

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

17224895 (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 binding device(s) for the purpose of organizing and holding papers".</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 by secondary information, if necessary, as shown in the list below.</p> <ul style="list-style-type: none"> - board: MDF board, plastic, aluminium, 95% - clip: Aluminium, plastic: 5% <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. 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 binder from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

Exclusions

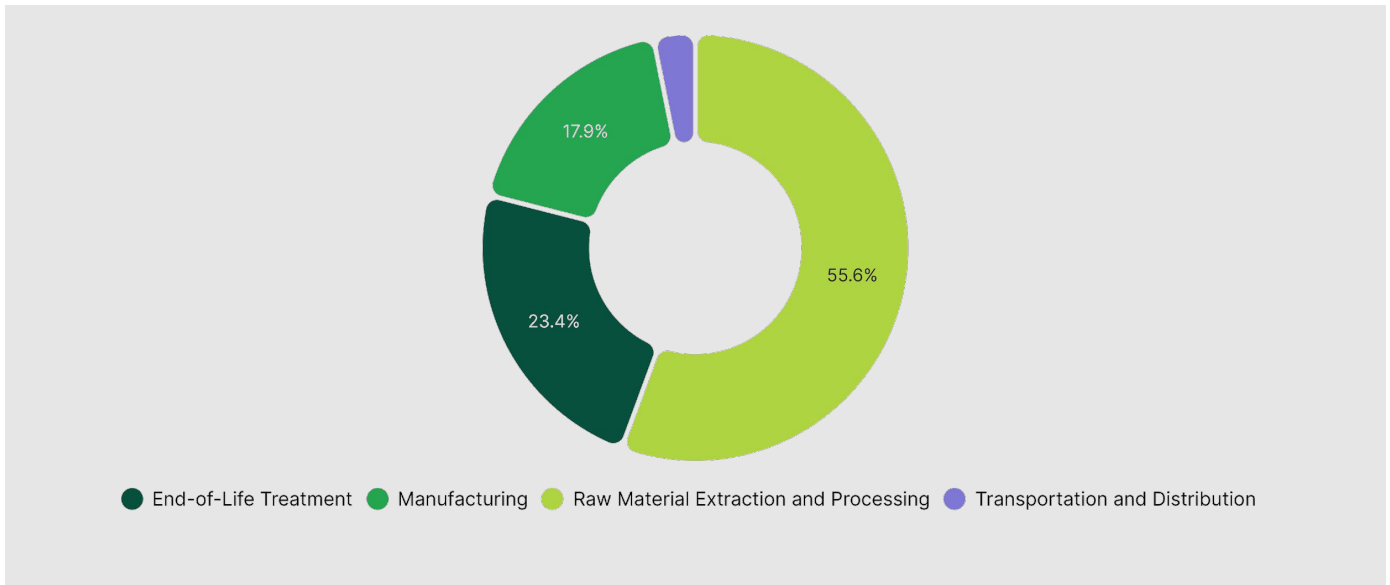
Secondary packaging impact is excluded from this assessment.

02

Results

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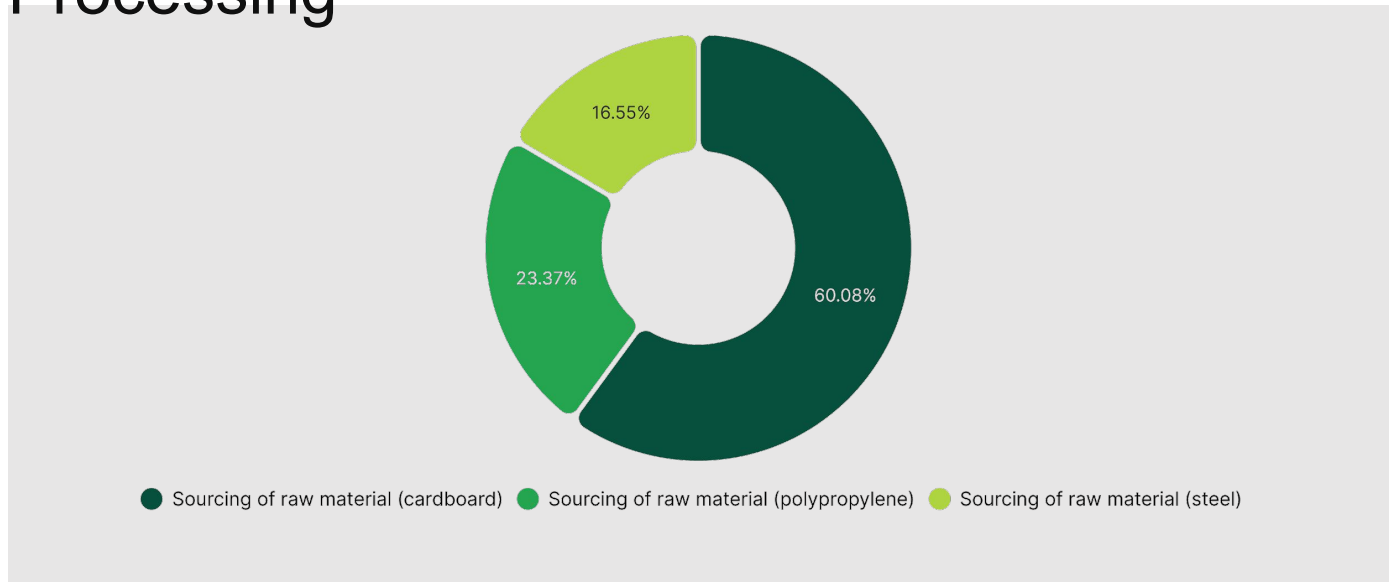
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	232.7	55.62 %
End-of-Life Treatment	97.71	23.36 %
Manufacturing	74.75	17.87 %
Transportation and Distribution	13.18	3.15 %
TOTAL	418.34	100.00 %

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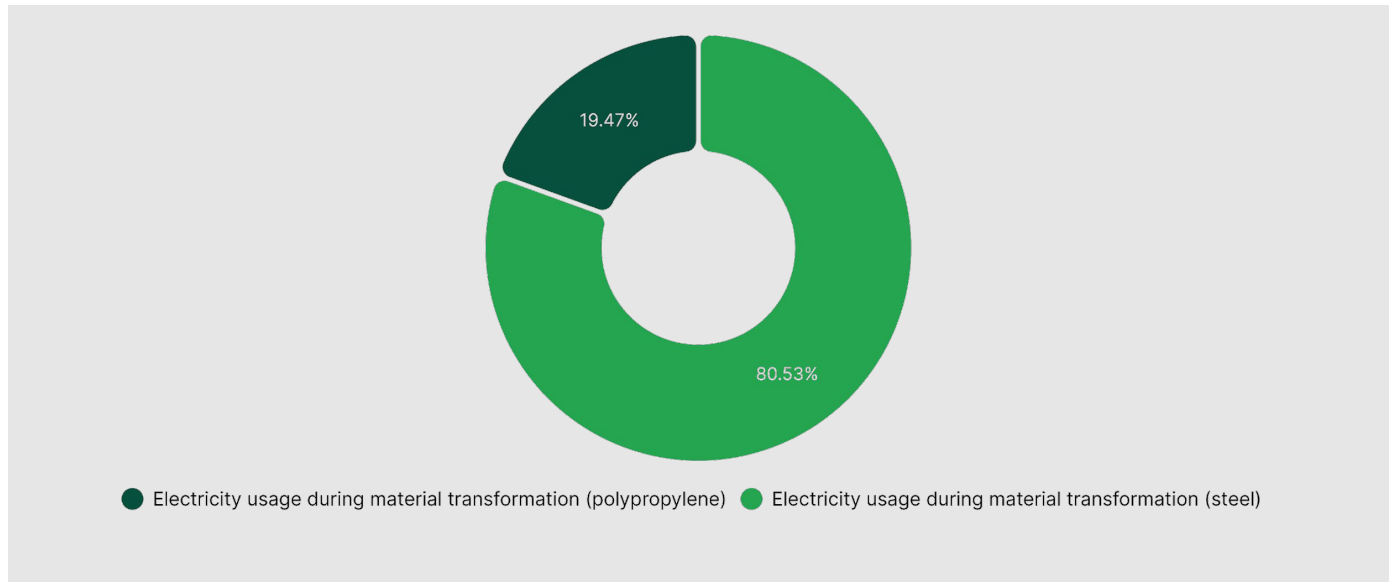
Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (cardboard)	1	0.19	139.81	60.08 %
Sourcing of raw material (polypropylene)	3	0.02	54.37	23.37 %
Sourcing of raw material (steel)	2	0.02	38.52	16.55 %
TOTAL			232.7	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 (steel)	4	0.14	60.2	80.53 %
Electricity usage during material transformation (polypropylene)	4	0.03	14.56	19.47 %
TOTAL			74.75	100.00 %

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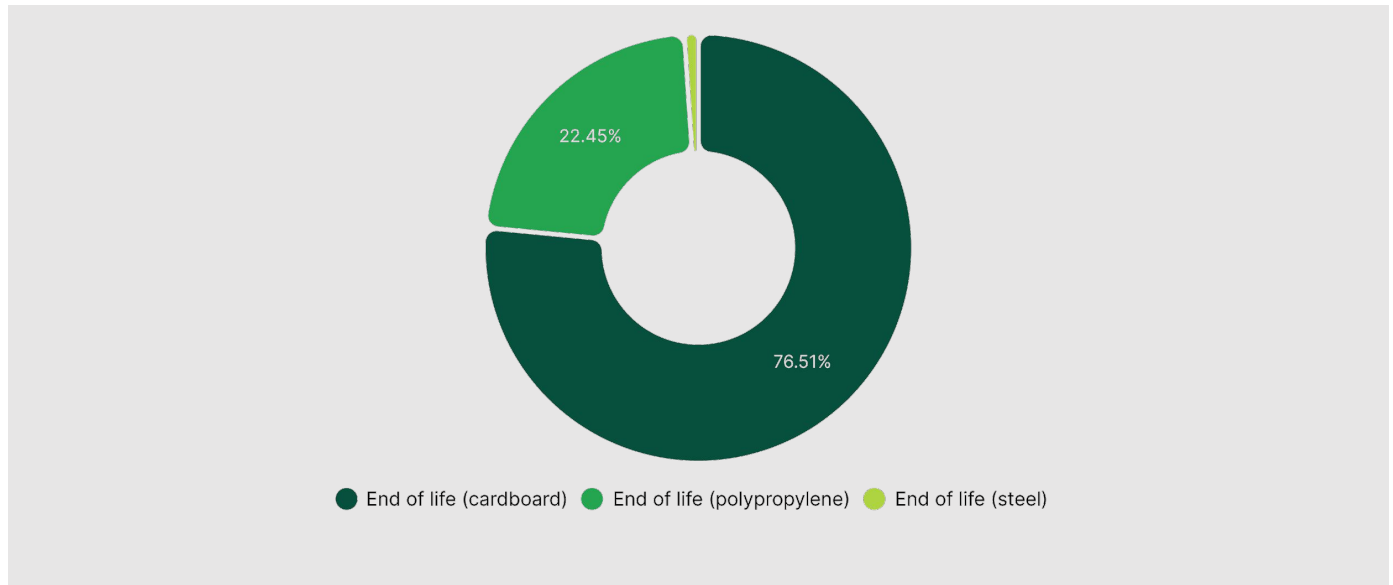
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	5	0.16	13.18	100.00 %
TOTAL			13.18	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 (cardboard)	6	0.13	74.75	76.51 %
End of life (polypropylene)	8	0.02	21.93	22.45 %
End of life (steel)	7	0.02	1.02	1.05 %
TOTAL			97.71	100.00 %

Contact us

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