

MATERIAL

EPP

*The lightweight
and highly durable
protective insulation*



Material advantages

- › **Lightweight and durable:** EPP products are easy to handle, transport and assemble, while offering outstanding mechanical resistance
- › **Design versatility:** EPP can be moulded into complex shapes, giving designers the freedom to create truly innovative parts with unique forms and textures
- › **Available colours:** white, black, grey, red, blue, green or yellow
All colour grades are produced using high-quality pigments and can be used in a wide range of applications
- › **Recyclable** through existing industrial EPP recycling streams



Characteristics

- › **Density:** 25–250 kg/m³ depending on the grade
- › **Resilient and resistant (mechanically and chemically):** high resistance to repeated impacts and deformation
- › **Thermal insulation properties**
- › **Reusable and suitable for repeated use**

Expanded polypropylene (EPP)

The lightweight and highly durable protective insulation

The benefits of the material

- › High energy absorption and low weight
- › High resistance to static and dynamic loads
- › Reliable performance across a wide temperature range
- › Good resistance to chemicals and oils
- › Good thermal insulation
- › Negligible water absorption

! Excellent energy absorption for passive safety components.

The benefits of EPP for furniture

Expanded Polypropylene is transforming the furniture industry thanks to its light weight, durability and recyclability.

It combines shock absorption, flexibility and long-lasting performance while preserving aesthetics.

Well suited to modern and ergonomic furniture, it offers designers, manufacturers and distributors a real differentiating advantage in a competitive market.

Applications

- › **Packaging and logistics:** shuttle trays, cushioning, and equipment protection.
- › **Automotive and mobility:** technical components that can enhance vehicle efficiency
- › **Industries:** HVAC, industrial machinery
- › **Others:** Sports and recreation, toys, protective gear, safety gear, furniture and decor, prototyping



Production of EPP

- **Originally:** expanded polypropylene (EPP) beads are produced **by expanding polypropylene using a blowing agent**. This material is characterised by its very lightweight cellular structure, which gives it a combination of lightness, strength and good shock-absorbing properties.
- **Steam moulding:** the beads are then introduced into **a specific mould**. Under the effect of steam, they expand, soften and fuse together to take on the desired shape precisely. This step makes it possible to manufacture technical moulded parts designed to meet specific requirements in terms of geometry, mechanical performance and protection.
- **Curing:** after moulding, the parts go through **a curing phase** intended to stabilise their structure, remove residual moisture and ensure a consistent, high-quality finish. This operation also helps guarantee dimensional stability and the final appearance of the product.

i Knauf Industries' own EPP brand: NEOPOLLEN®

- › Knauf Industries manufactures **its own premium EPP raw material, Neopollen®**, at its facility in Schwarzheide, Germany.
- › This integration ensures total oversight of quality and performance.
- › Through active research and development, we also create customized grades to fulfill the unique requirements of our clients.
- › Reach out to us for additional information.