

kg Silicone

Silicone is a synthetic polymer compound, with a molecular chain consisting of alternating silicon and oxygen atoms. Depending on the production process, it can take the form of a liquid, gel, elastomer or resin. It is widely used for plumbing applications, due to its adhesive properties, ability to repel water, flexibility, stability in high/low temperatures and antimicrobial properties.

Silicone is derived from silicon, which is extracted from quartz, sand or other sources. To produce silicone, the base material (silicon) goes through several chemical and distillation processes.

In construction, silicone is used as a sealant, adhesive or electrical insulation amongst other uses. It is also widely used in manufacturing, for production of gaskets, moulds, coatings, caulks, household goods and plumbing hardware.

Category Miscellaneous

Type Other polymers

Functional unit kg

Specific heat 1 460 J/(kg·K)

Density 960 kg/m³

Common uses

Sealant, adhesive, electrical insulation, fittings, coatings

Process name

Silicone product, at plant/RER U/ AusSD U

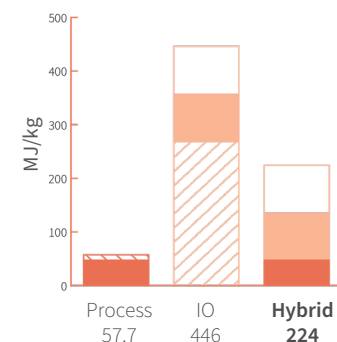
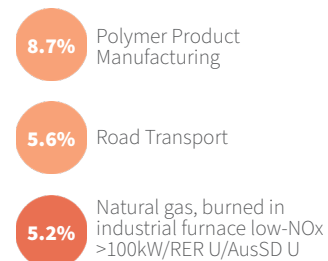
Input-output sector

Polymer Product Manufacturing

Further information

doi.org/10.26188/5da55771ca8cf

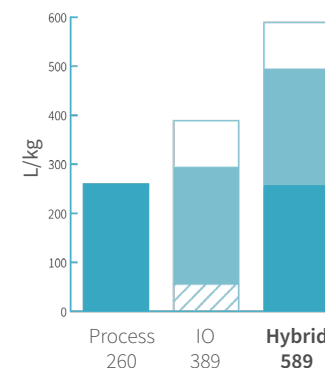
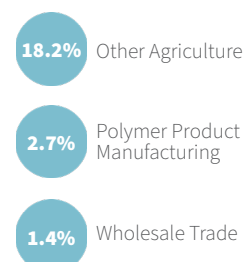
TOP THREE INPUTS



ENERGY

224
MJ/kg

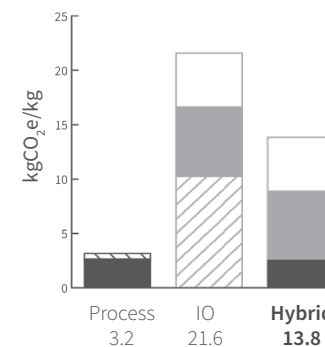
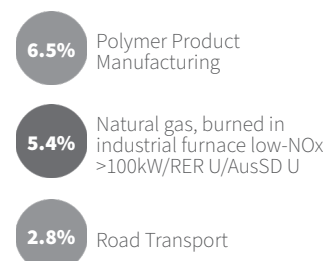
TOP THREE INPUTS



WATER

589
L/kg

TOP THREE INPUTS



GREENHOUSE GAS EMISSIONS

13.8
kgCO₂e/kg