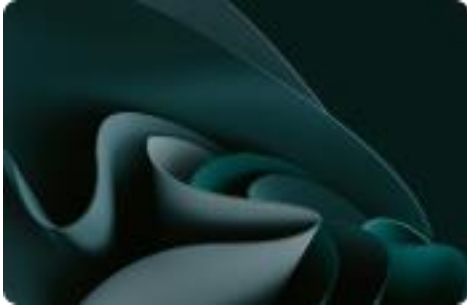


Life Cycle Analyses

MESHMAG



Summary



01 | Methodology



02 | Results

01

Methodology

Environmental Impact Assessment

<p>Functional unit</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). Therefore, the functional unit shall be clearly defined and measurable.</p>
<p>Impact Indicator</p>	<p>The impact is measured through the "IPCC 2021 GWP100" method</p>
<p>Electricity impact calculation method</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>Life Cycle Analyses</p>	<p>Cradle to grave</p>

Emission Factor Inventory

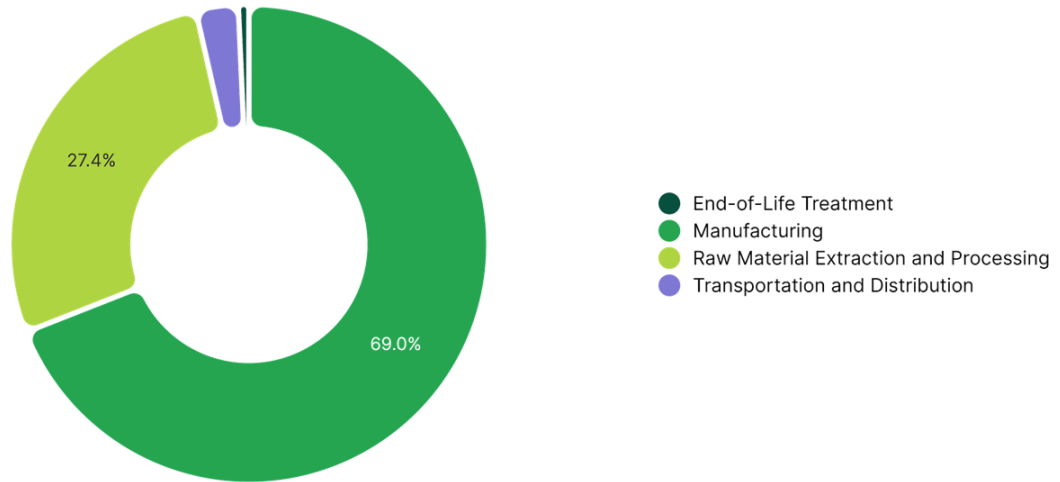
Num	Emission Factor	Source	Value	Unit
1	Steel, low-alloyed Ordinary transforming activity	ECOINVENT 3.10	2.203301567	kg
2	Electricity Total (Scope 2 & 3) People's Republic of China	IEA 2023	0.7231	kWh
3	Freight Boat From CN to FR	WELOW EXPERTS 1.0	0.25227278	kg
4	Waste reinforcement steel Ordinary transforming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

02

Results

Magazine rack

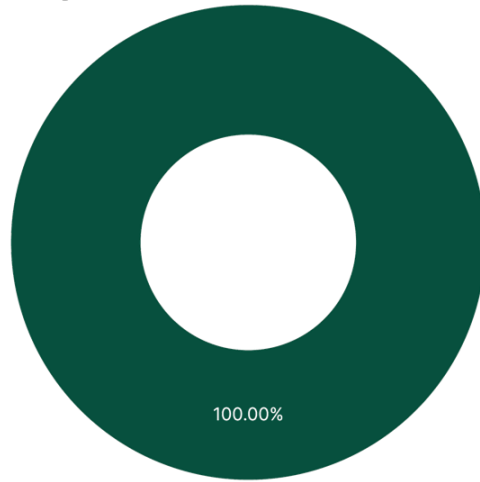
Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Manufacturing	2.63	69.04 %
Raw Material Extraction and Processing	1.04	27.40 %
Transportation and Distribution	0.11	2.85 %
End-of-Life Treatment	0.03	0.71 %
TOTAL	3.8	100.00 %

Magazine rack

Climate Change - Raw Material Extraction and Processing

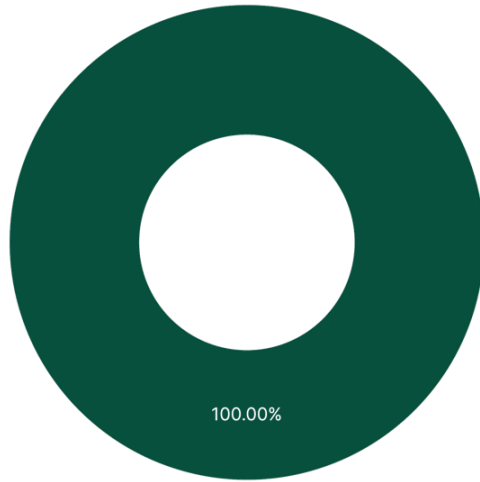


● Sourcing of raw material (steel)

Activity	Emission Factor Num	Quantity	Unité	Impact (kg CO ₂ eq)	Percentage (%)	
Sourcing of raw material (steel)	1	0.47	kg	1.04	100.00 %	
TOTAL					1.04	100.00 %

Magazine rack

Climate Change - Manufacturing

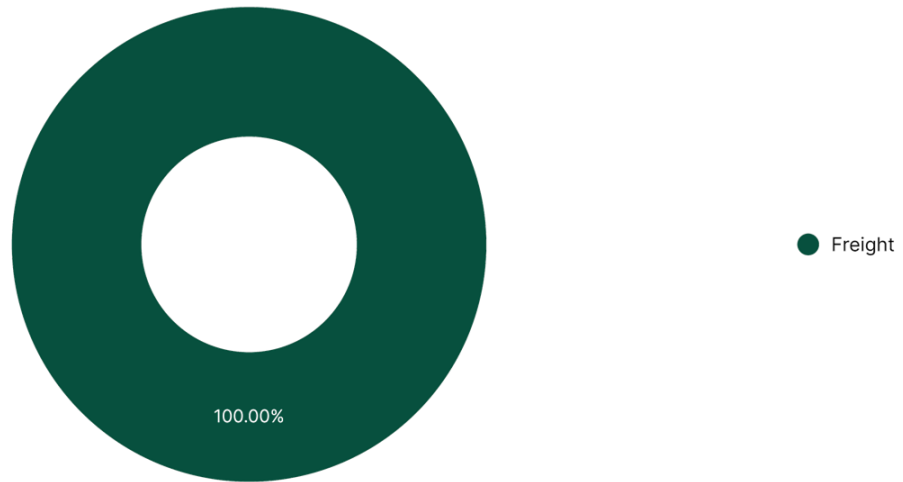


● Electricity usage during material transfo...

Activity	Emission Factor Num	Quantity	Unité	Impact (kg CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (steel)	2	3.63	kWh	2.63	100.00 %
TOTAL					2.63 100.00 %

Magazine rack

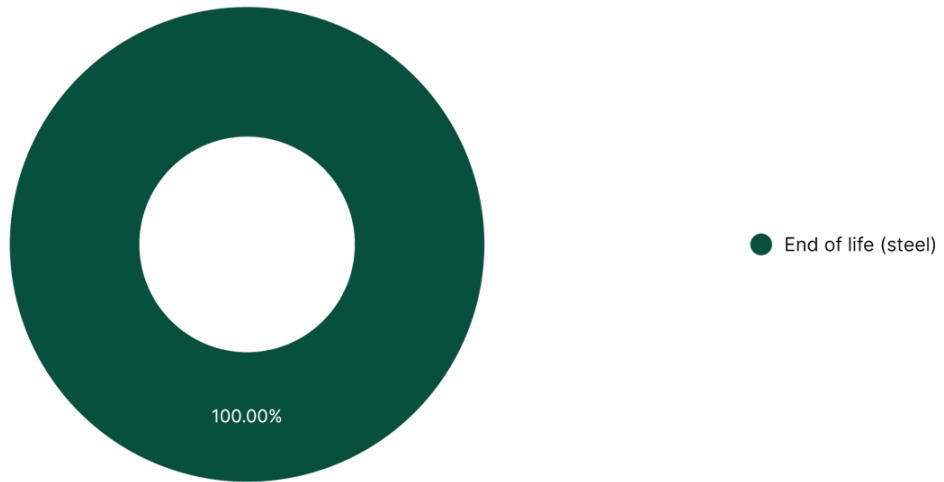
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Unité	Impact (g CO ₂ eq)	Percentage (%)
Freight	3	0.43	kg	108.48	100.00 %
TOTAL					108.48 100.00 %

Magazine rack

Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Unité	Impact (g CO ₂ eq)	Percentage (%)	
End of life (steel)	4	0.43	kg	26.98	100.00 %	
TOTAL					26.98	100.00 %

