



POLYCARBONATE IN THE EU

What is a polycarbonate?

Polycarbonate is a lightweight, highly versatile, durable, heat and shatter-resistant, formable and transparent thermoplastic. It is the material of choice for a wide range of end-user applications.

Socioeconomic benefits



€ 11.5–23.7 billion

gross value added for polymerisation & processing



22.8 million

estimated direct & indirect jobs



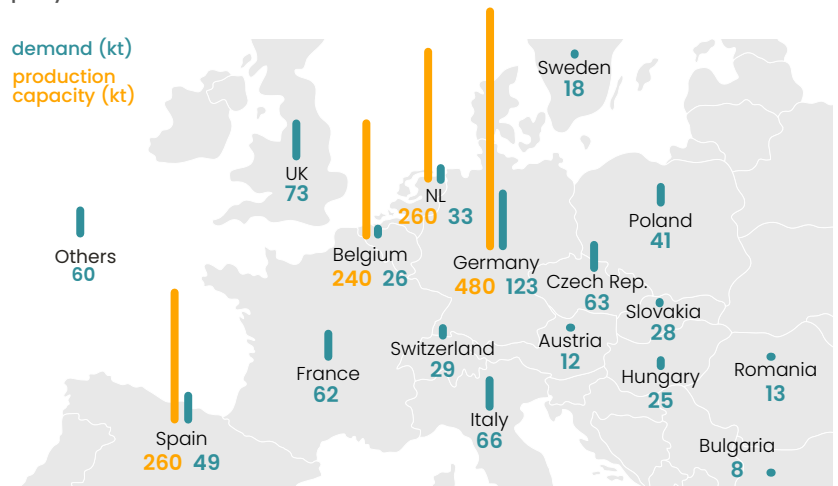
€ 470 million

net export value

The EU accounts for 1/4 of global production



In the EU, polycarbonate is produced in five facilities in Germany, Netherlands, Spain and Belgium. These facilities provide an overall production capacity of 1,240,000 t per year, accounting for about 25% of the global production capacity. In 2019, demand for polycarbonate in the EEA amounted to around 730,000 t, making the EU a significant net-exporter of polycarbonate.



EU demand amounts to around 730,000 t a year



Demand for polycarbonate in the European Economic Area (EEA) amounted to a value of some 1.57 billion € in terms of turnover. After polymerisation, polycarbonate is typically processed further in several steps, including compounding, blow molding, extrusion, injection molding or thermoforming, until the final product is offered to the market. The demand for polycarbonate is driven by six important sectors: automotive, building & construction, electrical and electronics, consumer, packaging, medical devices.



building & construction

31%



automotive

29%



electrical & electronics

28%



other

4%



consumer

4%



medical

3%



packaging

1%

Note

Polycarbonate production capacity is not equivalent to consumption or export.

Sources

Data basis for the information presented in this fact sheet are two independent reports commissioned by the PC/BPA group of Plastics Europe to external analytics companies: "Socio-economic value of polycarbonates in Europe", Wood Group UK Ltd, Feb 2021, and "Assessment of Socioeconomic Value of Polycarbonate in Europe", IHS Markit, 2022. Figures relate to 2018–2019 and are rounded.



Polycarbonate actively contributes to a more sustainable economy due to its inherent properties



DURABILITY

Polycarbonate's robustness makes it the plastic material of choice for applications that are meant to last 10+ years, such as their use in modern buildings, automotive headlights or housings for e-power charging stations. Polycarbonate use in electronics items enable longer life spans and allow repairability.



LIGHTWEIGHT & TRANSPARENCY

Polycarbonate combines lightweight with the distinctive feature of transparency. This is a key functionality for use in transparent roofs or security glazing. Compared to other materials far less energy is needed during transport and installation, thus contributing substantially to CO₂ emissions reductions.



RECYCLABILITY

Polycarbonate can be remelted. Repeated cooling and heating have limited effects on its properties. This means polycarbonate is an inherently good candidate for mechanical recycling. Other technologies such as chemical recycling can also be used with polycarbonate.

Polycarbonate industry: a comprehensive and dynamic journey towards sustainability

The polycarbonate industry is investing substantially in the transition to a more sustainable economy: major agreements and acquisitions as well as pilot projects demonstrate the feasibility of innovative ideas. The dynamics of the approach allows for a healthy competition within the sector. Sustainability advantages become competitive advantages and, in this way, sustainability is completely integrated into business plans.

Acquisitions of recycling companies and repurposing of plants as recycling facilities



Placing on the market polycarbonate resins with a high level of recycled content (up to 95%)



Closed-loop initiatives to recycle and upcycle



Exploring advanced recycling technologies to avoid incineration or landfill of post-consumer mixed plastic

Production of CO₂-reduced polycarbonate (without off-setting)



Collaboration with electronics industry to support re-design for sustainability



Use of certified renewable feedstock to produce polycarbonate



Transitioning to renewable energy sources, including the setting up in Europe of the first large-scale chemical plant in the world completely powered by solar energy

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