

**greenly**

2025-09-15

Lyreco LCA

# Life Cycle Assessment

*The methodology in this report is based on ISO 14040*

3.771.594 (sold in SE)

# Summary



**01** | Methodology



**02** | Results

# 01

## Methodology

# Environmental Impact Assessment

<p><b>Functional unit</b></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 "16 set(s) of adhesive notes for the purpose of writing".</p>
<p><b>Impact Indicator</b></p>	<p>The impact is measured through the "IPCC 2013 GWP 100a" method.</p>
<p><b>Electricity impact calculation method</b></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><b>Hypothesis</b></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"> <li>- paper: paper 99%</li> <li>- binding: adhesive 1%</li> </ul> <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.</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 stack of sticky notes from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

## Exclusions

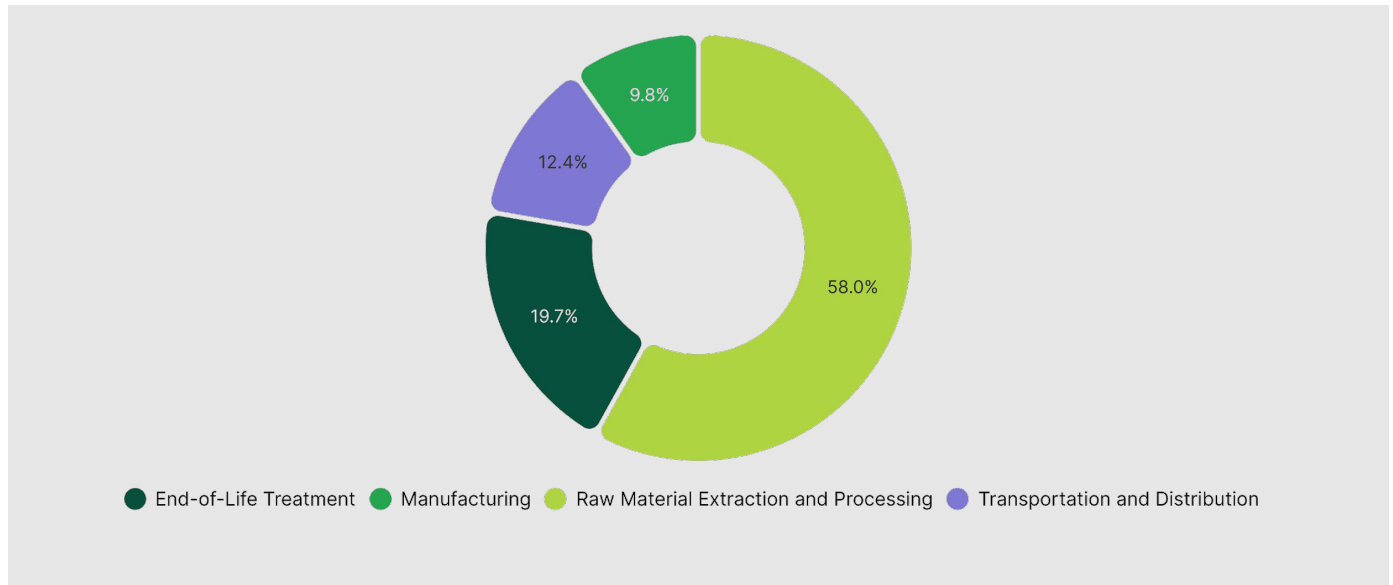
The impact of secondary packaging and writing utensils are excluded from this assessment.

# 02

## Results

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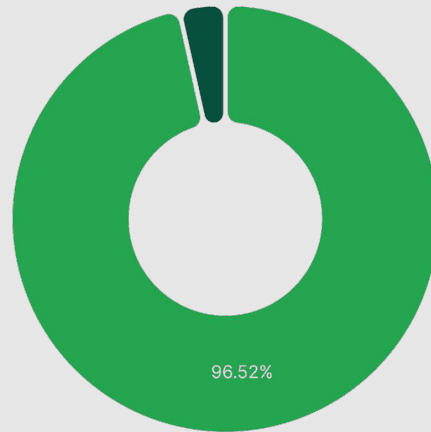
# Climate Change



Step	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Raw Material Extraction and Processing	1.23	58.04 %
End-of-Life Treatment	0.42	19.68 %
Transportation and Distribution	0.26	12.44 %
Manufacturing	0.21	9.84 %
TOTAL	2.12	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 (kg CO <sub>2</sub> eq)	Percentage (%)
Sourcing of raw material (coloured kraft paper)	2	1.06	1.19	96.52 %
Sourcing of raw material (adhesive)	1	7.85 · 10 <sup>-3</sup>	0.04	3.48 %

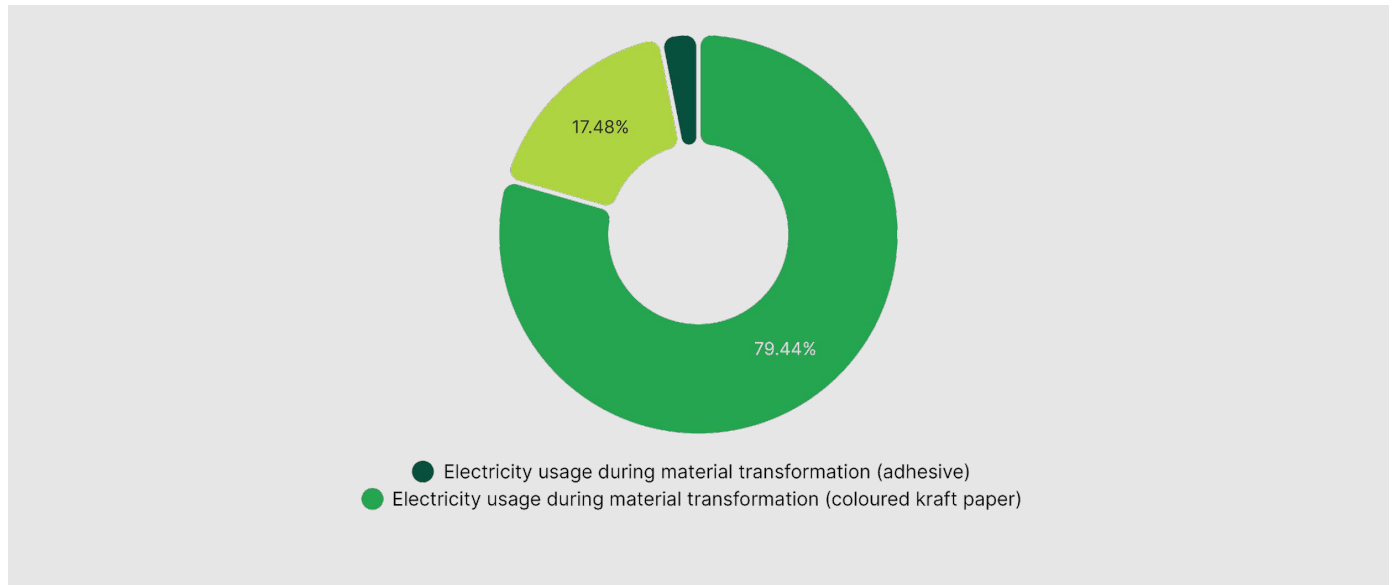
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TOTAL			1.23	100.00 %
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# Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO <sub>2</sub> eq)	Percentage (%)
Electricity usage during material transformation (coloured kraft paper)	3	0.38	165.74	79.44 %
Natural gas usage during material transformation (coloured kraft paper)	4	0.2	36.46	17.48 %
Electricity usage during material transformation (adhesive)	3	0.01	6.44	3.09 %
TOTAL			208.65	100.00 %

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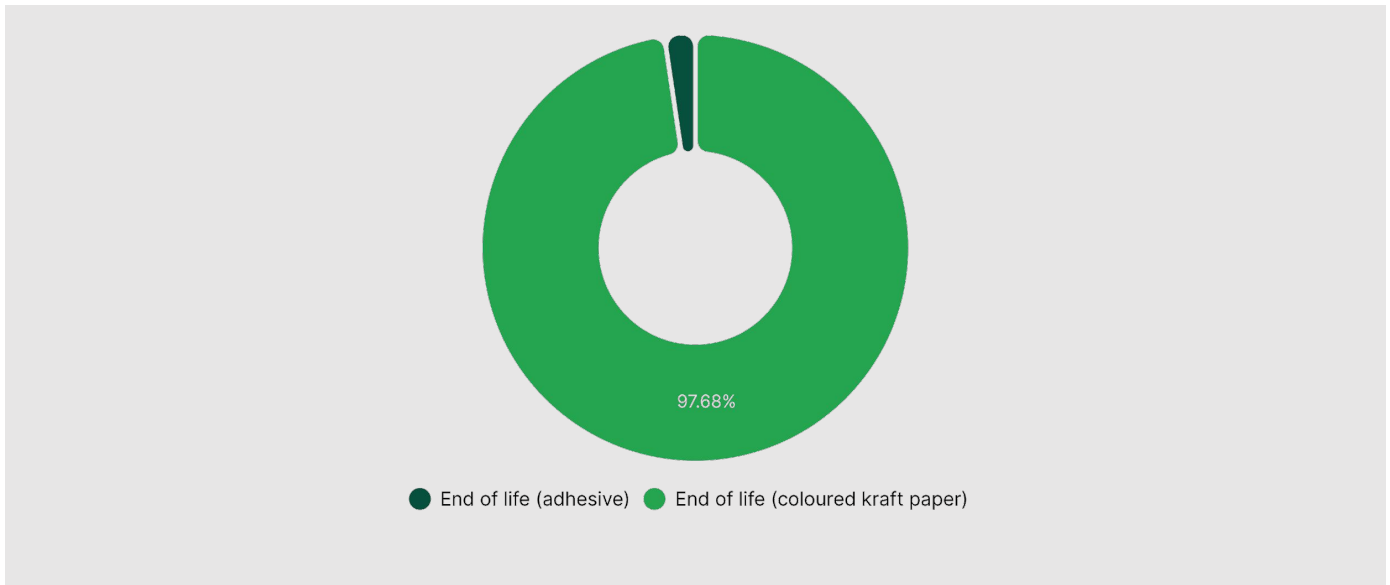
# Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO <sub>2</sub> eq)	Percentage (%)
Freight	5	0.71	263.81	100.00 %
TOTAL			263.81	100.00 %

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# Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (g CO <sub>2</sub> eq)	Percentage (%)
End of life (coloured kraft paper)	7	0.71	407.47	97.68 %
End of life (adhesive)	6	7.14 · 10 <sup>-3</sup>	9.66	2.32 %
TOTAL			417.13	100.00 %

# Contact us

Alexis Normand CEO

[www.greenly.earth](http://www.greenly.earth)