

# Life Cycle Analyses

MHELEVATOP



# 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). Therefore, the functional unit shall be clearly defined and measurable.

## Impact Indicator

The impact is measured through the "IPCC 2021 GWP100" 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.

## Life Cycle Analyses

Cradle to grave

# Emission Factor Inventory

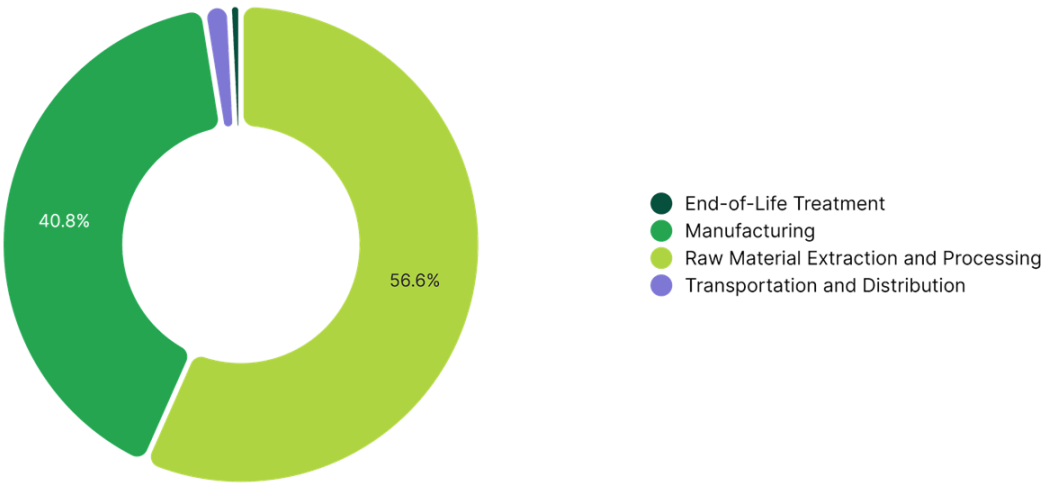
| Num | Emission Factor                                                     | Source            | Value         | Unit |
|-----|---------------------------------------------------------------------|-------------------|---------------|------|
| 1   | Aluminium, primary, ingot   Ordinary transforming activity          | ECOINVENT 3.10    | 7.605623188   | kg   |
| 2   | Silicone product   Market activity                                  | ECOINVENT 3.10    | 3.67823119    | kg   |
| 3   | Electricity   Total (Scope 2 & 3)   People's Republic of China      | IEA 2023          | 0.7231        | kWh  |
| 4   | Freight   Boat   From CN to FR Waste                                | WELOW EXPERTS 1.0 | 0.25227278    | kg   |
| 5   | polyethylene/polypropylene product   Ordinary transforming activity | ECOINVENT 3.10    | 1.783532575   | kg   |
| 6   | Waste aluminium   Ordinary transforming activity                    | ECOINVENT 3.10    | 0.02555404932 | kg   |

# 02

## Results

Laptop support

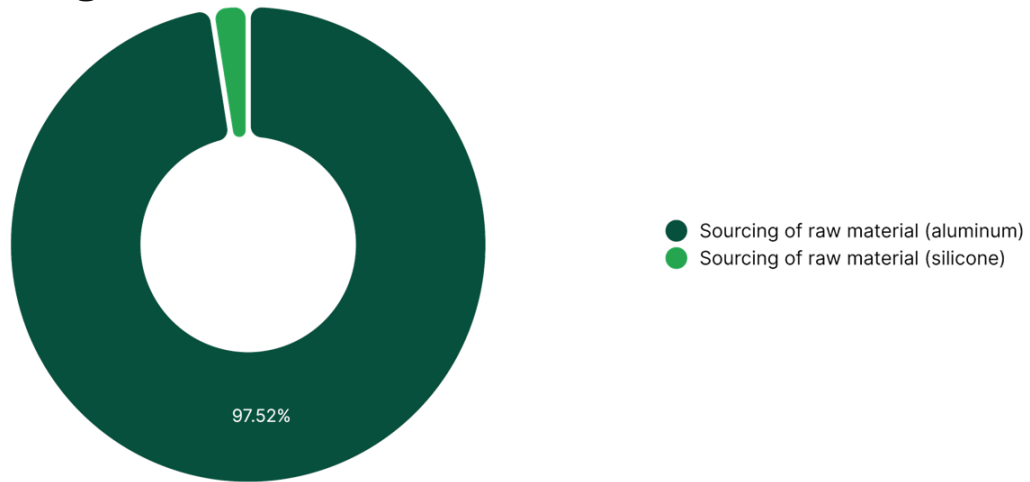
# Climate Change



| Step                                   | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|----------------------------------------|--------------------------------|----------------|
| Raw Material Extraction and Processing | 11.57                          | 56.64 %        |
| Manufacturing                          | 8.34                           | 40.82 %        |
| Transportation and Distribution        | 0.36                           | 1.75 %         |
| End-of-Life Treatment                  | 0.16                           | 0.79 %         |
|                                        |                                |                |
| TOTAL                                  | 20.43                          | 100.00 %       |

Laptop support

# Climate Change - Raw Material Extraction and Processing



| Activity                            | Emission Factor Num | Quantity | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|-------------------------------------|---------------------|----------|--------------------------------|----------------|
| Sourcing of raw material (aluminum) | 1                   | 1.48     | 11.29                          | 97.52 %        |
| Sourcing of raw material (silicone) | 2                   | 0.08     | 0.29                           | 2.48 %         |

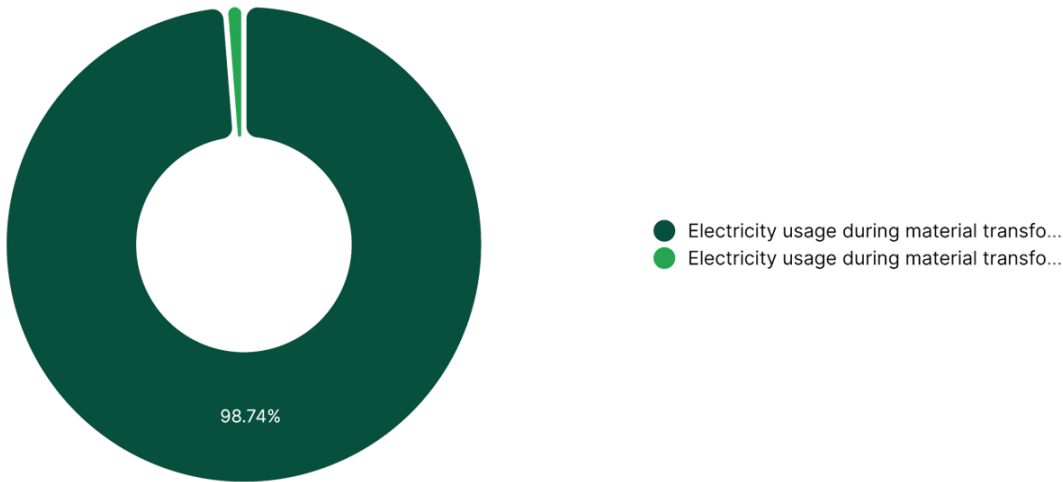
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| TOTAL |  |  | 11.57 | 100.00 % |
|-------|--|--|-------|----------|

Laptop support

# Climate Change - Manufacturing



| Activity                                                    | Emission Factor Num | Quantity | Impact (kg CO <sub>2</sub> eq) | Percentage (%) |
|-------------------------------------------------------------|---------------------|----------|--------------------------------|----------------|
| Electricity usage during material transformation (aluminum) | 3                   | 11.39    | 8.24                           | 98.74 %        |
| Electricity usage during material transformation (silicone) | 3                   | 0.14     | 0.1                            | 1.26 %         |

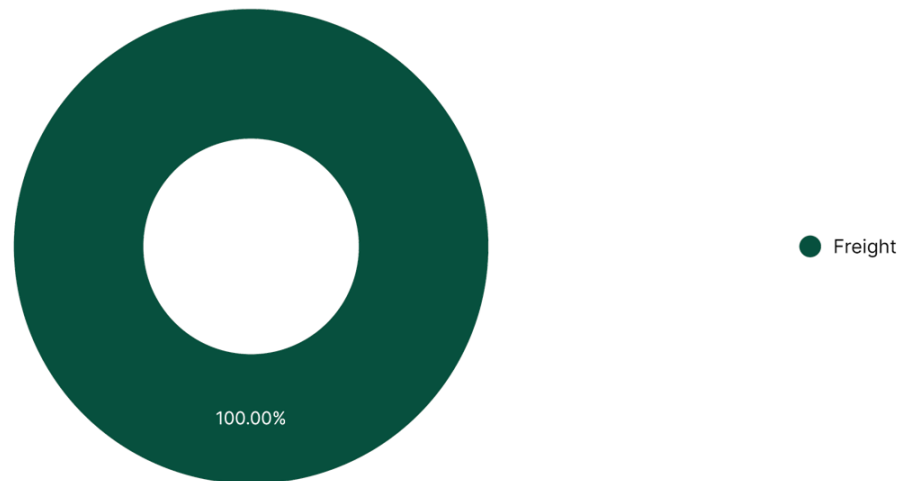
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| TOTAL |  |  | 8.34 | 100.00 % |
|-------|--|--|------|----------|

## Laptop support

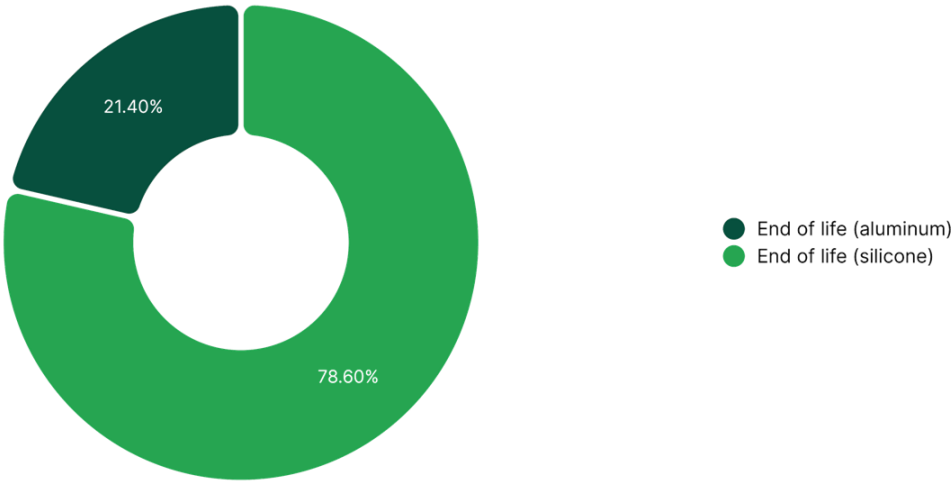
# Climate Change - Transportation and Distribution



| Activity | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|----------|---------------------|----------|-------------------------------|----------------|
| Freight  | 4                   | 1.42     | 358.23                        | 100.00 %       |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
|          |                     |          |                               |                |
| TOTAL    |                     |          | 358.23                        | 100.00 %       |

Laptop support

# Climate Change - End-of-Life Treatment



| Activity               | Emission Factor Num | Quantity | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|------------------------|---------------------|----------|-------------------------------|----------------|
| End of life (silicone) | 5                   | 0.07     | 126.63                        | 78.60 %        |
| End of life (aluminum) | 6                   | 1.35     | 34.47                         | 21.40 %        |

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| TOTAL |  |  | 161.1 | 100.00 % |
|-------|--|--|-------|----------|

