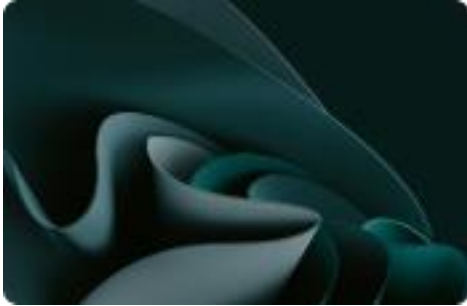


# Life Cycle Analyses

MESHLETTER



# 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   | Steel, low-alloyed   Ordinary transforming activity            | ECOINVENT 3.10    | 2.203301567   | kg   |
| 2   | Electricity   Total (Scope 2 & 3)   People's Republic of China | IEA 2023          | 0.7231        | kWh  |
| 3   | Freight   Boat   From CN to FR                                 | WELOW EXPERTS 1.0 | 0.25227278    | kg   |
| 4   | Waste reinforcement steel   Ordinary transforming activity     | ECOINVENT 3.10    | 0.06273427595 | kg   |

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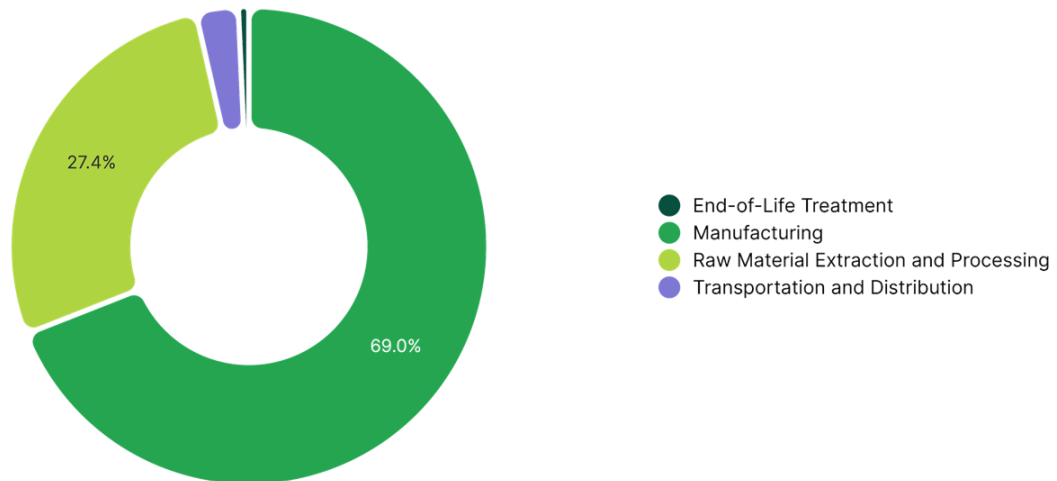
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# 02

## Results

Magazine rack

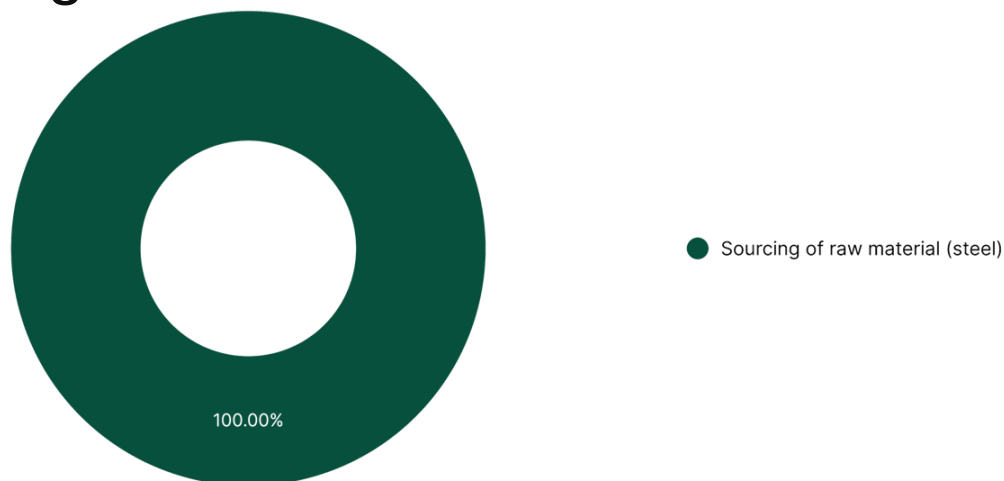
## Climate Change



| Step                                   | Impact<br>(kg CO <sub>2</sub> eq) | Percentage<br>(%) |
|----------------------------------------|-----------------------------------|-------------------|
| Manufacturing                          | 1.93                              | 69.04 %           |
| Raw Material Extraction and Processing | 0.77                              | 27.40 %           |
| Transportation and Distribution        | 0.08                              | 2.85 %            |
| End-of-Life Treatment                  | 0.02                              | 0.71 %            |
|                                        |                                   |                   |
| TOTAL                                  | 2.79                              | 100.00 %          |

## Magazine rack

# Climate Change - Raw Material Extraction and Processing



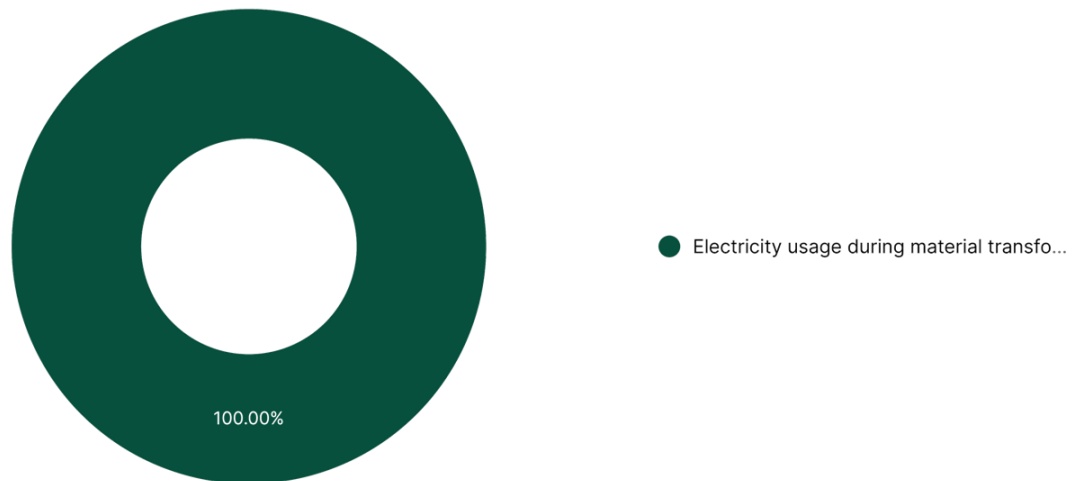
| Activity                         | Emission<br>Factor<br>Num | Quantity | Unité | Impact<br>(g CO <sub>2</sub> eq) | Percentage<br>(%) |
|----------------------------------|---------------------------|----------|-------|----------------------------------|-------------------|
| Sourcing of raw material (steel) | 1                         | 0.35     | kg    | 765.87                           | 100.00 %          |

|       |        |          |
|-------|--------|----------|
| TOTAL | 765.87 | 100.00 % |
|-------|--------|----------|



## Magazine rack

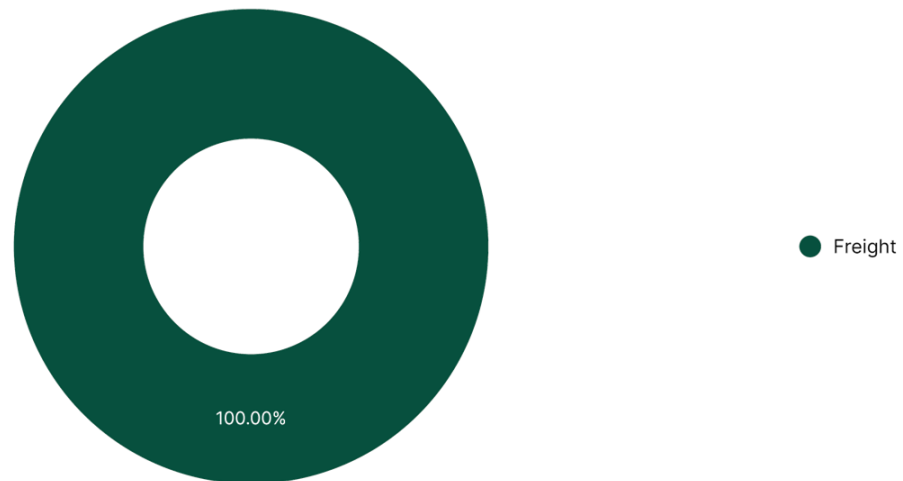
# Climate Change - Manufacturing



| Activity                                                 | Emission<br>Factor<br>Num | Quantity | Unité | Impact<br>(kg CO <sub>2</sub> eq) | Percentage<br>(%) |
|----------------------------------------------------------|---------------------------|----------|-------|-----------------------------------|-------------------|
| Electricity usage during material transformation (steel) | 2                         | 2.67     | kWh   | 1.93                              | 100.00 %          |
|                                                          |                           |          |       |                                   |                   |
|                                                          |                           |          |       |                                   |                   |
|                                                          |                           |          |       |                                   |                   |
|                                                          |                           |          |       |                                   |                   |
| TOTAL                                                    |                           |          |       | 1.93                              | 100.00 %          |

## Magazine rack

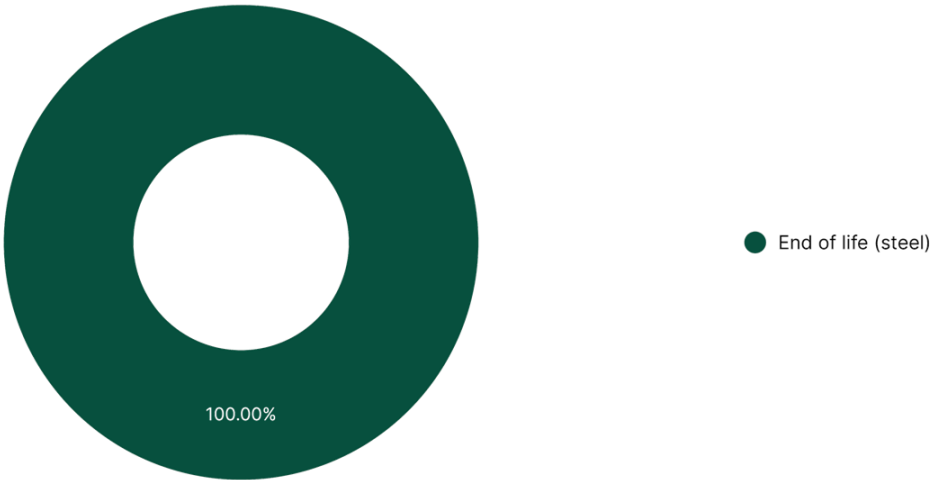
# Climate Change - Transportation and Distribution



| Activity | Emission<br>Factor<br>Num | Quantity | Unité | Impact<br>(g CO <sub>2</sub> eq) | Percentage<br>(%) |
|----------|---------------------------|----------|-------|----------------------------------|-------------------|
| Freight  | 3                         | 0.32     | kg    | 79.72                            | 100.00 %          |
|          |                           |          |       |                                  |                   |
|          |                           |          |       |                                  |                   |
|          |                           |          |       |                                  |                   |
|          |                           |          |       |                                  |                   |
| TOTAL    |                           |          |       | 79.72                            | 100.00 %          |

Magazine rack

# Climate Change - End-of-Life Treatment



| Activity            | Emission Factor Num | Quantity | Unité | Impact (g CO <sub>2</sub> eq) | Percentage (%) |
|---------------------|---------------------|----------|-------|-------------------------------|----------------|
| End of life (steel) | 4                   | 0.32     | kg    | 19.82                         | 100.00 %       |
|                     |                     |          |       |                               |                |
|                     |                     |          |       |                               |                |
|                     |                     |          |       |                               |                |
|                     |                     |          |       |                               |                |
| TOTAL               |                     |          |       | 19.82                         | 100.00 %       |

