



2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

3521179 (sold in CH)

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 "200 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.

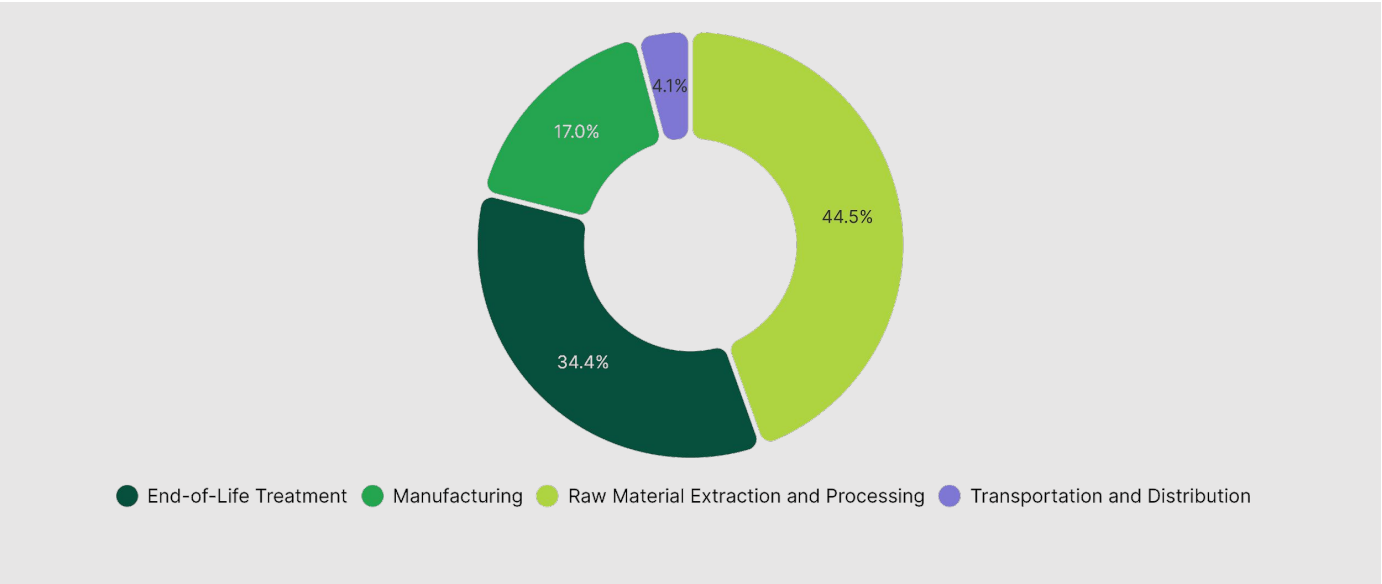
Exclusions

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

02

Results

3521179 (sold in CH)
 Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	380.81	44.54 %
End-of-Life Treatment	293.99	34.39 %
Manufacturing	145.32	17.00 %
Transportation and Distribution	34.85	4.08 %
TOTAL	854.96	100.00 %

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Climate Change - Raw Material Extraction and Processing

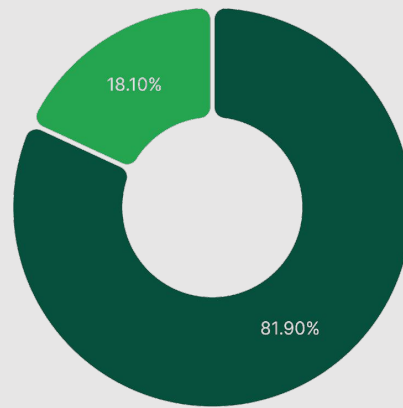


- Sourcing of raw material (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	765	380.81	100.00 %
TOTAL			380.81	100.00 %

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Climate Change - Manufacturing



- Electricity usage during material transformation (bleached kraft paper)
- Natural gas usage during material transformation (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	2	270.61	119.02	81.90 %
Natural gas usage during material transformation (bleached kraft paper)	3	145.35	26.31	18.10 %

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TOTAL			145.32	100.00 %
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Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Freight	4	510	34.85	100.00 %
TOTAL			34.85	100.00 %

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Climate Change - End-of-Life Treatment



- End of life (bleached kraft paper)

Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper)	5	510	293.99	100.00 %
TOTAL			293.99	100.00 %

Contact us

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