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2025-09-15

Lyreco LCA

Life Cycle Assessment

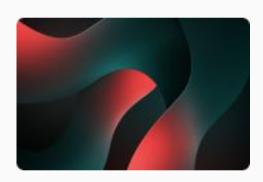
The methodology in this report is based on ISO 14040

12.953.311 (sold in SE)

## Summary



**01** Methodology



02 Results





# Methodology

### **Environmental Impact Assessment**

#### **Functional unit**

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 adhesive

#### **Impact Indicator**

The impact is measured through the "IPCC 2013 GWP 100a" method.

notes for the purpose of writing".

## Electricity impact calculation method

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.

#### **Hypothesis**

The Product's material composition is supplemented by secondary information, if necessary, as shown in the list below.

- paper: paper 99%
- binding: adhesive 1%

Manufacturing Processes and associated loss percentages are assumed based on materials in the product.

The electricity is based on the average in the country of manufacturing.

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. The End of Life is based on the average waste management process of the materials in the product.





### **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**

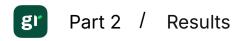
The impact of secondary packaging and writing utensils are excluded from this assessment.



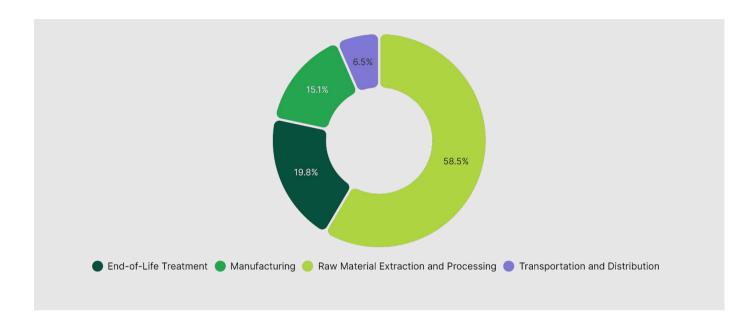




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## Climate Change

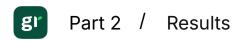


Step	lmpact (kg CO₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.84	58.50 %
End-of-Life Treatment	0.28	19.83 %
Manufacturing	0.22	15.13 %
Transportation and Distribution	0.09	6.53 %

TOTAL	1.43	100.00 %

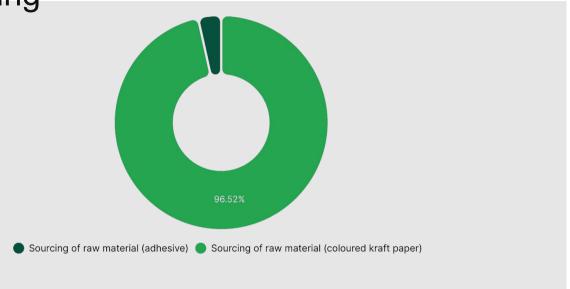






Climate Change - Raw Material Extraction and





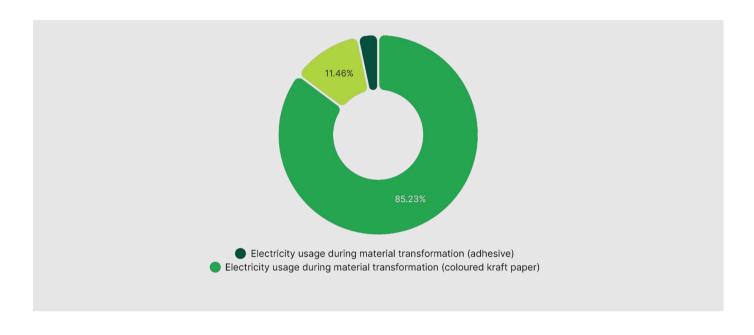
Activity	Emission Factor Num	Quantity	Impact (g CO₂ eq)	Percentage (%)
Sourcing of raw material (coloured kraft paper)	2	0.72	806.65	96.52 %
Sourcing of raw material (adhesive)	1	5.33 · 10^-3	29.07	3.48 %

TOTAL	835.72	100.00 %





### 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	0.25	184.23	85.23 %
Natural gas usage during material transformation (coloured kraft paper)	4	0.14	24.77	11.46 %
Electricity usage during material transformation (adhesive)	3	9.9 · 10^-3	7.16	3.31 %

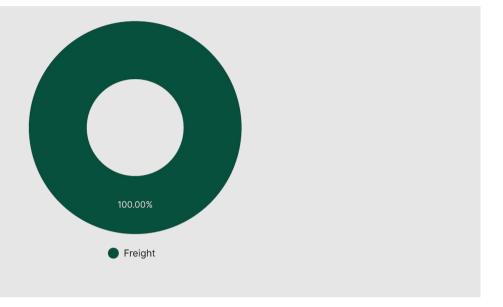
TOTAL	216.16	100.00 %





Climate Change - Transportation and

Distribution



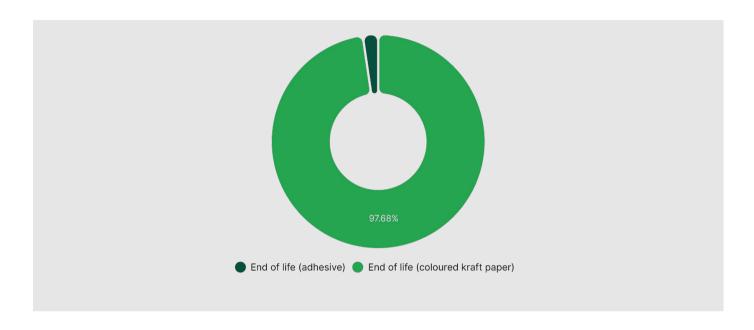
Activity	Emission Factor Num	Quantity	lmpact (g CO₂ eq)	Percentage (%)
Freight	5	0.49	93.3	100.00 %

93.3 **TOTAL** 100.00 %





### Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (g CO₂ eq)	Percentage (%)
End of life (coloured kraft paper)	7	0.48	276.78	97.68 %
End of life (adhesive)	6	4.85 · 10^-3	6.56	2.32 %

TOTAL	283.34	100.00 %





## **Contact us**

Alexis Normand CEO www.greenly.earth

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