

greenly

2025-09-16

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

108775 (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

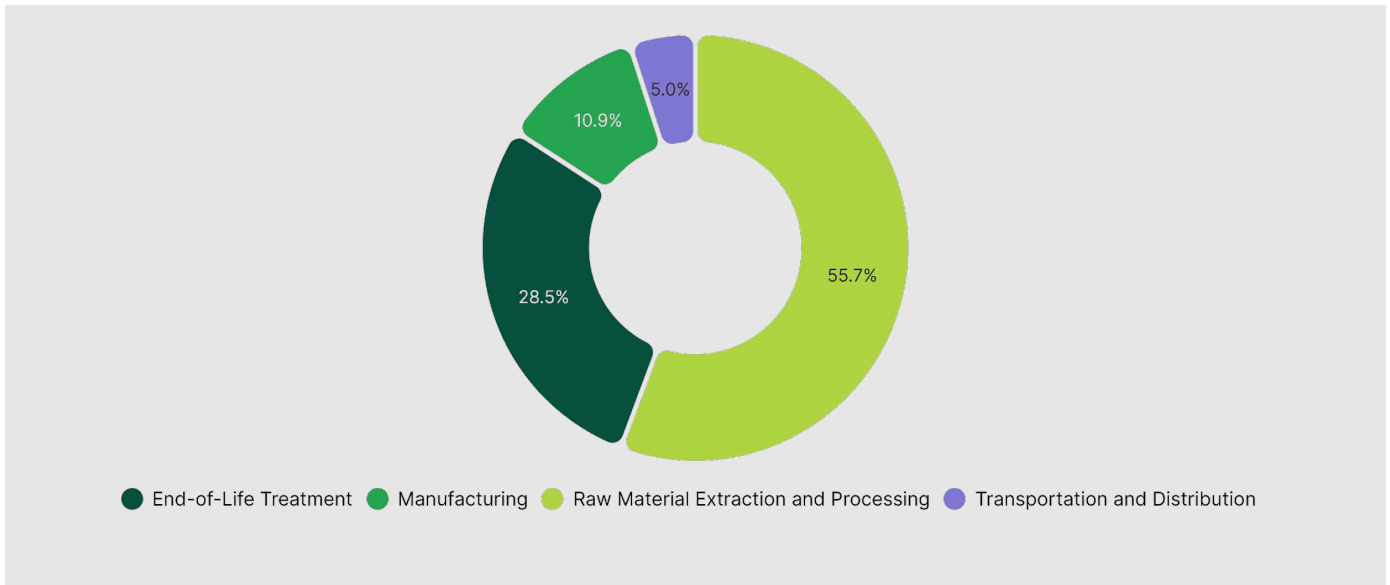
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

108775 (sold in FR)

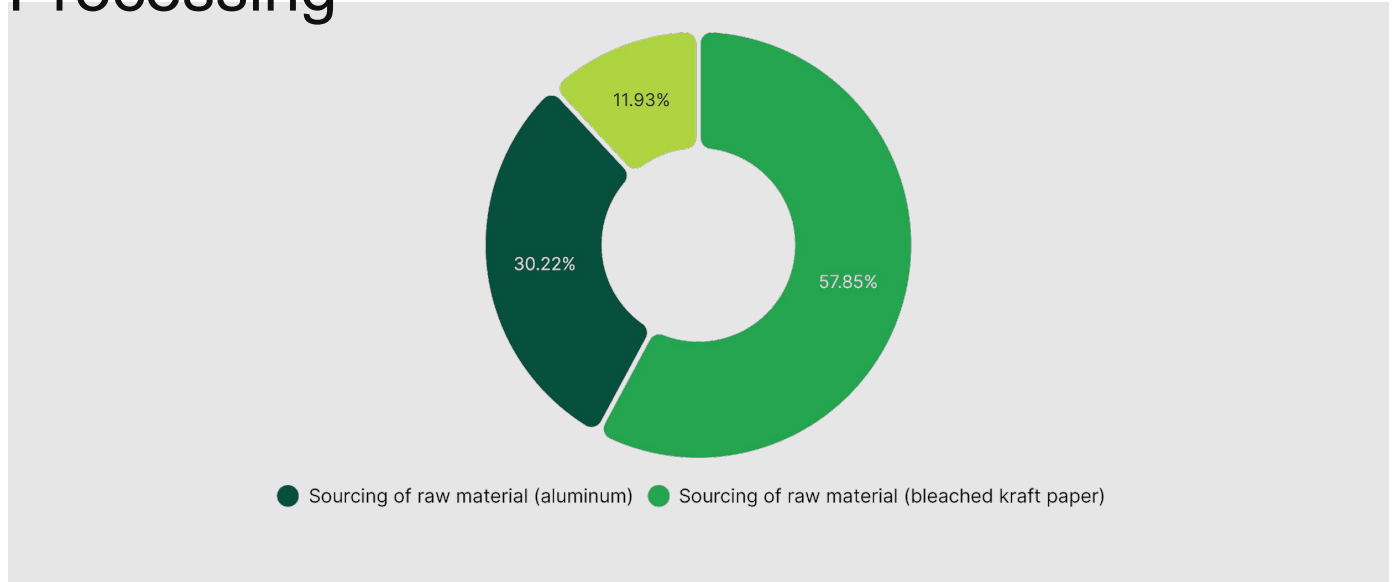
Climate Change



| Step | Impact (g CO ₂ eq) | Percentage (%) |
|--|-------------------------------|-----------------|
| Raw Material Extraction and Processing | 292.75 | 55.69 % |
| End-of-Life Treatment | 149.59 | 28.46 % |
| Manufacturing | 57.12 | 10.87 % |
| Transportation and Distribution | 26.2 | 4.99 % |
| TOTAL | 525.66 | 100.00 % |

108775 (sold in FR)

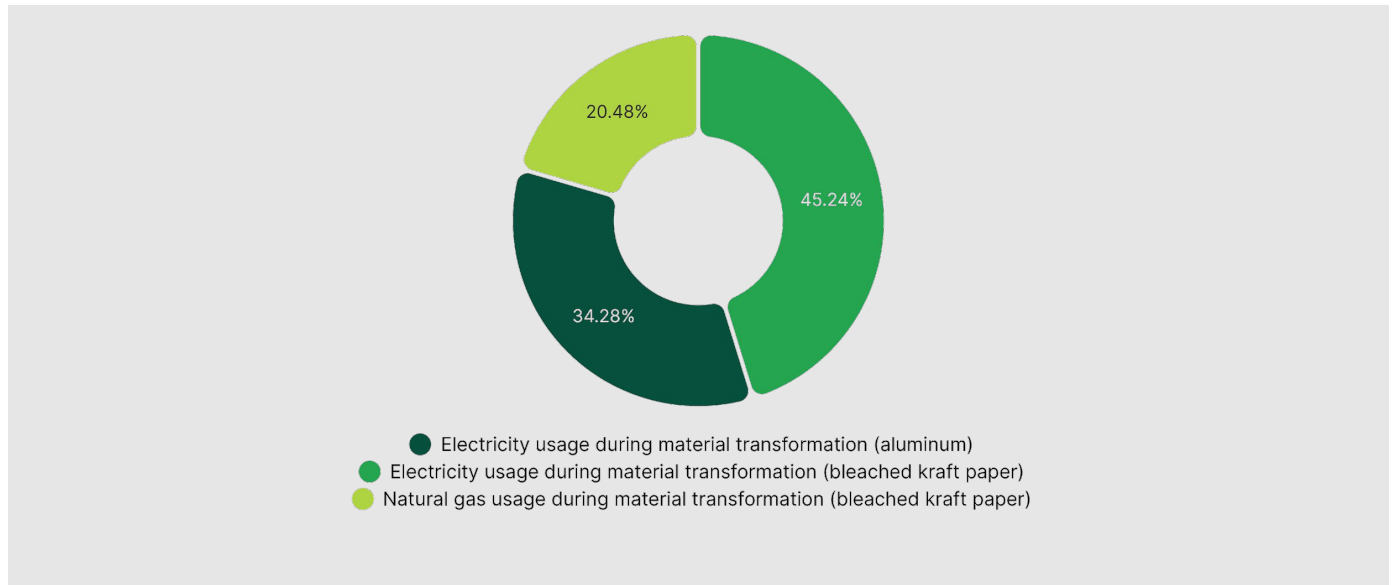
Climate Change - Raw Material Extraction and Processing



| Activity | Emission Factor Num | Quantity | Impact (g CO ₂ eq) | Percentage (%) |
|---|---------------------|----------|-------------------------------|----------------|
| Sourcing of raw material (bleached kraft paper) | 3 | 0.34 | 169.35 | 57.85 % |
| Sourcing of raw material (aluminum) | 1 | 0.01 | 88.47 | 30.22 % |
| Sourcing of raw material (cardboard) | 2 | 0.05 | 34.93 | 11.93 % |
| TOTAL | | | 292.75 | 100.00 % |

108775 (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 | 0.12 | 25.84 | 45.24 % |
| Electricity usage during material transformation (aluminum) | 4 | 0.09 | 19.58 | 34.28 % |
| Natural gas usage during material transformation (bleached kraft paper) | 5 | 0.06 | 11.7 | 20.48 % |
| TOTAL | | | 57.12 | 100.00 % |

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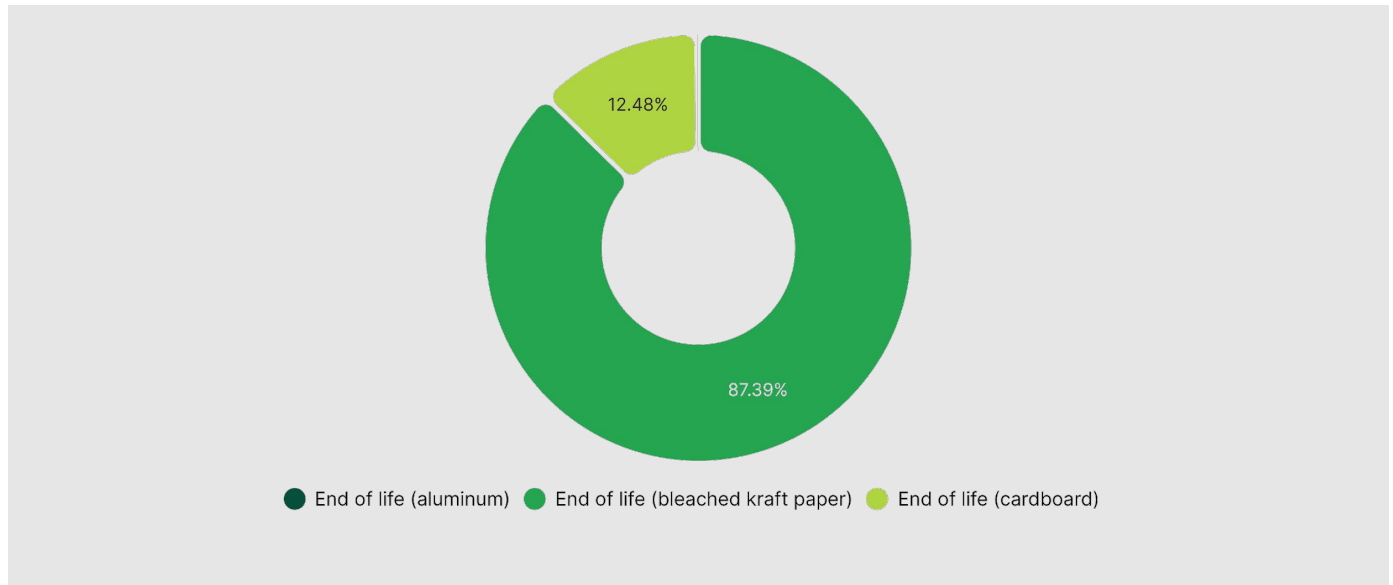
Climate Change - Transportation and Distribution



| Activity | Emission Factor Num | Quantity | Impact (g CO ₂ eq) | Percentage (%) |
|----------|---------------------|----------|-------------------------------|----------------|
| Freight | 6 | 0.27 | 26.2 | 100.00 % |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTAL | | | 26.2 | 100.00 % |

108775 (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) | 8 | 0.23 | 130.74 | 87.39 % |
| End of life (cardboard) | 8 | 0.03 | 18.68 | 12.48 % |
| End of life (aluminum) | 7 | 0.01 | 0.18 | 0.12 % |
| TOTAL | | | 149.59 | 100.00 % |

Contact us

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