kg Portland cement

Portland cement (also known as common or general-purpose cement) is manufactured from limestone, clay and gypsum. A range of additional minerals or additives can be added to control the properties of the finished cement.

Limestone and other raw materials are heated at over 1 000°C to produce clinker. The clinker is then mixed with gypsum and ground into a fine powder to produce Portland cement.

Portland cement is typically used as a binder for concrete and cement-based products, such as fibre cement sheet and cement mortar. When mixed with water it forms a workable slurry that undergoes a process known as hydration, setting within a few hours and forming its final hardened state within weeks.

Category *Concrete and plaster products*

Type *Other minerals*

Functional unit *kg*

Specific heat *920 J/(kg·K)*

Density *1 500 kg/m³*

Common uses
Concrete, fibre cement sheet, fibre cement weatherboard, cement mortar, cement render

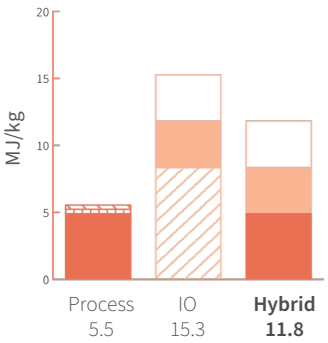
Process name
Ordinary portland cement, at plant/AU U

Input-output sector
Cement, Lime and Ready-Mixed Concrete Manufacturing

Further information
doi.org/10.26188/5da55701cee5d

TOP THREE INPUTS

- 37.7% Clinker, at plant/AU U
- 15.3% Road Transport
- 3.7% Electricity, low voltage, Australian/AU U

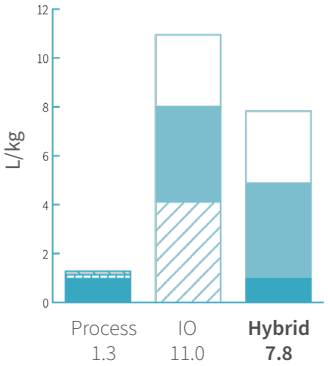


ENERGY

11.8 MJ/kg

TOP THREE INPUTS

- 11.7% Clinker, at plant/AU U
- 3.2% Professional, Scientific and Technical Services
- 2.9% Road Transport

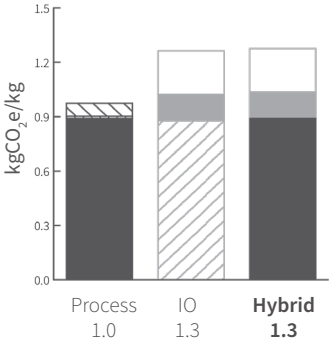


WATER

7.8 L/kg

TOP THREE INPUTS

- 68.1% Clinker, at plant/AU U
- 4.2% Road Transport
- 1.7% Electricity, low voltage, Australian/AU U



GREENHOUSE GAS EMISSIONS

1.3 $kgCO_2e/kg$