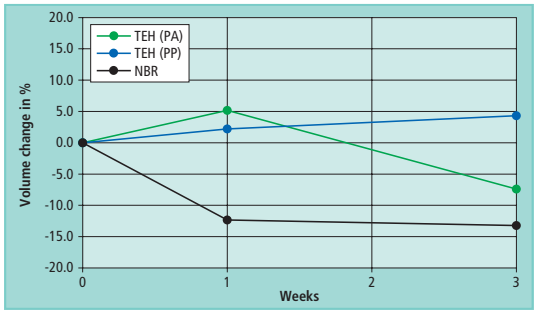
## TPE News

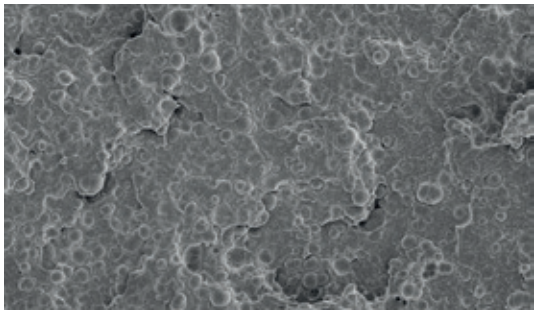


For many years, manufacturers and processors of thermoplastic elastomers (TPE) have been striving to shift the performance limits of these materials toward those of rubber materials. The desire for improved chemical resistance and higher temperature resistance plays a major role here. Kraiburg TPE has developed new thermoplastic elastomer hybrids (TEH) that further reduce the differences in performance between the world of TPE materials and rubber materials. The development of an innovative production technology has made access to TEHs possible.






Thermoplastic elastomers (TPE) are a class of materials offering a recyclable alternative to thermoset rubbers in applications requiring rubber-like properties. However, the high cost of these engineered composites warrants the addition of fillers. One such filler, thermal carbon black, provides cost savings while also maintaining the inherent flexibility of the material. Thermal carbon black (N990) was added to eight high-performance TPEs, including three bio-based TPEs, at various levels up to 40 wt% with minimal viscosity increase. The composites maintained elongation as well as malleability at up to 20 % loading. These properties were observed to a lesser extent with furnace carbon black N762. Thermal carbon black N990 demonstrates a synergy with the TPE, improving mechanical properties while reducing total compound cost.





Hydrogenated styrenic block copolymers (HSBC) have been used in medical tubing for many years due to their high clarity, flexibility, kink resistance and toughness. They do not contain intentionally added phthalate- and BPA-based chemicals and can be sterilized with all common sterilization techniques, even at elevated temperatures. The latest polymer developments from Kraton demonstrate improved performance in critical application requirements such as solvent bonding, surface appearance and processing. Blends with polypropylene (PP) at different ratios can be extruded into medical tubing for IV systems, peristaltic pump systems, homecare equipment and other drug delivery systems, and they can be processed at lower temperatures, thus achieving several advantages.