

**greenly**

2025-09-13

Lyreco LCA

# Life Cycle Assessment

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

5.955.935 (sold in PL)

# 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).<br/>The functional unit of this analysis is "100 pair(s) of disposable gloves used once".</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, if necessary, by secondary information as shown in the list below.</p> <ul style="list-style-type: none"> <li>- Nitrile 100%</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 of the clipboard.</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 pair of disposable gloves from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

## Exclusions

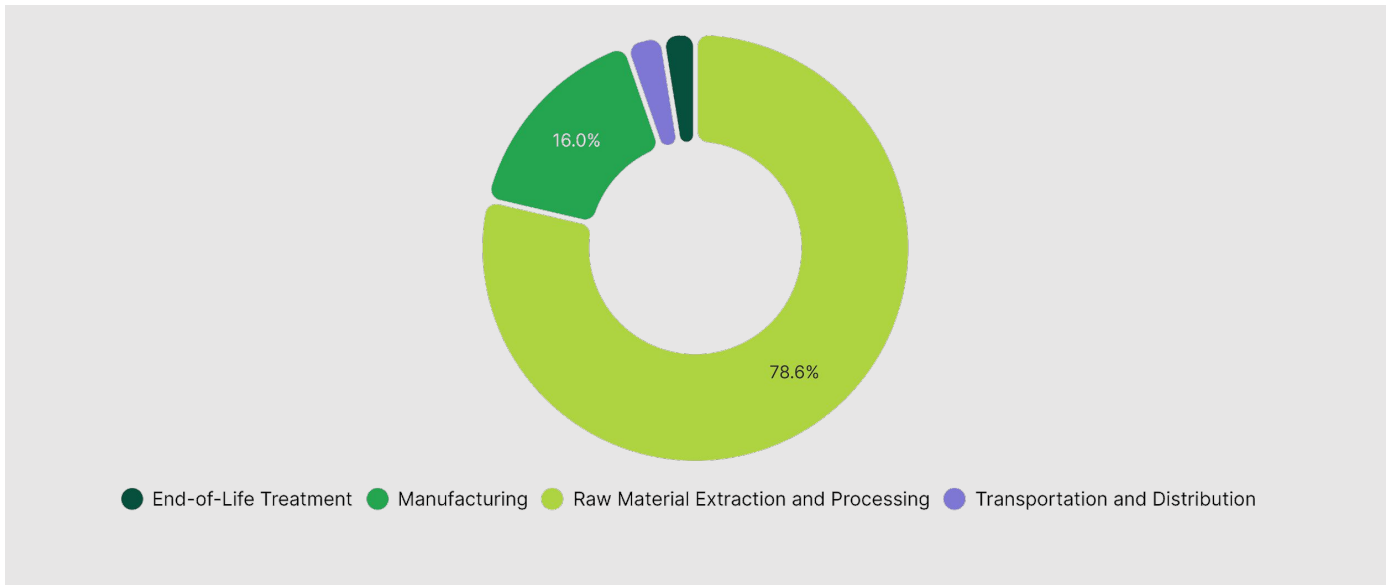
The impact of secondary packaging is excluded from this assessment.

# 02

## Results

5.955.935 (sold in PL)

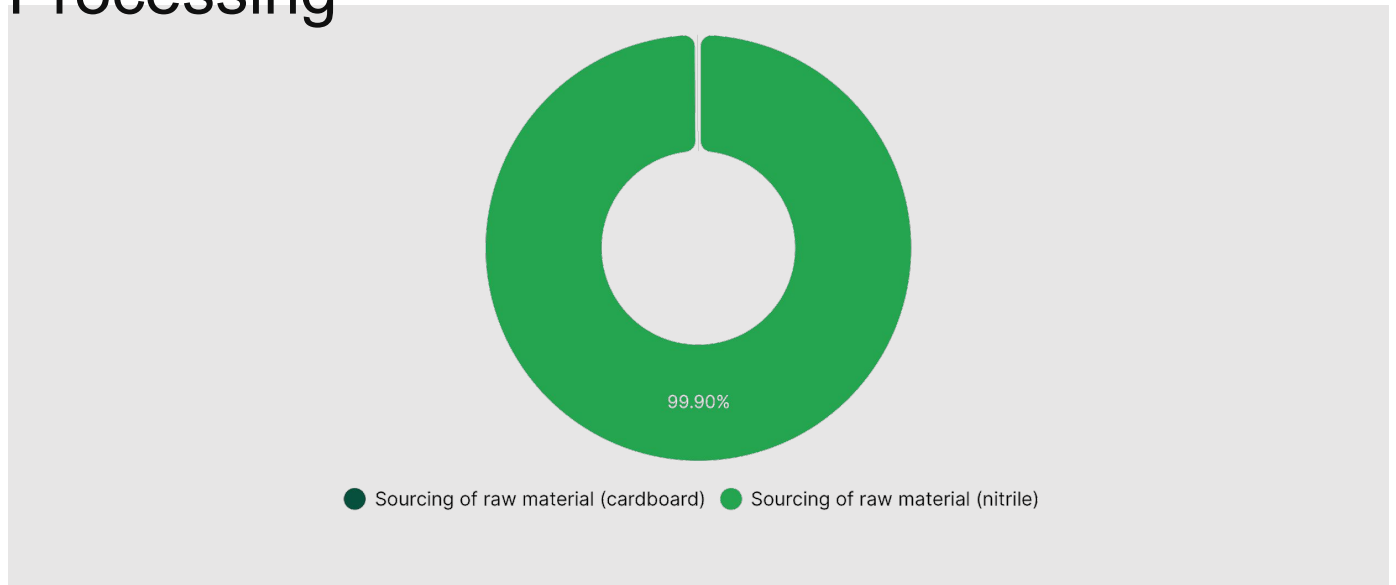
# Climate Change



| Step                                   | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|--|--------------------------------|----------------|
| Raw Material Extraction and Processing | 9.71                           | 78.64 %        |
| Manufacturing                          | 1.98                           | 16.04 %        |
| Transportation and Distribution        | 0.35                           | 2.81 %         |
| End-of-Life Treatment                  | 0.31                           | 2.51 %         |
| TOTAL                                  | 12.35                          | 100.00 %       |

5.955.935 (sold in PL)

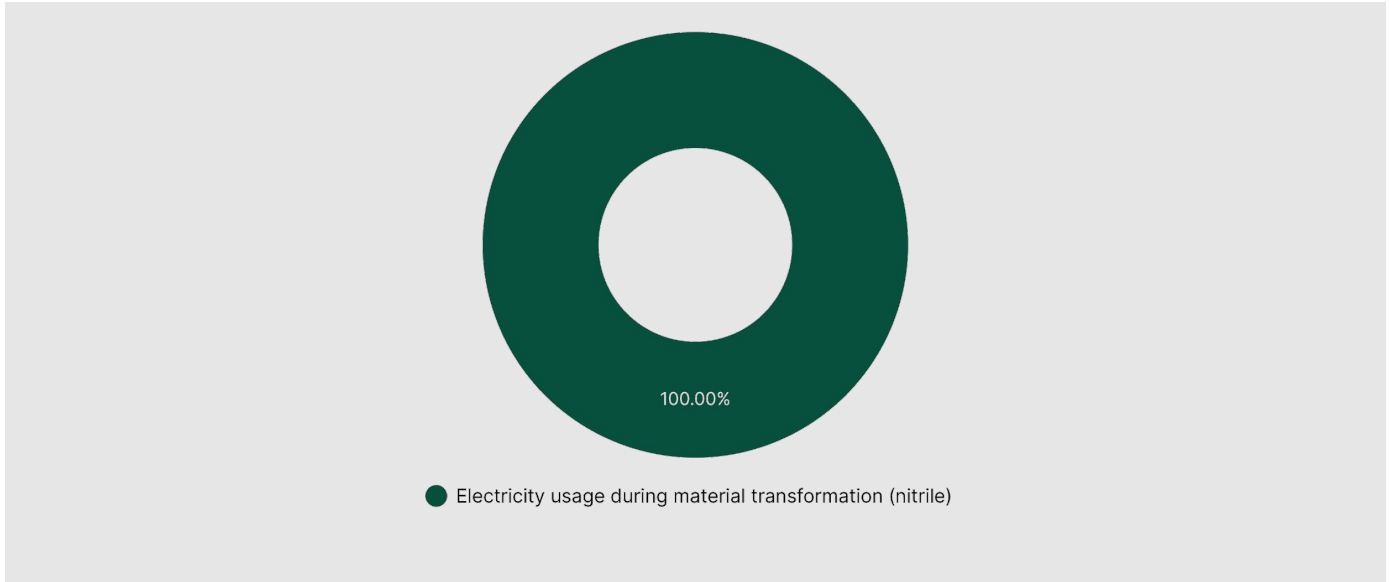
# Climate Change - Raw Material Extraction and Processing



| Activity                             | Emission Factor Num | Quantity | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|--------------------------------------|---------------------|----------|--------------------------------|----------------|
| Sourcing of raw material (nitrile)   | 1                   | 1.02     | 9.7                            | 99.90 %        |
| Sourcing of raw material (cardboard) | 2                   | 0.01     | 0.01                           | 0.10 %         |
| TOTAL                                |                     |          | 9.71                           | 100.00 %       |

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# Climate Change - Manufacturing



| Activity   | Emission Factor Num | Quantity | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|--|---------------------|----------|--------------------------------|----------------|
| Electricity usage during material transformation (nitrile) | 3                   | 3.26     | 1.98                           | 100.00 %       |
|  |                     |          |                                |                |
|  |                     |          |                                |                |
|  |                     |          |                                |                |
|  |                     |          |                                |                |
| TOTAL  |                     |          | 1.98                           | 100.00 %       |

5.955.935 (sold in PL)

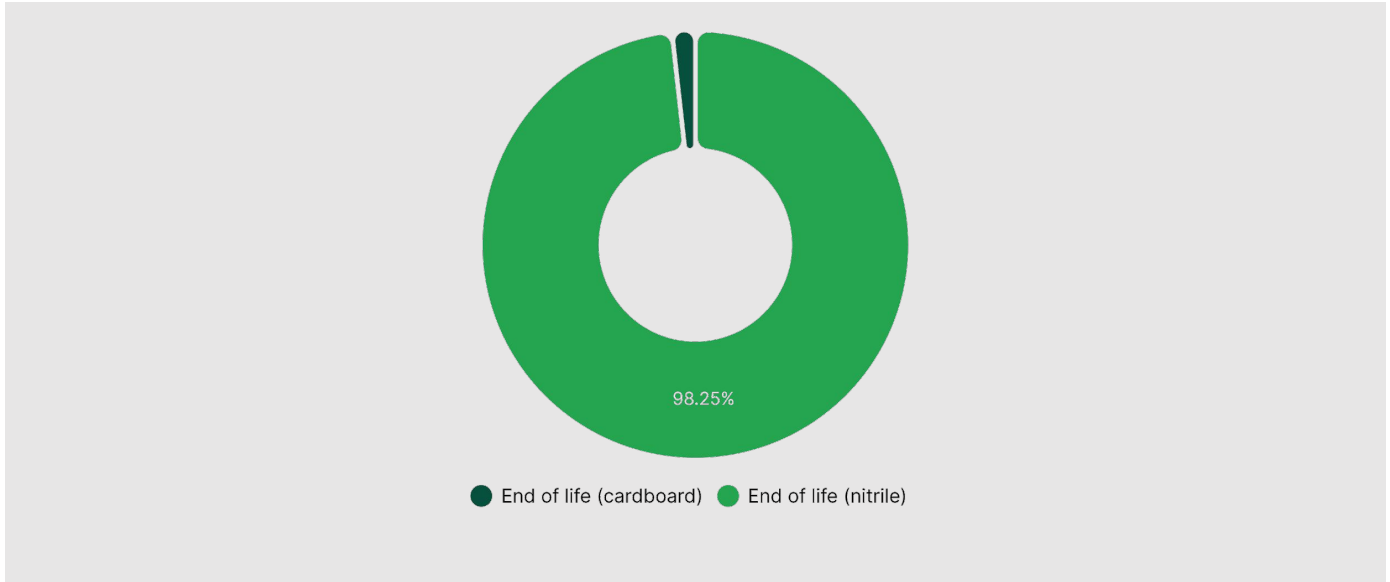
# Climate Change - Transportation and Distribution



| Activity | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|----------|---------------------|----------|-------------------------------|----------------|
| Freight  | 4                   | 0.94     | 347.31                        | 100.00 %       |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
| TOTAL    |                     |          | 347.31                        | 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 (nitrile)   | 6                   | 0.93                   | 304.24                        | 98.25 %        |
| End of life (cardboard) | 5                   | 9.4 · 10 <sup>-3</sup> | 5.42                          | 1.75 %         |

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|-------|--|--|--------|----------|
| TOTAL |  |  | 309.66 | 100.00 % |
|-------|--|--|--------|----------|

# Contact us

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