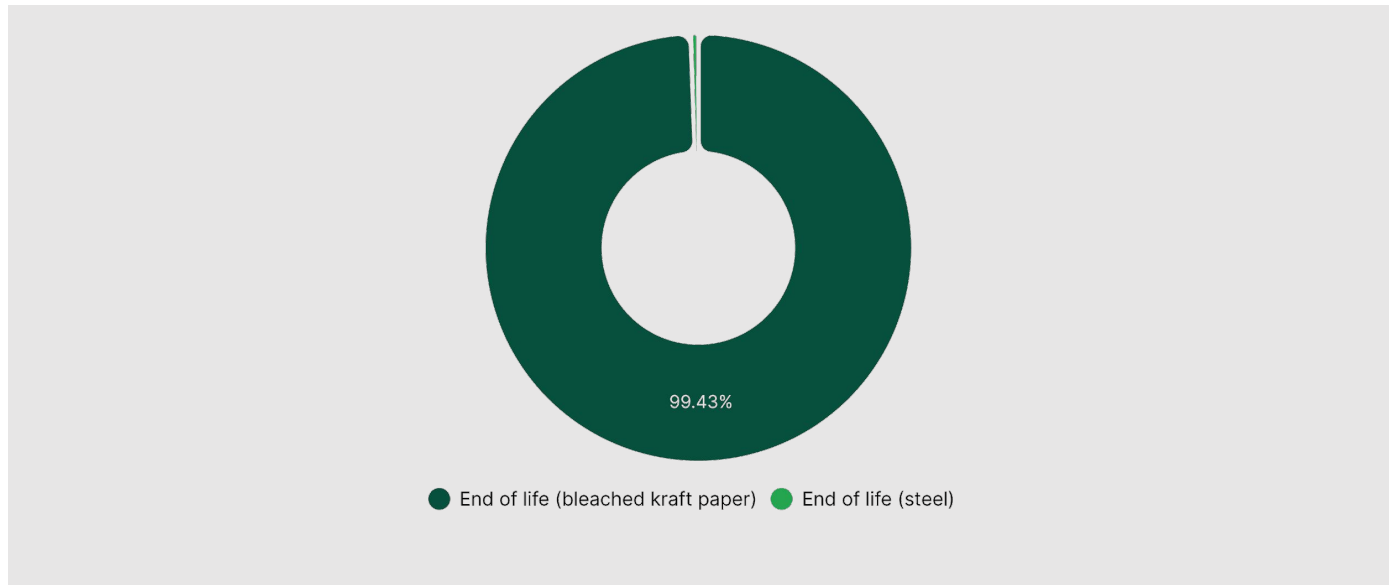
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	5	0.34	124.52	100.00 %
TOTAL			124.52	100.00 %

19210572 (sold in FR)

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

Alexis Normand CEO

www.greenly.earth