

kg Polystyrene (EPS/XPS) insulation

Polystyrene (PS) is a synthetic polymer and thermoplastic. Polystyrene insulation is made from Expanded (EPS) or Extruded Polystyrene (XPS). It has a low thermal conductivity (0.03-0.038 W/(m·K)) and is a lightweight material.

PS insulation is made by polymerising styrene monomers in polystyrene before moulding it (EPS) or extruding it (XPS) into rigid foam panels.

PS insulation is widely used in the construction industry. EPS is used in walls and on roofs that do not require stepping onto. XPS, with its increased compressive strengths, can be stepped upon and is therefore more common on roofs.

Category *Insulation*

Type *Polystyrene*

Functional unit *kg*

Specific heat *1 223 J/(kg·K)*

Density *23 kg/m³*

Common uses
Insulation

Process name
Polystyrene foam slab, from expandable polystyrene (EPS)

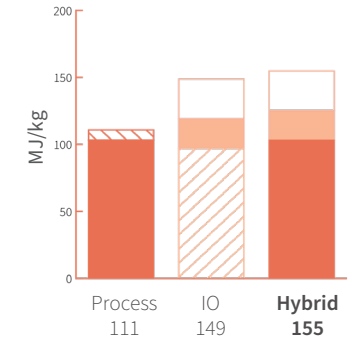
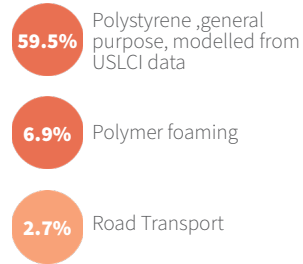
Input-output sector
Polymer Product Manufacturing

Further information
doi.org/10.26188/5da556cc242c5

Material variations

	Unit	Energy (MJ/unit)	Water (L/unit)	GHG emissions (kgCO ₂ e/unit)
<i>Polystyrene (EPS/XPS) insulation</i>	<i>kg</i>	<i>155</i>	<i>841</i>	<i>8.0</i>
EPS/XPS insulation - 72 mm (R2)	m ²	251	1 362	12.9
EPS/XPS insulation - 90 mm (R2.5)	m ²	314	1 703	16.2

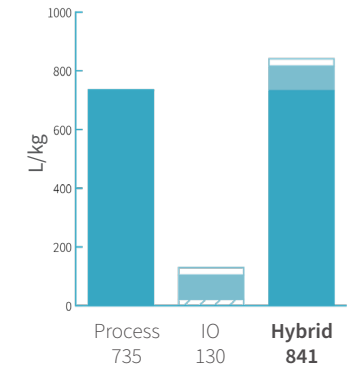
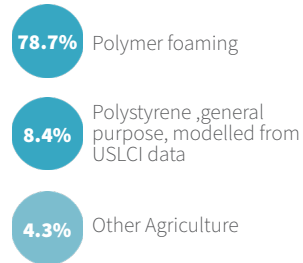
TOP THREE INPUTS



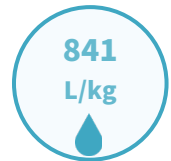
ENERGY



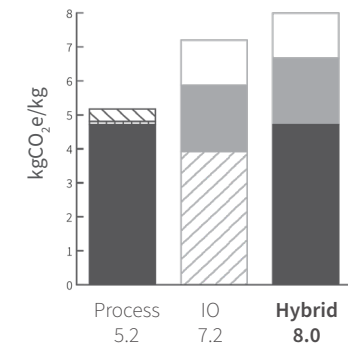
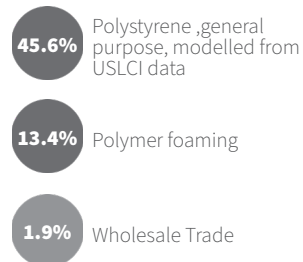
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WATER



TOP THREE INPUTS



GREENHOUSE GAS EMISSIONS

