

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

12953344 (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 "12 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

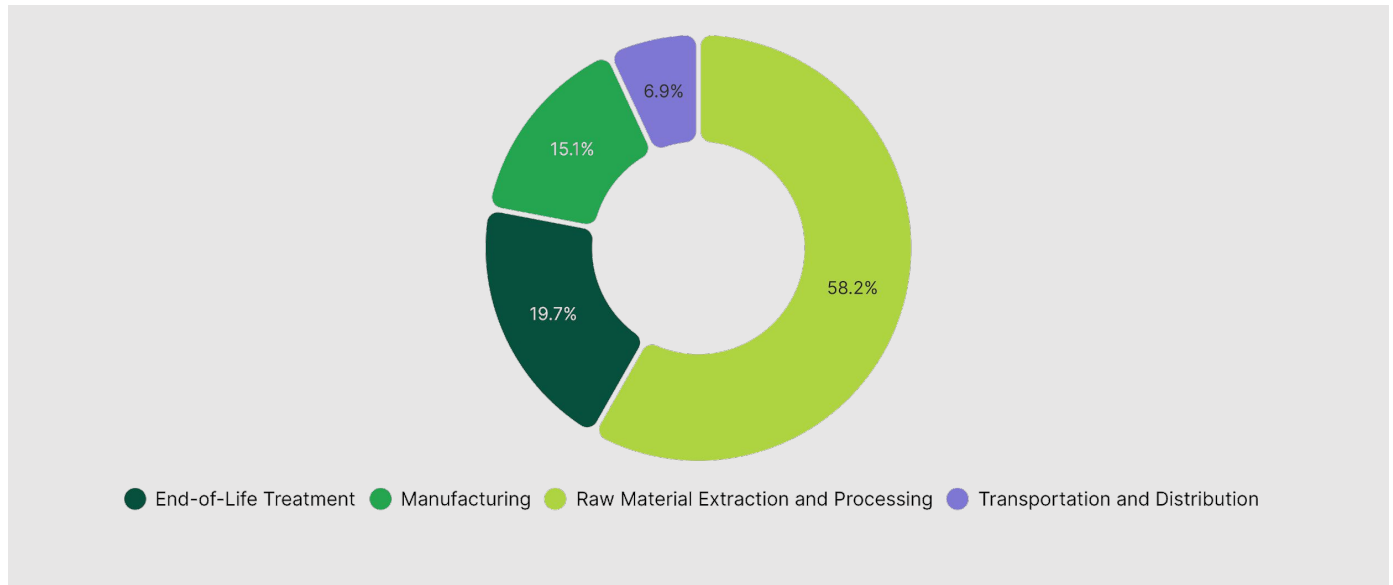
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

12953344 (sold in WI)

Climate Change



| Step | Impact (kg CO ₂ eq) | Percentage (%) |
|--|--------------------------------|-----------------|
| Raw Material Extraction and Processing | 0.83 | 58.25 % |
| End-of-Life Treatment | 0.28 | 19.75 % |
| Manufacturing | 0.21 | 15.07 % |
| Transportation and Distribution | 0.1 | 6.94 % |
| TOTAL | 1.42 | 100.00 % |

12953344 (sold in WI)

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 | 0.71 | 798.34 | 96.52 % |
| Sourcing of raw material (adhesive) | 1 | 5.28 · 10 ⁻³ | 28.77 | 3.48 % |

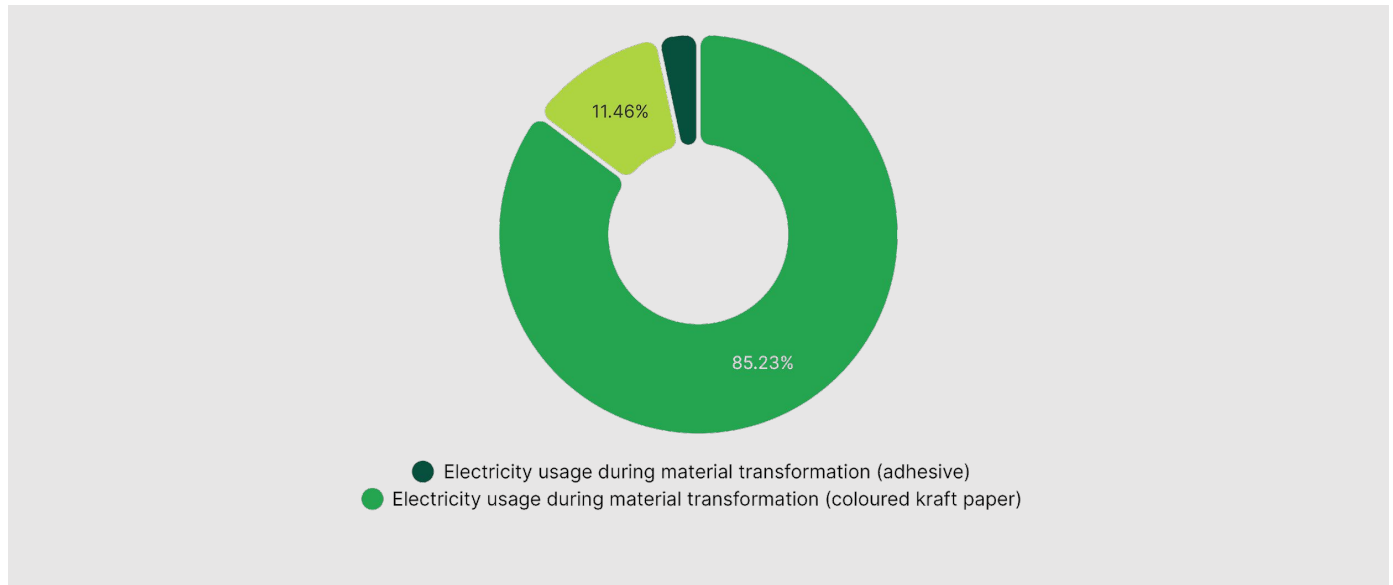
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|-------|--|--|--------|----------|
| TOTAL | | | 827.11 | 100.00 % |
|-------|--|--|--------|----------|

12953344 (sold in WI)

Climate Change - Manufacturing



| Activity | Emission Factor Num | Quantity | Impact (g CO ₂ eq) | Percentage (%) |
|---|---------------------|------------------------|-------------------------------|----------------|
| Electricity usage during material transformation (coloured kraft paper) | 4 | 0.25 | 182.33 | 85.23 % |
| Natural gas usage during material transformation (coloured kraft paper) | 3 | 0.14 | 24.51 | 11.46 % |
| Electricity usage during material transformation (adhesive) | 4 | 9.8 · 10 ⁻³ | 7.09 | 3.31 % |
| TOTAL | | | 213.93 | 100.00 % |

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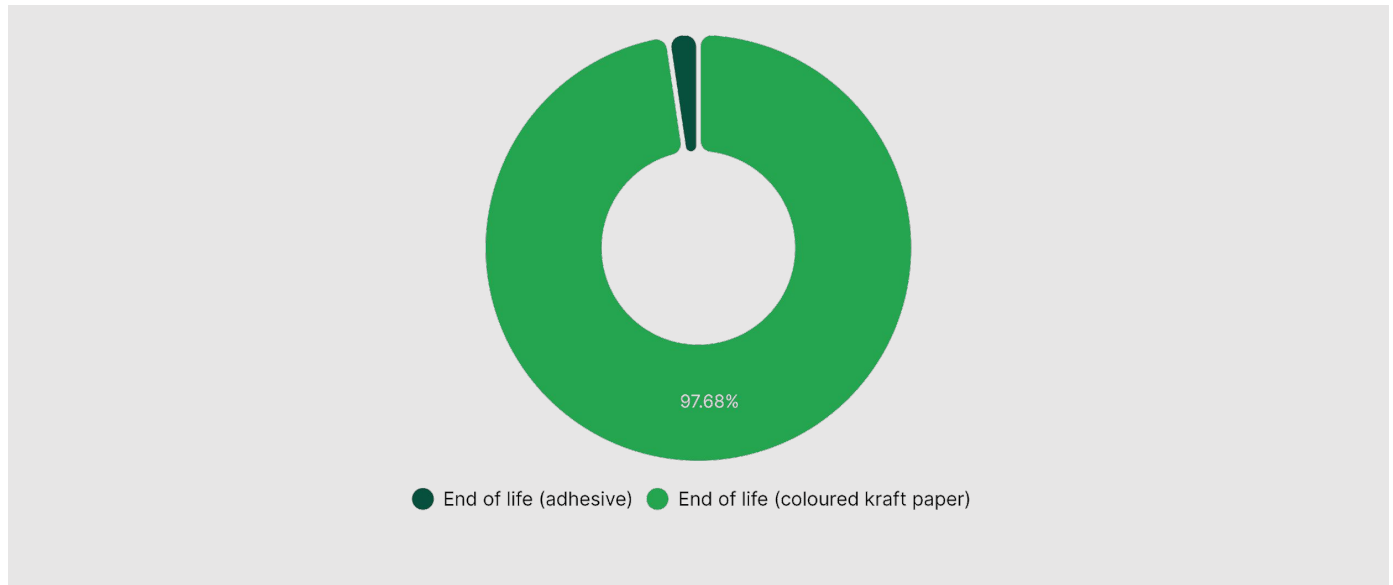
Climate Change - Transportation and Distribution



| Activity | Emission Factor Num | Quantity | Impact (g CO ₂ eq) | Percentage (%) |
|----------|---------------------|----------|-------------------------------|----------------|
| Freight | 5 | 0.48 | 98.56 | 100.00 % |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTAL | | | 98.56 | 100.00 % |

12953344 (sold in WI)

Climate Change - End-of-Life Treatment



| Activity | Emission Factor Num | Quantity | Impact (g CO ₂ eq) | Percentage (%) |
|------------------------------------|---------------------|------------------------|-------------------------------|----------------|
| End of life (coloured kraft paper) | 7 | 0.48 | 273.93 | 97.68 % |
| End of life (adhesive) | 6 | 4.8 · 10 ⁻³ | 6.49 | 2.32 % |
| TOTAL | | | 280.42 | 100.00 % |

Contact us

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