

kg Stainless steel sheet

Steel is a ferrous metal and is an alloy of iron and carbon, as well as potential other elements. It has a very high tensile strength. Steel has been used in the construction industry for over a century. Stainless steel is extremely resistant to corrosion.

The core material for making steel is iron, which is found in iron ore. Iron is extracted from iron ore in blast furnaces through the smelting process, while controlling for the content of carbon. To render the steel stainless, chromium is needed and is typically added as stainless steel scraps. The molten steel is usually further processed before being cast for its final use.

Steel is commonly used in the construction industry, mainly as a structural material. Stainless steel sheets are used to produce a range of finishing materials, such as high durability cladding, roofing (mainly for airports), and kitchen surfaces.

Category Metals
Type Stainless steel
Functional unit kg
Specific heat 456 J/(kg·K)
Density 7 740 kg/m³

Common uses
 High-durability cladding, tubes, roofing, kitchen surfaces

Process name
 Stainless steel, sheet (custom)

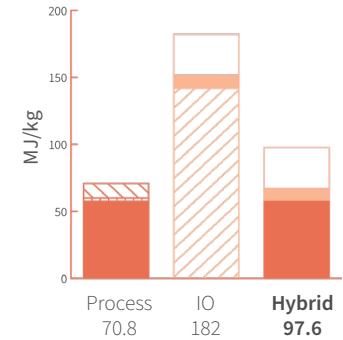
Input-output sector
 Iron and Steel Manufacturing

Further information
doi.org/10.26188/5da557de9ee33

Material variations	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO ₂ e/unit)
Stainless steel sheet	kg	97.6	140	7.2
Stainless steel sheet products	kg	238	263	14.7

TOP THREE INPUTS

- 50.6%** Steel, converter, chromium steel 18/8, at plant/RER U/AusSD U
- 8.1%** Sheet rolling, chromium steel/RER U/AusSD U
- 4.7%** Road Transport

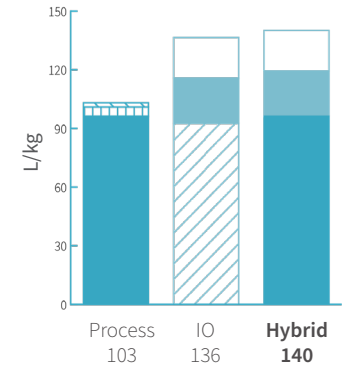


ENERGY



TOP THREE INPUTS

- 41.2%** Sheet rolling, chromium steel/RER U/AusSD U
- 27.5%** Steel, converter, chromium steel 18/8, at plant/RER U/AusSD U
- 0.7%** Wholesale Trade

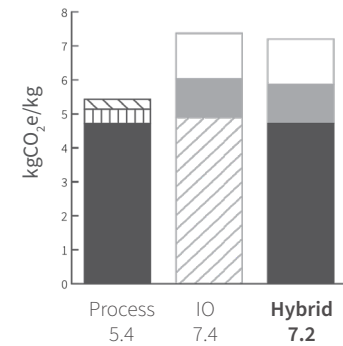


WATER



TOP THREE INPUTS

- 55.9%** Steel, converter, chromium steel 18/8, at plant/RER U/AusSD U
- 9.7%** Sheet rolling, chromium steel/RER U/AusSD U
- 2.1%** Road Transport



GREENHOUSE GAS EMISSIONS

