

kg Copper pipe

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. These are then heated and extruded into pipes.

Copper has multiple uses in construction. Copper pipes are used for building services, including for gas and in heating, cooling and ventilation systems.

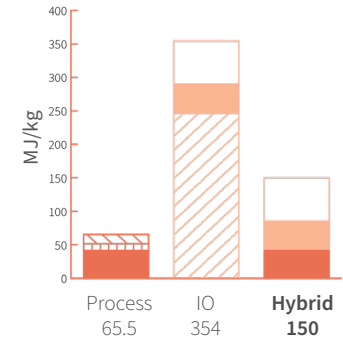
- Category** *Metals*
- Type** *Copper*
- Functional unit** *kg*
- Specific heat** *390 J/(kg·K)*
- Density** *8 940 kg/m³*
- Common uses**
Gas pipes, coolant pipes, water pipes
- Process name**
Copper wire (custom)
- Input-output sector**
Basic Non-Ferrous Metal Manufacturing
- Further information**
doi.org/10.26188/5da55317e50fc

Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO ₂ e/unit)
<i>Copper pipe</i>	<i>kg</i>	<i>150</i>	<i>289</i>	<i>10.1</i>
Copper pipe - 12.7 mm outer dia., 0.91 mm thick	m	45.1	87.0	3.0
Copper pipe - 19.05 mm outer dia., 1.02 mm thick	m	77.3	149	5.2
Copper pipe - 40 mm outer dia., 1.22 mm thick	m	199	384	13.4

TOP THREE INPUTS

- 23.2%** Copper, primary, at refinery/GLO U/AusSD U
- 4.7%** Road Transport
- 4.6%** Wire drawing, copper/RER U/AusSD U

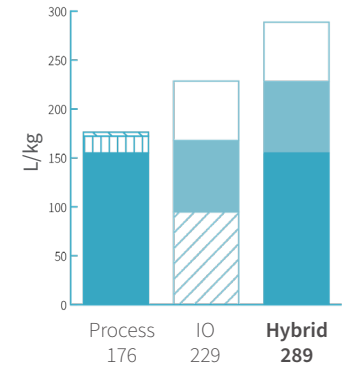


ENERGY



TOP THREE INPUTS

- 49.2%** Copper, primary, at refinery/GLO U/AusSD U
- 4.5%** Wire drawing, copper/RER U/AusSD U
- 0.9%** Electricity Transmission, Distribution, On Selling and Electricity Market Operation

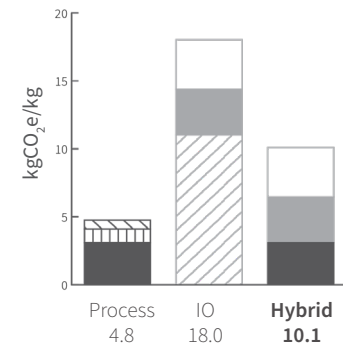


WATER



TOP THREE INPUTS

- 24.7%** Copper, primary, at refinery/GLO U/AusSD U
- 6.0%** Wire drawing, copper/RER U/AusSD U
- 2.2%** Road Transport



GREENHOUSE GAS EMISSIONS

