

MATERIAL

EPS

*High-efficiency and
cost-effective
lightweight insulation*



Material advantages

- › **Very lightweight:** easy handling, quick installation, and reduced load on structures.
- › Excellent thermal insulation at controlled cost.
- › **Available colours:** white, grey, or speckled
- › **Easy to process:** moulded into parts or blocks, easy to cut
- › **Recyclable through existing recycling streams** and **available with different post-consumer recycled content levels**



Characteristics

- › **Molded density:** 10–150 kg/m³ depending on grade
- › **Very good thermal conductivity:** typically between 31 and 38 mW/m·K
- › Compression and impact resistance
- › **Several grades available:** suitable for food contact, flame-retardant, or fire-resistant

Expanded Polystyrene (EPS)

Lightweight, high-performance, and cost-effective insulation

Applications

- **Building – insulation:** ETICS facades, interior walls, roof terraces, floors, screeds, underfloor heating, lost formwork.
- **Packaging & logistics:** equipment cushioning and protection, multiple transport chocks (household appliances), corners/angles, crates, and custom solutions.
- **Cold chain & food:** transport/insulation (fish crates, seafood trays, containers), temperature maintenance.
- **Health & pharmaceutical:** insulated packaging for vaccines, medicines, and sensitive samples.
- **Automotive & mobility:** technical parts, component cushioning and protection, lightweight inserts.
- **Other:** buoyancy (buoys, pontoons), models, prototyping, decorative signage, etc.

! Fire performance

With flame retardants, we can offer products compliant with Euroclass E. For other fire standards, please contact us.

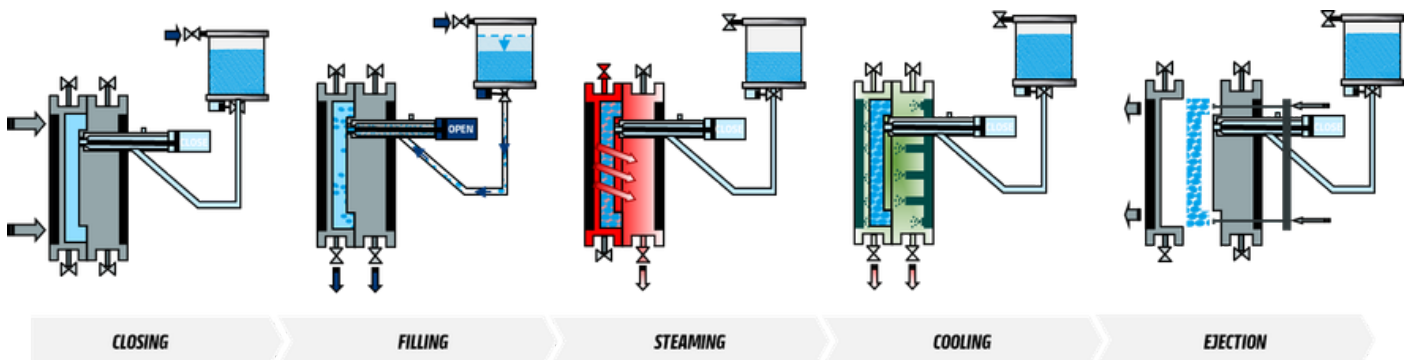
Production of EPS

EPS (expanded polystyrene) is made from expandable polystyrene beads produced by **the polymerisation of styrene** and containing **a blowing agent** (pentane). Styrene is polymerised to form expandable polystyrene (EPS) beads containing 4–7% blowing agent (pentane).

The beads are heated with steam at approximately 90–110°C. The pentane vaporises and the beads expand to 20 to 50 times their original volume. The target final density (usually 10 to 40 kg/m³) is controlled by the duration and intensity of the pre-expansion process.

After this pre-expansion stage, the expanded polystyrene beads are used in our industrial moulding processes. They are injected into a mould (block or finished part), where the beads fuse together under steam exposure.

The products are then cooled and demoulded. The process operates without solvents and produces a closed-cell material composed mainly of air.



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