



OP-17-404

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**FRACTURE BEHAVIOR OF POLYCARBONATE SHEETS MODIFIED BY REACTIVE EXTRUSION OF
POLYETHYLENE PET USING ESSENTIAL WORK OF FRACTURE APPROACH**

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Thermal, mechanical, morphological, and fracture behaviour of 700 µm sheets of polycarbonate (PC)/polyethylene terephthalate (PET) blends have been evaluated. Blends were prepared with and without three different transesterification catalysts based on Ca, Zn and Sm in a proportion of 0.04 % by weight of total amount of blend. According to FT-IR, DMTA and DSC results, Sm-based transesterification catalyst seems to be the most effective one in PC modification under the mixing/processing conditions used. However it shows the highest tendency to promote secondary reactions that degrade the system.

Essential Work of Fracture analysis (EWF) has let to conclude that the addition of 20 %w/w of PET to PC with Zn-based transesterification