

kg Low-density polyethylene (LDPE) pipe

Polyethylene (PE) is the most common plastic and is a thermoplastic polymer. It has low strength and rigidity but high impact strength and ductility and low friction. It is highly waterproof.

PE is produced by polymerising ethylene monomers using different catalysts (typically metal chlorides or metal oxides). Different densities can be obtained with different properties. Multiple additives are also used to obtain different grades and properties of PE. PE is thermoformed into moulds or extruded.

Low-density polyethylene (LDPE) is generally cheaper than HDPE. LDPE pipes are usually used for lower pressure systems and are typically smaller than HDPE pipes.

Category *Plastics*
Type *Low Density Polyethylene*
Functional unit *kg*
Specific heat *1 555 J/(kg·K)*
Density *910 kg/m³*

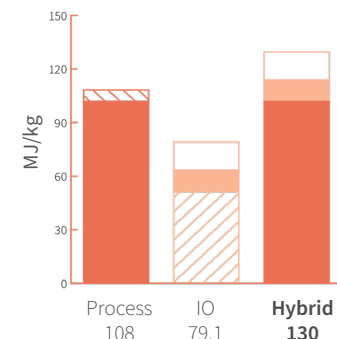
Common uses
Low-pressure pipes
Process name
LDPE, extruded pipe (custom)
Input-output sector
Polymer Product Manufacturing
Further information
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Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO ₂ e/unit)
<i>Low-density polyethylene (LDPE) pipe</i>	kg	130	89.6	6.0
LDPE pipe - 13 mm inner dia., 3.95 mm thickness	m	11	7.6	0.5
LDPE pipe - 19 mm inner dia., 4.4 mm thickness	m	17.3	11.9	0.8
LDPE pipe - 25 mm inner dia., 5.2 mm thickness	m	26.6	18.4	1.2
LDPE pipe - 32 mm inner dia., 6.7 mm thickness	m	43.9	30.3	2.0

TOP THREE INPUTS

- 74.0%** low density polyethylene, at plant/AU U
- 4.6%** Extrusion, plastic pipes/ RER U/AusSD U
- 1.7%** Road Transport

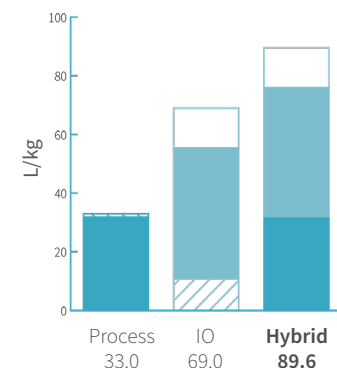


ENERGY



TOP THREE INPUTS

- 23.1%** Extrusion, plastic pipes/ RER U/AusSD U
- 21.3%** Other Agriculture
- 12.0%** Low density polyethylene, at plant/AU U

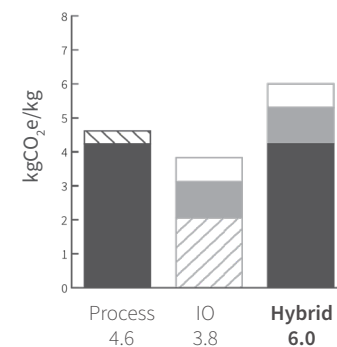


WATER



TOP THREE INPUTS

- 61.7%** Low density polyethylene, at plant/AU U
- 8.9%** Extrusion, plastic pipes/ RER U/AusSD U
- 1.4%** Wholesale Trade



GREENHOUSE GAS EMISSIONS

