

kg Clay roof tile

Clay roof tiles, also known as terracotta tiles are a common roofing option. They are durable, weather resistant, fire resistant, and have a high thermal mass compared with other roofing materials. Tiles are interlocking, to ensure a consistent weatherproof roof covering, and require ongoing maintenance to ensure they remain weatherproof. Tiles can be brittle, and crack easily if not handled/treated correctly.

The manufacturing process for clay tiles is similar to the production of other ceramic products. Clay is prepared and mixed to ensure consistent particle size and mineral content. The clay is then moulded or extruded into tile shaped elements. These are dried in a temperature and humidity controlled environment, and fired in a high temperature oven/kiln. Coatings or glazing can be applied to ensure the tiles are waterproof, or provide other construction or aesthetic qualities. The colour of the tile largely depends on the mineral content of the clay, the final firing temperature, or the coating/glazing applied.

Clay roof tiles are available in a wide range of shapes and sizes, including specific regional styles which are influenced by roof pitch, weather conditions, availability of raw materials and aesthetic qualities.

Category Sand, stone and ceramics

Type Clay

Functional unit kg

Specific heat 800 J/(kg·K)

Density 1 860 kg/m³

Common uses

Roof cladding

Process name

Roof tile, at plant/RER U/AusSD U

Input-output sector

Ceramic Product Manufacturing

Further information

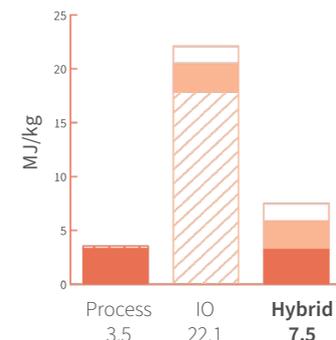
doi.org/10.26188/5da552bc24123

TOP THREE INPUTS

7.7% Other Non-Metallic Mineral Product Manufacturing

6.9% Road Transport

2.6% Cement, Lime and Ready-Mixed Concrete Manufacturing



ENERGY

7.5 MJ/kg

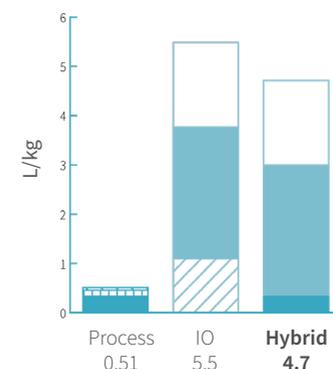


TOP THREE INPUTS

6.7% Other Non-Metallic Mineral Product Manufacturing

3.4% Professional, Scientific and Technical Services

3.0% Food and Beverage Services



WATER

4.7 L/kg

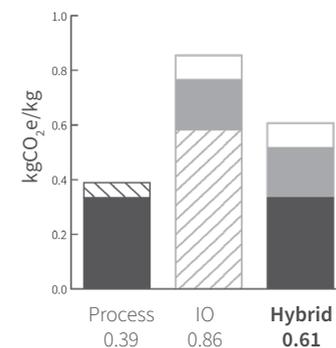


TOP THREE INPUTS

7.1% Other Non-Metallic Mineral Product Manufacturing

2.9% Cement, Lime and Ready-Mixed Concrete Manufacturing

2.7% Road Transport



GREENHOUSE GAS EMISSIONS

0.61 kgCO₂e/kg

