# kg Copper sheet

Copper is a soft and malleable non-ferrous metal and has been used in construction for hundreds of years. It has high thermal and electric conduction properties.

Copper is made by crushing mined copper ores and flash smelting them. The resulting copper sulphite is further heated with oxygen to obtain copper oxide. The latter is heated to obtain blister copper, which is used to cast anodes that are turned into pure copper cathodes through electroplating.

Copper has multiple uses in construction. Copper sheets are often used to manufacture roofing, cladding, gutters, antimicrobial finished surfaces and others.

**Category** *Metals*

**Type** *Copper*

**Functional unit** *kg*

**Specific heat** *390 J/(kg·K)*

**Density** *8 940 kg/m³*

**Common uses**
*Roofing, cladding, gutters, antimicrobial finished surfaces*

**Process name**
*Copper sheet (custom)*

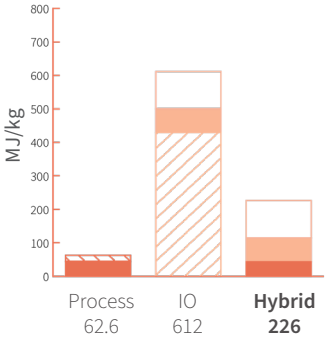
**Input-output sector**
*Basic Non-Ferrous Metal Manufacturing*

**Further information**
*doi.org/10.26188/5da55308b9bbe*

| Material variations | Unit | Energy (MJ/unit) | Water (L/unit) | GHG emissions ($kgCO_2e$/unit) |
|---|---|---|---|---|
| *Copper sheet* | *kg* | *226* | *389* | *15.1* |
| Copper sheet - 0.9 mm | $m^2$ | 1 819 | 3 132 | 121 |
| Copper sheet - 1.2 mm | $m^2$ | 2 426 | 4 175 | 162 |
| Copper sheet - 2 mm | $m^2$ | 4 043 | 6 959 | 270 |
| Copper sheet - 3 mm | $m^2$ | 6 064 | 10 438 | 405 |


**TOP THREE INPUTS**

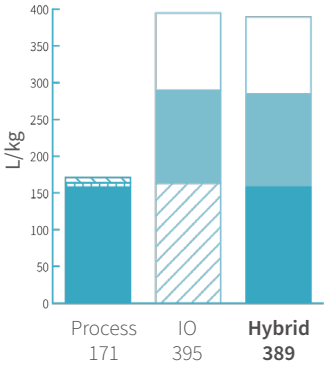
- 15.9% Copper, primary, at refinery/GLO U/AusSD U
- 5.4% Road Transport
- 2.0% Sheet rolling, copper/RER U/AusSD U




ENERGY
226 MJ/kg

**TOP THREE INPUTS**

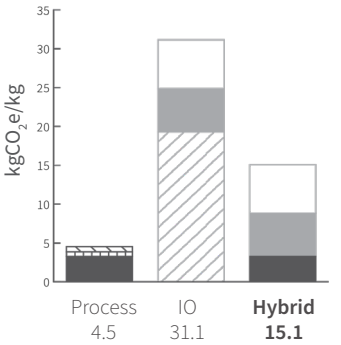
- 37.6% Copper, primary, at refinery/GLO U/AusSD U
- 2.1% Sheet rolling, copper/RER U/AusSD U
- 1.1% Electricity Transmission, Distribution, On Selling and Electricity Market Operation




WATER
389 L/kg

**TOP THREE INPUTS**

- 16.5% Copper, primary, at refinery/GLO U/AusSD U
- 2.5% Sheet rolling, copper/RER U/AusSD U
- 2.4% Road Transport




GREENHOUSE GAS EMISSIONS
15.1 $kgCO_2e/kg$