kg Nylon 66

Nylon 66 (nylon 6-6, nylon 6/6, or nylon 6,6) is a polyamide made from two monomers with six carbon atoms each. It has high mechanical strength, rigidity, good stability under heat and chemical resistance.

Nylon 66 is synthesised by polycondensating hexamethylenediamine and adipic acid. The same amount of each monomere are mixed with water and crystallised to produce a nylon salt. The salt is polymerised and nylon 66 is formed. It can be extruded, granulated or spun into fibres.

Nylon 66 is mostly used as a sheet in construction, but also in rods, tubes, screws, washers, ropes and spacers.

Category *Plastics*

Type *Nylon*

Functional unit *kg*

Specific heat *1 464 J/(kg·K)*

Density *1 140 kg/m³*

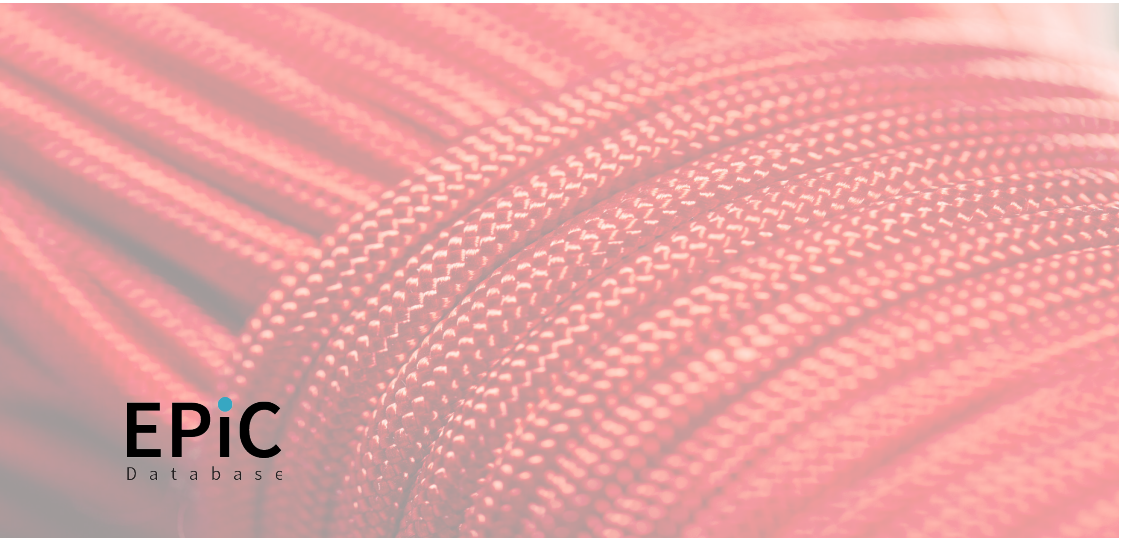
Common uses
Membrane, rods, tubes, screws, washers, spacers, rope

Process name
Nylon 66, at plant/RER U/AusSD U

Input-output sector
Polymer Product Manufacturing

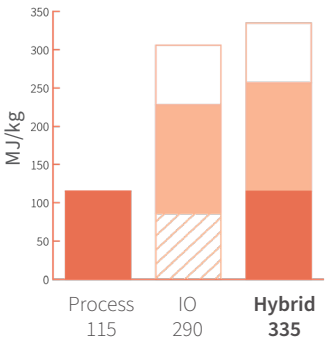
Further information
doi.org/10.26188/5da55609d0f6f

Material variations	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions ($kgCO_2e$/unit)
Nylon 66	*kg*	*335*	*910*	*22.2*
Nylon 66 sheet - 1.5 mm	m^2	572	1 556	37.9
Nylon 66 sheet - 3 mm	m^2	1 145	3 113	75.8
Nylon 66 sheet - 5 mm	m^2	1 908	5 188	126



TOP THREE INPUTS

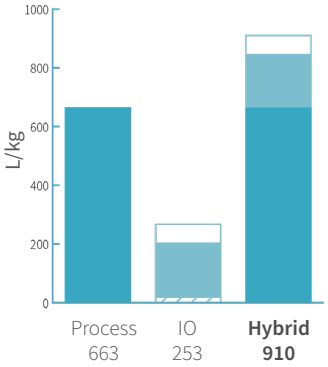
- 21.2% Basic Chemical Manufacturing
- 4.8% Electricity Generation
- 3.8% Petroleum and Coal Product Manufacturing



ENERGY
335 MJ/kg

TOP THREE INPUTS

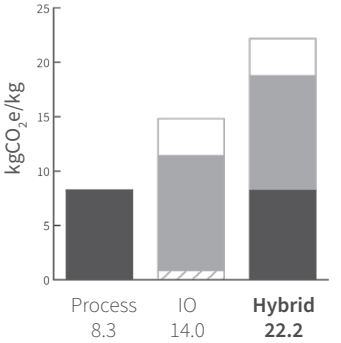
- 7.7% Other Agriculture
- 3.0% Basic Chemical Manufacturing
- 1.2% Water Supply, Sewerage and Drainage Services



WATER
910 L/kg

TOP THREE INPUTS

- 20.3% Basic Chemical Manufacturing
- 8.7% Electricity Generation
- 2.6% Polymer Product Manufacturing



GREENHOUSE GAS EMISSIONS
22.2 $kgCO_2e$/kg