

Comparison of Processing Conditions for Plasticized PVC and PVB

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Abstract : The worldwide problem is that the recycled PVB is wildly stored in landfills. However, PVB have very similar chemical properties such as PVC. Moreover, both of them are used in plasticized form. Thus, the thermal properties of plasticized PVC obtained from primary production and the PVB was obtained by recycling of windshields are compared. It is carried out in order to find degradable conditions and decide if blend of PVB/PVC can be processable together. Tested PVC contained 38 % of plasticizer diisononyl phthalate (DINP) and PVB was plasticized with 28 % of triethylene glycol, bis(2-ethylhexanoate) (3GO). Thermal and thermo-oxidative decomposition of both vinyl polymers are compared such as DSC and OOT analysis. The tensile strength analysis is added.

Keywords : polyvinyl chloride, polyvinyl butyral, recycling, reprocessing, thermal analysis, decomposition

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