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PRESS RELEASE

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The next generation of engineering particle foams from Ensinger

Material solutions for applications in the aerospace, electronics, medical and industrial sectors

As performance requirements continue to increase, conventional particle foams such as polypropylene and polystyrene often reach their limits. High temperatures, long-term mechanical stress or exposure to aggressive chemicals are difficult – and often uneconomical – to manage with traditional materials.

As a specialist in high-performance plastics, Ensinger now offers a forward-looking alternative in the form of engineering particle foams based on thermoplastics such as polyetheretherketone (PEEK), polyethersulphone (PESU) and polycarbonate (PC). These materials offer the structural advantages of traditional foams – such as lightweight design and energy absorption – alongside the exceptional performance characteristics of engineering polymers.

Fine cell structure and tailored density

Manufacturing is carried out using an energy-efficient, newly developed process that enables a fine and homogeneous cell structure. The density and material properties can be precisely adjusted to meet specific customer requirements – ranging from ultra-lightweight components to load-bearing structural parts.

Broad range of applications

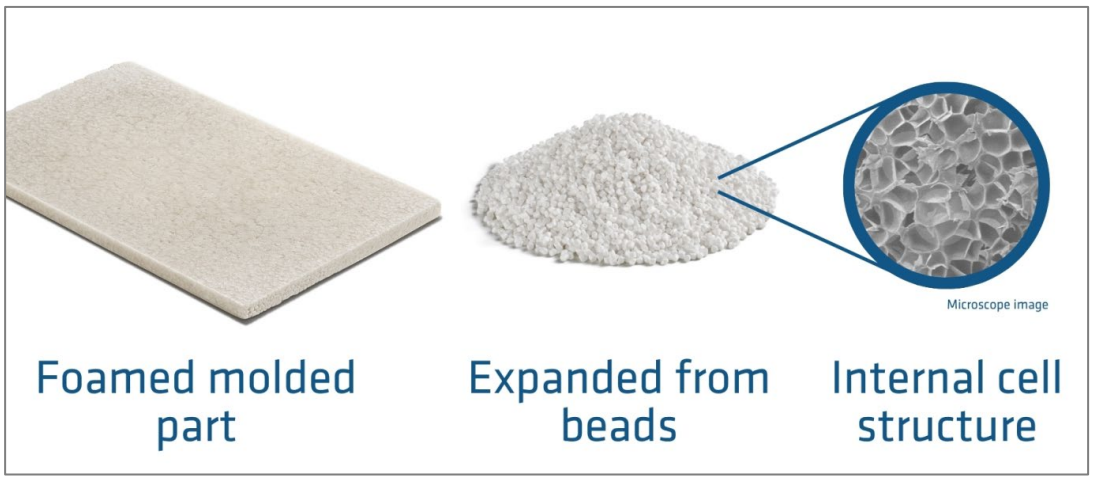
Ensinger’s particle foams are lightweight, robust and impact-resistant. Depending on the base polymer, they can withstand temperatures of up to 300 °C (PEEK) and are highly resistant to oils, greases, cleaning agents and solvents. These properties open up new possibilities for challenging applications in sectors such as aerospace, electronics, medical technology and mobility.

Product formats in the pilot phase

The product line is currently in the pilot phase. Ensinger supports customers from an early stage in the development process. Project partners benefit from bespoke advice, adjustable material properties and strong engineering support. The aim is to develop high-performance particle foam solutions that offer both functional and economic advantages. Beads in various densities and foam sheets in sample sizes are currently available for development and testing. Custom-moulded parts can also be developed on a project basis.

Further information: ensingerplastics.com/en/particle-foam

The **Ensinger Group** is engaged in the development, manufacture and sale of compounds, semi-finished materials, composites, technical parts and profiles made of engineering and high-performance plastics. To process the thermoplastic polymers, Ensinger uses a wide range of production techniques, such as extrusion, machining, injection moulding, casting, sintering and pressing. With a total of more than 2,500 employees at over 30 locations, the family-owned enterprise is represented worldwide in all major industrial regions with manufacturing facilities or sales offices.



Caption (image: Ensinger)

Ensinger is expanding the range of applications for engineering particle foams with thermoplastic polymers such as PC, PESU and PEEK. The new product line combines the advantages of high-performance plastics with the structural properties of conventional foams.

Caption (image: Ensinger)

Individually adjustable density: The particle foams (polycarbonate in this image) can be adapted to customer-specific requirements – from ultra-light foams to materials with higher strength.

Caption (image: Ensinger)

Material diversity: With PC, PESU, PEEK and other plastics, Ensinger offers a wide range of engineering plastics that were previously unavailable in the world of particle foams.

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