A new approach for silane curing metallocene-based polyethylene-octene copolymers by Monosil and Sioplas processes

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The silane grafted compound need to be storage under approprate conditions in order to be avioded from any premature crosslinking reactions, which is a necessary requirement for re-extruding the silane grafted compounds and producing the final-shaped articles. Therefore, with the aim of selecting an approprate silane grafting process, Monosil or Sioplas, the effect of dibutyltin dilaurate (DBTDL) as catalyst on the melt flow index (MFI) of the silane grafted compounds was invesigated. The results showed a MFI of 6.4±0.1 g/10 min for the silane grafted compound obtained from the Sioplas process, but, the MFI of 1.9 g/10 min which was obtained due to the presence of the catalyst in the Monosil process indicated that this method is not a promising process for silane grafting.

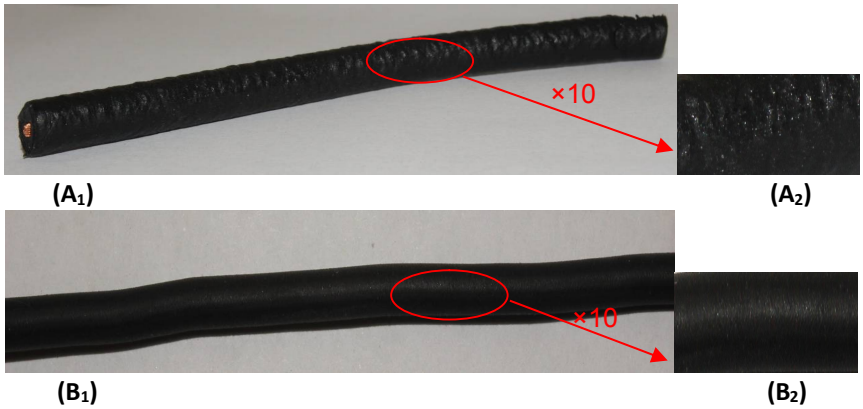

Figure 1. Effect of pre-crosslinking of silane grafted compound on the product appearance. Monosil process (A_1 and A_2) and Sioplas process (B_1 and B_2). A_1 and B_1 have a resolution of 5184×1114 pixels; A_2 and B_2 have a resolution of 295×181 pixels.

References

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