

EPS (expanded polystyrene) airpop®

EPS is the classic among the foam materials, and has come to be known by the trade name Styropor® (BASF).

We use EPS as a bead polymer together with the environmentally friendly propellant pentane. The polystyrene base material is foamed, i.e. expanded, to create foam beads. The air contained in the beads ensures the best thermal properties. A very high level of shock absorption and compressive strength, moisture resistance and very low net weight make EPS an important material for many areas of application. The added flame-retardant incorporated in the matrix makes EPS compliant to the requirements of DIN 4102 B1 in the construction industry. We usually work with expanded polystyrene having a density between 15 and 300 kg/m³.

We also use innovative, advanced materials such as Neopor® (BASF) or SILVER® (Ineos). The graphite or carbon black incorporated in the matrix achieves thermal insulation properties 20% greater than conventional EPS.

The latest advance comprises a materials modification such as E-por® (BASF) or ARCEL® (Ineos), which, compared to the conventional EPS of the same density, is more resistant to bending and cracks, and has very good recovery behaviour. The material is also viscoplastic and has a high level of shock absorption in the particle foam zone. In addition to its attractive appearance and feel, one major advantage is its high energy absorption. It therefore has excellent cushioning behaviour, with good elasticity and low water absorption.

The standard commercial colour of EPS is white (colourless). EPS is easy to dye and solid-colour designs are also available.

Requirements for particularly high electrical conductivity can be met by using special anti-static additives in the manufacturing process.