

kg Aluminium sheet

Aluminium is a ductile non-ferrous metal. It is a lightweight metal with an average density of 2.7 t/m³. It is durable, corrosion resistant, a good reflector of both visible and infrared radiation, and highly recyclable. Aluminium alloys are used in the construction industry as raw aluminium typically lacks the strength required for most of its applications.

Aluminium is extracted from bauxite, its common ore, through an extensive process. Bauxite is converted to aluminium oxide through the Bayer process. Aluminium oxide (or Alumina) is then converted to aluminium billets by the electricity-intensive Hall-Héroult process, made of 99% aluminium, which can be further purified if needed. Aluminium billets are then thermoformed into the relevant shape.

Aluminium is commonly used as a construction material, notably as cladding, structural and window framing, and as a thermal reflector. Aluminium sheets or plates are used as the base material for aluminium cladding, gutters, and structural elements.

Category	Metals
Type	Aluminium
Functional unit	kg
Specific heat	910 J/(kg·K)
Density	2 712 kg/m ³

Common uses
Cladding, structural elements, tubes, plates

Process name
Aluminium sheet rolled (custom)

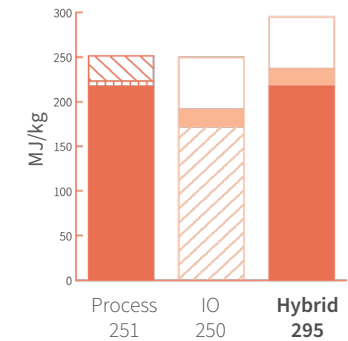
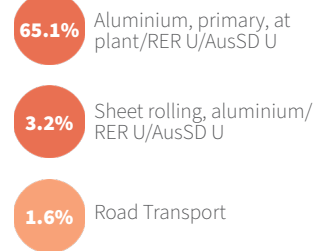
Input-output sector
Basic Non-Ferrous Metal Manufacturing

Further information
doi.org/10.26188/5da551dec2e47

Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO ₂ e/unit)
Aluminium sheet	kg	295	160	26.7
Aluminium sheet - 1.6 mm	m ²	1 280	693	116
Aluminium sheet - 3 mm	m ²	2 400	1 300	217
Aluminium sheet - 6 mm	m ²	4 800	2 600	434

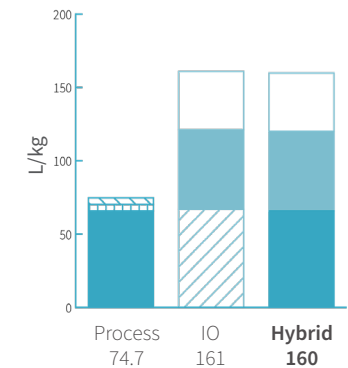
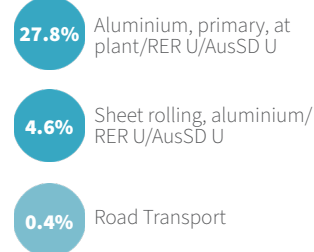
TOP THREE INPUTS



ENERGY



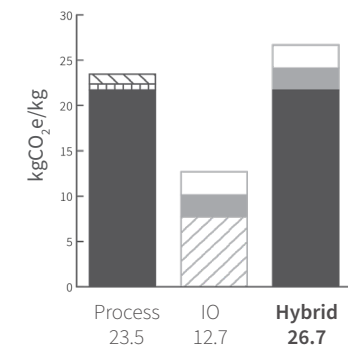
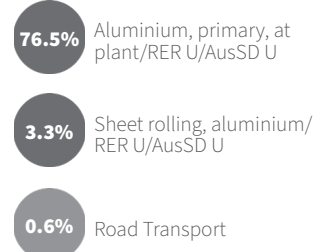
TOP THREE INPUTS



WATER



TOP THREE INPUTS



GREENHOUSE GAS EMISSIONS

