kg

Cold rolled steel

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.

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. The molten steel is usually further processed before being cast for its final use. Cold rolled steel is cooled at room temperature and then annealed or tempered.

Steel is commonly used in the construction industry, mainly as a structural material. Cold rolled structural steel is used to produce a range of more precise structural elements compared to hot rolled structural steel. These include structural members for trusses and profiles for roof and wall systems.

Category *Metals*

Type *Steel*

Functional unit *kg*

Specific heat *490 J/(kg·K)*

Density *7 850 kg/m³*

Common uses
Truss members, wall and roof systems

Process name
Steel cold rolled (custom)

Input-output sector
Iron and Steel Manufacturing

Further information
doi.org/10.26188/5da552dadce9f

TOP THREE INPUTS

41.5% Steel, converter, low-alloyed, at plant/RER U/ AusSD U

9.9% Sheet rolling, steel/RER U/ AusSD U

5.7% Road Transport

ENERGY

51.7 MJ/kg

Process 31.9 | IO 109 | Hybrid 51.7

TOP THREE INPUTS

36.8% Sheet rolling, steel/RER U/ AusSD U

20.6% Steel, converter, low-alloyed, at plant/RER U/ AusSD U

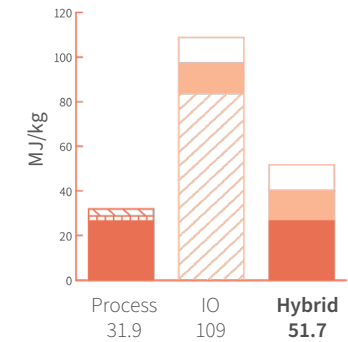**5.9%** Water Supply, Sewerage and Drainage Services

WATER

77.6 L/kg

Process 47.9 | IO 81.5 | Hybrid 77.6

TOP THREE INPUTS

46.9% Steel, converter, low-alloyed, at plant/RER U/ AusSD U

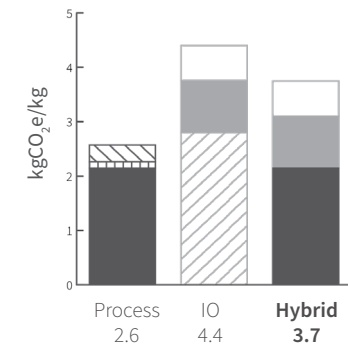**10.4%** Sheet rolling, steel/RER U/ AusSD U

4.0% Non Ferrous Metal Ore Mining
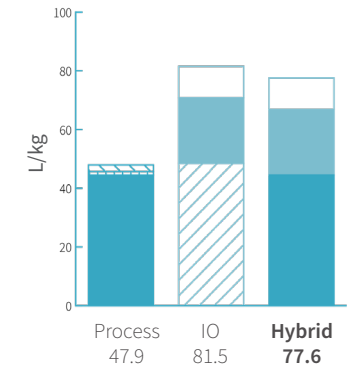
GREENHOUSE GAS EMISSIONS

3.7 kgCO₂e/kg

Process 2.6 | IO 4.4 | Hybrid 3.7

EPiC Database