

## kg Rockwool insulation

Rockwool, also called mineral wool, is made by spinning or drawing molten rock materials into fibres. The resulting fibrous material has a very low density and low thermal conductivity (0.04 W/(m·K)).

Rockwool is produced by melting rock at 1 600°C and blowing air or steam through the furnace to generate the fibres. Fibres can also be produced by spinning, similar to the process of making cotton candy (the same process used to make fibreglass, or glasswool). The wool is packed in rolls or matts.

Rockwool insulation is widely used in the construction industry as thermal insulation. It has a high fire resistance depending on the constituting material, with ceramic fibre wool withstanding up to 1 200°C of heat.

**Category** *Insulation*

**Type** *Other minerals*

**Functional unit** *kg*

**Specific heat** *840 J/(kg·K)*

**Density** *70 kg/m<sup>3</sup>*

**Common uses**  
*Insulation*

**Process name**  
*Rock wool, packed, at plant/CH U/AusSD U*

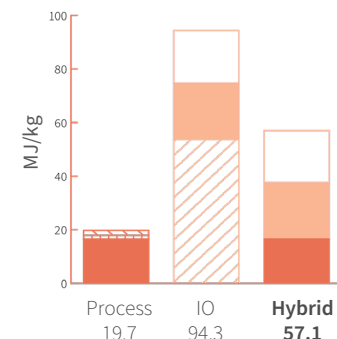
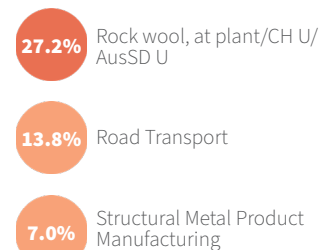
**Input-output sector**  
*Other Non-Metallic Mineral Product Manufacturing*

**Further information**  
[doi.org/10.26188/5da55737d3e5e](https://doi.org/10.26188/5da55737d3e5e)

### Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO <sub>2</sub> e/unit)
Rockwool insulation	kg	57.1	62.2	3.8
Rockwool insulation - 80 mm (R2)	m <sup>2</sup>	320	348	21.1
Rockwool insulation - 100 mm (R2.5)	m <sup>2</sup>	400	435	26.4

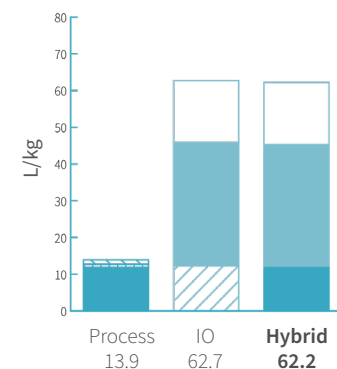
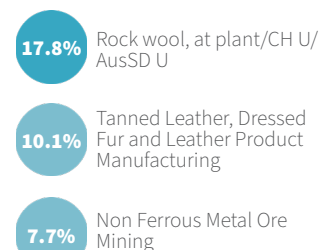
### TOP THREE INPUTS



### ENERGY

57.1  
MJ/kg

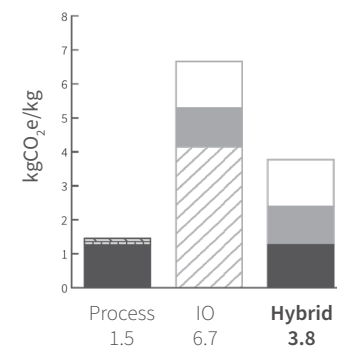
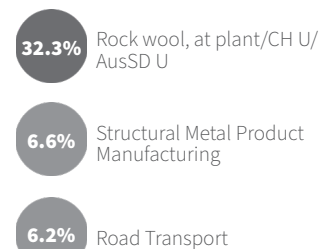
### TOP THREE INPUTS



### WATER

62.2  
L/kg

### TOP THREE INPUTS



### GREENHOUSE GAS EMISSIONS

3.8  
kgCO<sub>2</sub>e/kg