

## kg Polyurethane (PU) flexible foam

Polyurethane (PU) is a polymer with a low density, low thermal conductivity and high durability.

PU is produced by mixing a stream of isocyanate and a stream of polyol, including any other additives. The proportion of each stream in the mix is often used to alter the material properties. The resulting mixture is poured into a mould or onto a surface. Once cured, the PU is demoulded.

In construction, flexible PU foam consists of thin flexible foam rolls that are typically used as floor underlay.

**Category** *Plastics*  
**Type** *Polyurethane*  
**Functional unit** *kg*  
**Specific heat** *1 800 J/(kg·K)*  
**Density** *69 kg/m<sup>3</sup>*

**Common uses**  
*Floor underlay*  
**Process name**  
*Polyurethane, flexible foam, at plant/RER U/AusSD U*

**Input-output sector**  
*Polymer Product Manufacturing*

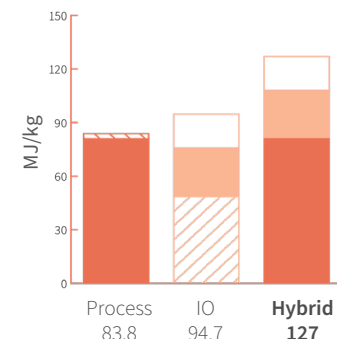
**Further information**  
[doi.org/10.26188/5da556dde71cd](https://doi.org/10.26188/5da556dde71cd)

### Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO <sub>2</sub> e/unit)
<i>Polyurethane (PU) flexible foam</i>	kg	127	443	7.7
PU foam underlay - 7 mm, 64 kg/m <sup>3</sup>	m <sup>2</sup>	56.8	198	3.4
PU foam underlay - 7 mm, 69 kg/m <sup>3</sup>	m <sup>2</sup>	61.4	214	3.7
PU foam underlay - 10 mm, 73 kg/m <sup>3</sup>	m <sup>2</sup>	92.5	323	5.6
PU foam underlay - 10 mm, 123 kg/m <sup>3</sup>	m <sup>2</sup>	156	543	9.4

### TOP THREE INPUTS

- 41.0%** Polyols, at plant/RER U/AusSD U
- 19.3%** Toluene diisocyanate, at plant/RER U/AusSD U
- 3.5%** Petroleum and Coal Product Manufacturing

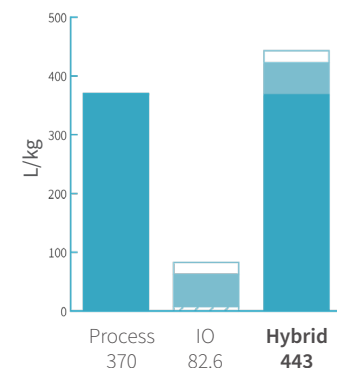


### ENERGY

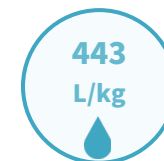


### TOP THREE INPUTS

- 56.6%** Polyols, at plant/RER U/AusSD U
- 21.5%** Toluene diisocyanate, at plant/RER U/AusSD U
- 5.1%** Other Agriculture

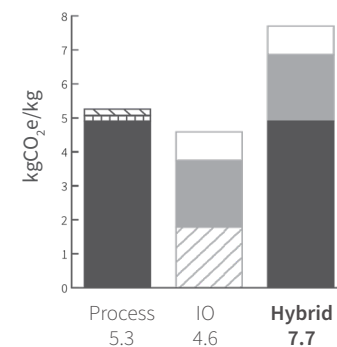


### WATER



### TOP THREE INPUTS

- 33.8%** Polyols, at plant/RER U/AusSD U
- 24.3%** Toluene diisocyanate, at plant/RER U/AusSD U
- 2.7%** Polymer Product Manufacturing



### GREENHOUSE GAS EMISSIONS

