



2025-09-18

Lyreco LCA

# Life Cycle Assessment

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

15886125 (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 "5 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.

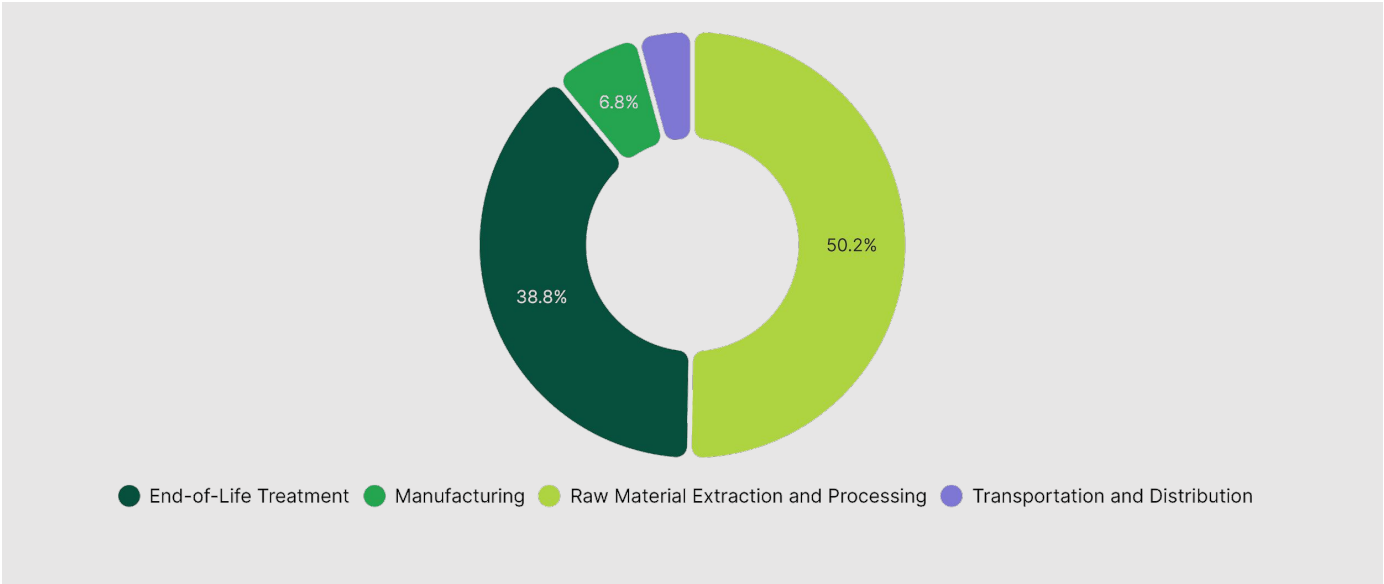
## Exclusions

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

# 02

## Results

15886125 (sold in CH)  
 Climate Change



| Step                                   | Impact<br>(kg CO <sub>2</sub> eq) | Percentage<br>(%) |
|----------------------------------------|-----------------------------------|-------------------|
| Raw Material Extraction and Processing | 0.95                              | 50.23 %           |
| End-of-Life Treatment                  | 0.74                              | 38.78 %           |
| Manufacturing                          | 0.13                              | 6.80 %            |
| Transportation and Distribution        | 0.08                              | 4.19 %            |
|                                        |                                   |                   |
| TOTAL                                  | 1.9                               | 100.00 %          |

15886125 (sold in CH)

# Climate Change - Raw Material Extraction and Processing



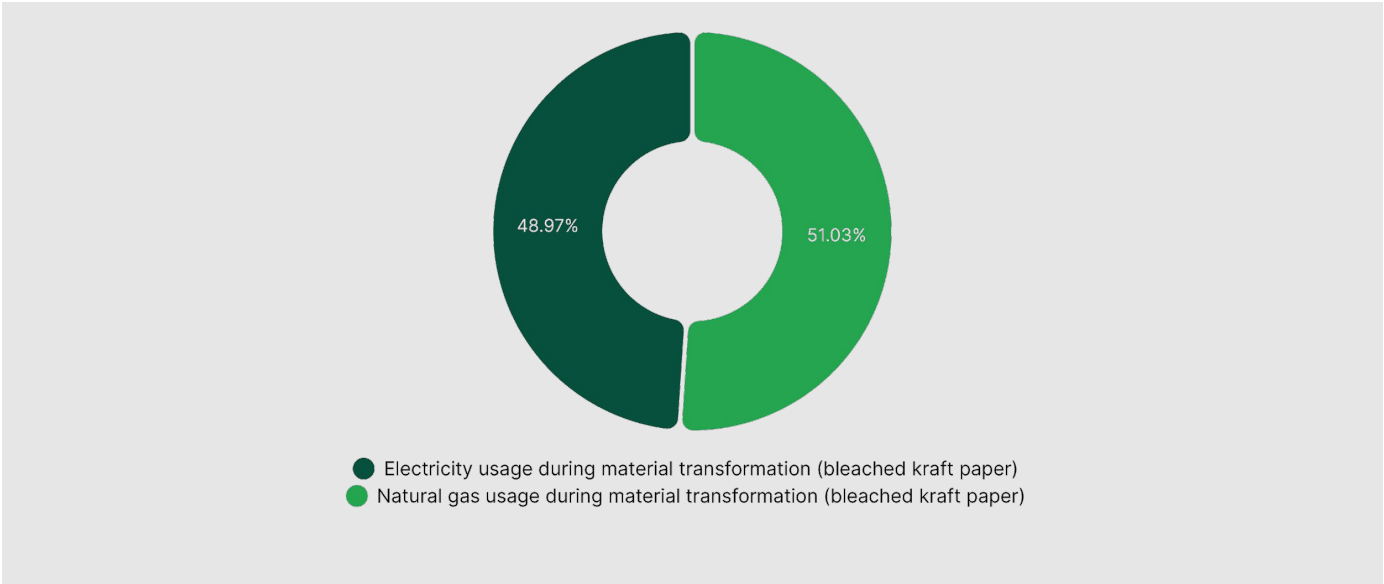
- Sourcing of raw material (bleached kraft paper)

| Activity                                        | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|-------------------------------------------------|---------------------|----------|-------------------------------|----------------|
| Sourcing of raw material (bleached kraft paper) | 1                   | 1.92     | 954.26                        | 100.00 %       |
|                                                 |                     |          |                               |                |
|                                                 |                     |          |                               |                |
|                                                 |                     |          |                               |                |
| TOTAL                                           |                     |          | 954.26                        | 100.00 %       |



15886125 (sold in CH)

# Climate Change - Manufacturing



| Activity                                                                | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%)  |
|-------------------------------------------------------------------------|---------------------|----------|-------------------------------|-----------------|
| Natural gas usage during material transformation (bleached kraft paper) | 3                   | 0.36     | 65.93                         | 51.03 %         |
| Electricity usage during material transformation (bleached kraft paper) | 2                   | 0.68     | 63.27                         | 48.97 %         |
| TOTAL                                                                   |                     |          |                               | 129.19 100.00 % |

15886125 (sold in CH)

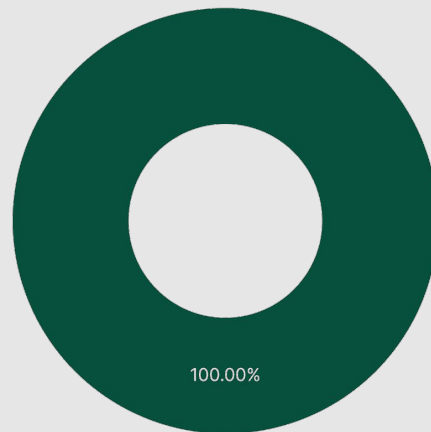
# Climate Change - Transportation and Distribution



| Activity | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|----------|---------------------|----------|-------------------------------|----------------|
| Freight  | 4                   | 1.28     | 79.58                         | 100.00 %       |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
| TOTAL    |                     |          | 79.58                         | 100.00 %       |

15886125 (sold in CH)

# Climate Change - End-of-Life Treatment



- End of life (bleached kraft paper)

| Activity                           | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|------------------------------------|---------------------|----------|-------------------------------|----------------|
| End of life (bleached kraft paper) | 5                   | 1.28     | 736.7                         | 100.00 %       |
|                                    |                     |          |                               |                |
|                                    |                     |          |                               |                |
|                                    |                     |          |                               |                |
| TOTAL                              |                     |          | 736.7                         | 100.00 %       |

# Contact us

Alexis Normand CEO

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