Table 1. Effect of impact modifiers (5–10 wt%) on physical properties of polycarbonate

Physical properties	Yield stress (psi)	Yield strain (%)	Break stress (psi)	Break elongation (%)	Young's modulus (kpsi)
PC (no impact modifier)	8530	12.8	8690	190	126
Mebust 10007	7950	14.1	8500	193	110
Acrylic A	7600	13.9	7900	184	104
MBS	7950	13.1	8950	191	100

Impact modifiers offer low temperature performance

PolyChem Alloy Inc has launched two ultra-low-temperature impact modifiers for engineering resins such as PBT, polycarbonate and nylon. Pelletized Abust™ and Mebust™ impact modifiers are claimed to offer improved low temperature (-55°C) impact properties.

The impact modifiers are said to have a butadiene content in excess of 65%. They have no melting point and can easily be mixed with high temperature (up to 250°C) engineering resins. According to data reported by the company, injection moulding compounds prepared with optimum levels of its impact modifiers have similar physical properties to compounds prepared using existing acrylic and MBS impact modifiers (Table 1).

The company adds that the Abust and Mebust additives have less than 0.05% moisture and are free-flowing. This improves handling characteristics and minimizes flammability concerns associated with the handling of impact modified powders. Applications for the materials are automotive, furniture and appliance, wire and cable, and construction, where high impact strength at sub-zero temperatures is essential.

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PolyOne Performance Additives expands colour additives for elastomers

The Performance Additives group of PolyOne Corp has introduced the Stan-Tone® EP product line, an expansion of the Stan-Tone family of colour additives for the elastomer and rubber markets. Based on an EPDM binder, Stan-Tone EP colour additives are more compatible with various elastomer systems than standard binders, PolyOne claims. As a result, the new colour masterbatch dispersions are ideal for elastomeric compounders and mixers in a number of cost-driven, end-use applications, including hose and tube, wire and cable, and flooring, the company says. Both general-purpose and high-performance additives are available.

According to PolyOne, Stan-Tone EP colour additives offer customers a number of benefits, including excellent dispersion quality, improved colour and rheological consistency, and improved shelf life. The Stan-Tone EP product line is one of 15 colour additive product lines offered by the Performance Additives group. PolyOne can formulate a colour pallet to meet specific customer requirements for any of the Stan-Tone product lines. The pallet approach can reduce cost, inventory, lead times and variation, while adding colour flexibility, the company says.

In addition, the Performance Additives group launched a new online colour-selection tool, the Stan-Tone Color Selector. This displays all colours from the entire Stan-Tone product family as well as technical information for each colour, including pigment type, physical properties, colour index and light fastness.

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