

Heat resistance for air induction systems

To meet the increasing temperature extremes for air induction system ducting, Zeon has introduced its latest grade of Zeotherm thermoplastic elastomer - Zeotherm 131-90B. It is targeted for clean air intake ducts, charge air cooler (CAC) ducts, and crankcase ventilation (EGR/PCV) components. It is ideally suited for use on turbo diesel, turbo gas, and supercharged vehicles where temperature extremes of 140°C and higher are common.

The material is able to withstand more than 2,000 hours continuous exposure to 135°C, while still retaining its flexibility and a minimal loss of mechanical properties. For applications demanding performance above 150°C, the grade is capable of withstanding 175°C extremes for one week (168 hours) exposure and short-term exposure to 190°C.

The use of Zeotherm enables improved heat resistance compared to copolyester (TEEE), improved flexibility and sealing compared to soft polyamides (soft PA6), and reduced weight and part cost compared to components made from ethylene-acrylic rubber (AEM). Zeotherm 131-90B is processable via blow moulding and plastic injection moulding.

www.zeotherm.com

POM for blow moulding

Thanks to BASF's Ultraform E3120 BM, hollow objects with demanding requirements can now be made of polyoxymethylene (POM) by means of extrusion blow moulding. In comparison to containers made of polyethylene (PE), they display better barrier properties against gases such as oxygen, hydrogen and carbon dioxide. Ultraform E3120 BM is resistant to many types of media such as alcohol, oil and hydrocarbons, and can be sterilized with hot steam. This product is now available in commercial quantities.

Due to the optimized crystallization behaviour the material offers a wide processing window, so that the blow moulding process can be cost-efficiently automated. The high stretchability of the plastic melt gives access to applications with thin-walled sections.

Since this translucent material accurately replicates the mould surfaces and is easy to dye, tanks for coolants and brake fluids can be smartly designed. Another option would be to add barrier layers to co-extruded films. The hollow objects made of the new POM grade are cost-effective to manufacture and actually weigh less than containers made of metal or glass. Furthermore, BASF experts can support customers when it comes to the design and construction of blow moulded parts.

www.basf.de/ultraform

Colourizing PUR foam with liquid colours

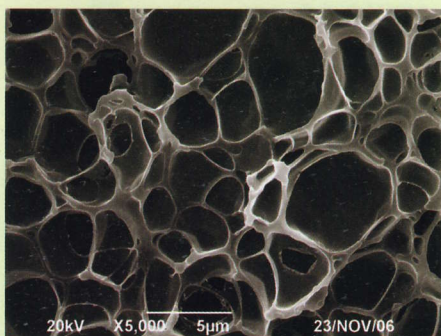
Liquid colours are economical in use, feature good colour mixing and offer cost benefits. In this segment a proportion of the customers come from the automotive industry where paints are an issue - for ease of identification foam parts for individual types of vehicle are colourized in particular colours - to ensure that employees do not "reach for the wrong one" in the fitting process.

A second aspect is the topic of „cleaning effects“ - liquid colours reduce abrasion during extrusion or injection moulding and act in the same way as a lubricant on the metal surfaces such as worms and nozzles. An important consideration when it comes to filled / reinforced materials.



Liquid colours for colourful PUR foams (fig. Novosystems)

www.novosystems.de



Micro-cellular PET-foam in 5000x magnification (fig.: Trocellen)

Cross-linked PO foams

Trocellen is a provider of three different technologies for cross-linked polyolefin-foams. With their product lines Trocellen classic, Trocellen vertical and Trocellen bloc they are able to produce foams in rolls and sheets in different thicknesses, densities and compositions that match the required properties and applications of the customers. Furthermore Trocellen is using a large variety of conversion capabilities to add value to its foam product portfolio. These include various lamination processes involving other foams, films, textiles or cover stocks; adhesive coatings, flame lamination, die cutting, compression moulding, perforation and embossing. Prototyping with vacuum forming, press and twin-sheet processes is also part of the services.

The latest development is a micro-cellular PET-foam with an excellent reflection character. More details on that will be published in one of the coming Polymotive issues.

www.trocellen.com