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Matthieu GERVAIS, A ALKHUDDER, A. GRANDMONTAGNE, Alain GUINAULT, Cyrille SOLLOGOUB - Impact on thermomechanical behaviour of a maleic anhydride grafted ABS on ABS/PC multi-layered blends - 2013

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## Impact on thermomechanical behaviour of a maleic anhydride grafted ABS on ABS/PC multi-layered blends

M. Gervais<sup>a,b</sup>, A. Alkhuder<sup>b</sup>, A. Grandmontagne<sup>a,b</sup>, A. Guinault<sup>a,b</sup>, C. Sollogoub<sup>a,b</sup>

<sup>a</sup> PIMM, CNAM/ENSAM, 151 boulevard de l'hôpital 75013 Paris, France

<sup>b</sup> P-2AM, CNAM 292, rue Saint Martin – F75003 Paris - France

Email of corresponding author: [matthieu.gervais@cnam.fr](mailto:matthieu.gervais@cnam.fr)

The significant increase of Waste Electric and Electronic Equipment (WEEE) has led to an important research in upgrading recycled engineering plastics by means of a blending technique. In particular, there is an interest in studying the properties of ABS/PC blends, the two most important components of WEEE, at ABS rich compositions, according to the generation ratio of waste [1].

Since ABS and PC are immiscible, the final properties depend to a large extent on the flow-induced morphology [2]. In order to better control the final blend morphology of injection molded samples, we propose a two-step approach: the first step consists in producing pellets with multilayered structure, using a multilayer coextrusion device. During the second subsequent step, the pellets are injection molded, with temperature conditions chosen to minimize the deformation of the created structures. The effect of a compatibilizer, namely, an ABS grafted with maleic anhydride (ABS-g-MA) [3] on the thermomechanical properties and morphology has been investigated.

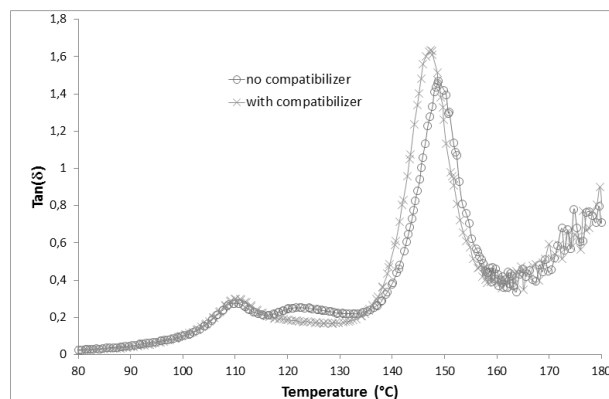


Figure 1.  $\text{Tan}\delta$  as a function of temperature for ABS/PC blend (70/30 wt%) with and without the addition of ABS-g-MA

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3. Elmaghor, F.; Zhang, L.; Fan, R.; Li, H. *Polymer* 2004, 45, (19), 6719-6724.