



2025-09-18

Lyreco LCA

# Life Cycle Assessment

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

2814836 (sold in PL)

# Summary



## 01 | Methodology



## 02 | Results

# 01

## 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 "250 page(s) of A4 paper for writing".

## Impact Indicator

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

## 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

# Environmental Impact Assessment

## System Boundaries

The scope of this research includes the complete lifecycle of a piece of paper from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

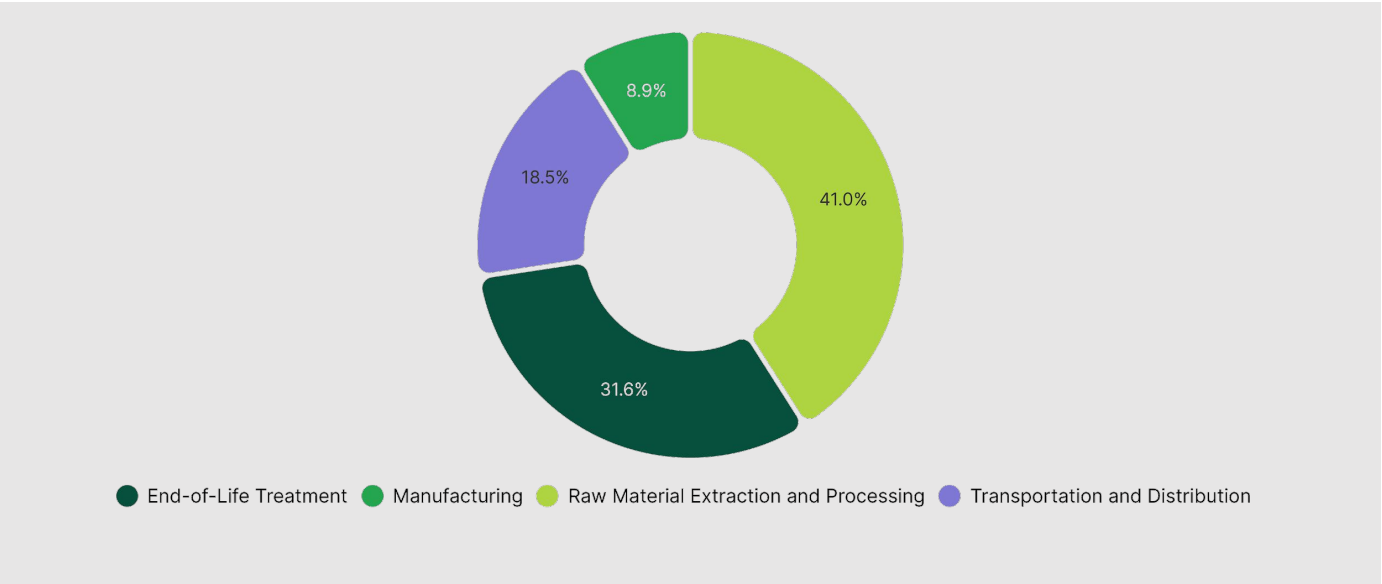
## Exclusions

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

# 02

## Results

2814836 (sold in PL)  
 Climate Change



Step	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Raw Material Extraction and Processing	1.42	40.98 %
End-of-Life Treatment	1.1	31.63 %
Transportation and Distribution	0.64	18.52 %
Manufacturing	0.31	8.87 %
TOTAL	3.46	100.00 %

2814836 (sold in PL)

# Climate Change - Raw Material Extraction and Processing



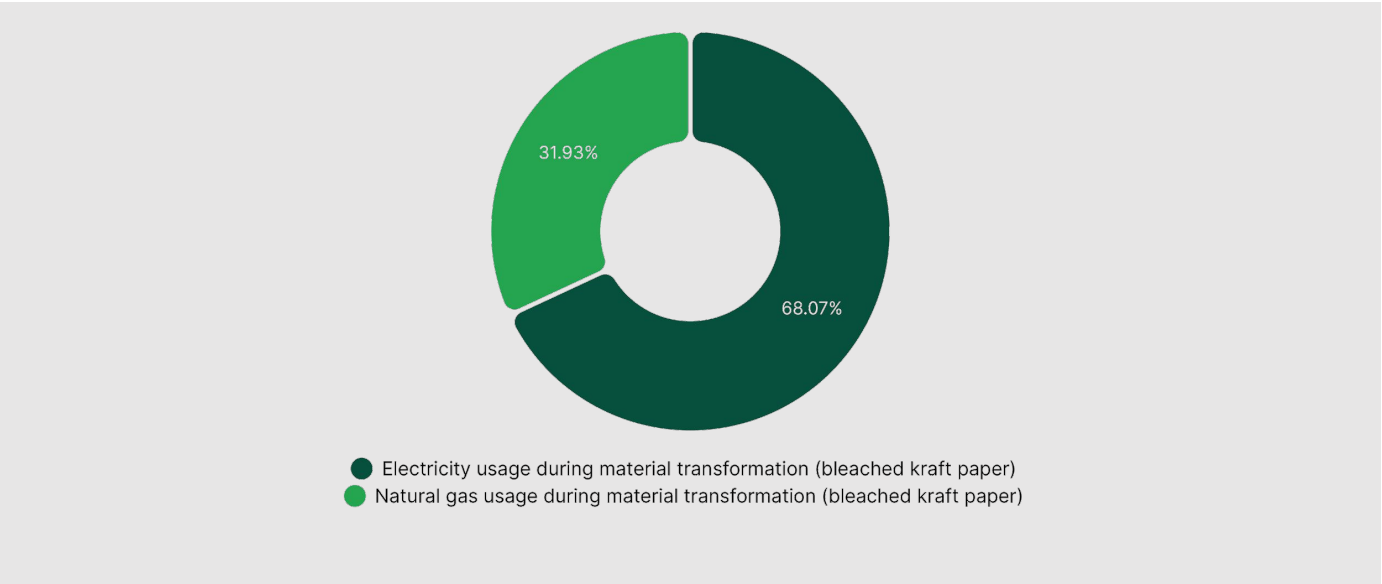
- Sourcing of raw material (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	2.85	1.42	100.00 %
TOTAL			1.42	100.00 %



2814836 (sold in PL)

# Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO <sub>2</sub> eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	2	1.01	208.99	68.07 %
Natural gas usage during material transformation (bleached kraft paper)	3	0.54	98.01	31.93 %
TOTAL			307	100.00 %

2814836 (sold in PL)

# Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO <sub>2</sub> eq)	Percentage (%)
Freight	4	1.9	641.24	100.00 %
TOTAL			641.24	100.00 %

2814836 (sold in PL)

# Climate Change - End-of-Life Treatment



- End of life (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (kg CO <sub>2</sub> eq)	Percentage (%)
End of life (bleached kraft paper)	5	1.9	1.1	100.00 %
TOTAL			1.1	100.00 %

# Contact us

Alexis Normand CEO

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